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ARTICLE

French and Spanish *wh*-interrogatives with and without *wh*

Malte Rosemeyer [ORCID]

Freie Universität Berlin
Email: malte.rosemeyer@gmail.com

Abstract

This article describes the usage of partial interrogatives without *wh* such as *And you went...?* in French and Spanish, and analyses the variation between such *in-situ-∅* and *in-situ-wh*-interrogatives such as *And you went where?* On the basis of an analysis of *in-situ-∅*-interrogatives in a corpus of spoken French and Spanish, these interrogatives are described as a particularly efficient means of realizing an information request. Due to the fact that their use is bound to contexts in which the information request is highly expected by the hearer, they can be produced using a minimal syntactic format and simultaneously ensure that the addressee produces the desired response. In comparison, the use of *in-situ-wh* is less context-sensitive. The analysis also investigates the possibility of differences between French and Spanish as regards the productivity of these interrogatives. An acceptability study of these interrogatives finds no significant difference in terms of the productivity and acceptability of *in-situ-∅* in French and Spanish, whereas *in-situ-wh* reaches a higher acceptability in French than in Spanish. I interpret these results as evidence for a description of *in-situ-∅* as an *ad-hoc* interactional resource whose use does not depend on conventionalization processes, whereas information-requesting *in-situ-wh* has become conventional in French.

Keywords: question; information request; interrogative; interaction; French; Spanish

1. INTRODUCTION

This article aims at describing the usage of partial interrogatives without *wh* in French and Spanish, a construction that has not yet received much attention in the literature up to date. This construction is formed by simply leaving out an utterance-final element in an otherwise complete utterance. In written texts, the apparent ellipsis of the element is typically represented by three dots, followed by a question mark (see 1-2).

(1) *Chronique d'une station-service*, Alexandre Labruffe, 2019.
  – *Vous me rappelez un film avec votre pastèque. La*
  saveur de la pastèque. Vous connaissez ? Un film taïwanais.
  '– You remind me of a movie with your watermelon. *La saveur*
  de la pastèque. Do you know it? A Taiwanese film.'
  – *Ah oui ?* [...]. *Et ça parle **de**...* **?**
  '– Ah yes? And it's about... ?'
  – *De cul.* [...]
  '– About sex.'

(2) *El tapadito*, Patricia Suárez, 2005.
  Leni: *¡Una cárcel! ¡Como esa donde vivía el Conde Montecristo!*
        'A jail! Like the one where Count of Montecristo lived!'
  Vera: **¿El Conde de...?**
        'The Count of...?'
  Leni: *¡El que ansiaba la venganza!*
        'The one who craved revenge!'

In this article, I will call partial interrogatives without *wh*-element *in-situ-∅-interrogatives*. Only sporadic mention of *in-situ-∅*-interrogatives is made in the literature, where such constructions have been called *complementary questions* (Bolinger, 1957: 7; Reinhardt, 2019: 32), or *designedly incomplete utterances* that realize *fill-in-the-blank questions* (Persson, 2017).

    Formally, *in-situ-∅*-interrogatives resemble *in-situ-wh*-interrogatives (see 3), the only difference being that in *in-situ-∅*-interrogatives the *wh*-element is not present. The invented cases in (3) seem compatible with the usage contexts in (1) and (2), respectively. Consequently, a second aim of this article is to investigate whether we can assume the existence of structured variation (Weinreich et al., 1968: 101) between *in-situ-∅*- and *in-situ-wh*-interrogatives in French and Spanish. Answering this question will help responding to a major problem raised by acknowledging the existence of *in-situ-∅*-interrogatives, namely the question why languages possess *wh*-elements at all.

(3) a.   *Et ça parle de quoi?*
        'And it's about what?'
   b.   *¿El Conde de qué?*
        'The Count of what?'

In order to establish a description of the usage of *in-situ-∅*-interrogatives, a corpus study of the usage of these constructions in French and Spanish spoken informal conversations is carried out. The analysis demonstrates that *in-situ-∅*-interrogatives are typically anaphorical and display structural latency (Auer, 2014: 14-18). Regarding their function, *in-situ-∅*-interrogatives can be used as repair initiators or 'true' information requests, just like *in-situ-wh*-interrogatives.

The main difference to *in-situ-wh*-interrogatives seems to be that *in-situ-∅*-interrogatives display an even higher degree of anaphoricity and answerability. As a result, *in-situ-∅*-interrogatives realize particularly efficient requests for information because of (a) their minimal syntactic structure and (b) the fact that their use is more likely to lead to a response on the hearer's part than the use of other interrogative constructions. In line with this interpretation, the use of *in-situ-∅*-interrogatives is frequent in contexts centered around efficient information exchange, such as professional telephone calls, teaching contexts and professional explanations.

The second part of the paper addresses the question of the existence of structured variation between *in-situ-∅*- and *in-situ-wh*-interrogatives. Given that *in-situ-wh*-interrogatives are conventionalized to a greater degree in French than in Spanish, I hypothesize that French speakers prefer this interrogative format over *in-situ-∅*-interrogatives, while this preference is expected to be weaker for Spanish. Indeed, results from a questionnaire study demonstrate that when faced with the choice between *in-situ-∅*- and *in-situ-wh*-interrogatives, Spanish speakers are more likely to select *in-situ-∅*-interrogatives over *in-situ-wh*-interrogatives than French speakers. These results suggest that whereas *in-situ-∅*-interrogatives represent an ad-hoc strategy for the expression of information requests that may be universal, the usage of *in-situ-wh*-interrogatives is more restricted.

2. INFORMATION REQUESTS AND ANAPHORICITY

Conversation Analysis distinguishes between *interrogatives* (a certain type of syntactic format) and *information requests*, the act of requesting information (Steensig and Drew, 2008; Hayano, 2013; Ehmer and Rosemeyer, 2018). Although this correlation is in no way absolute (see, e.g., Dekhissi, 2016; 2021), information requests are typically realized using interrogatives. This preference is easiest to explain for *wh*-interrogatives, which incorporate a semantically underspecified form, the *wh*-element. The meaning of a sentence such as *Where did you go?* can be described as the set of propositions that count as answers to that question, such as <I went to London; I went to Rio, etc.> (Hamblin, 1973: 48; Karttunen, 1977: 9-11; or the more recent description in Onea and Zimmermann, 2019: 12). An interrogative thus establishes a set of possible propositions, out of which the hearer is expected to choose the correct one. This instruction to choose the correct possible answer is clearly a pragmatic phenomenon. When using a *wh*-interrogative the speaker presents herself "incapable, in a particular way, of completing a proposition" (Fiengo, 2009: 47; cf. also Rosemeyer, 2018b; Ozerov, 2019). The preference for an answer as the hearer's reaction, as well as the fact that interrogatives frequently select the hearer in terms of turn-taking, can be derived from this formal incompleteness of interrogatives: by highlighting her inability to complete the proposition, the speaker may invite the hearer to complete the proposition for her. As is well known in Conversation Analysis, this pragmatic process is crucially governed by the degree to which the hearer can be assumed to be more knowledgeable than the speaker (Heritage, 2010: 140-142; Bolden and Robinson, 2011; Enfield et al., 2012: 193-194; Heritage, 2012; Rosemeyer, 2022). For instance, an interrogative

such as *Am I the president?* can be interpreted either as a rhetorical question or an actual information request, depending on the degree to which the epistemic gradient between the speakers is tilted.

Crucially for our purposes, this pragmatic theory of the use of interrogatives explains how *in-situ-∅*-interrogatives can be interpreted as information requests: just like "regular" *wh*-interrogatives, *in-situ-∅*-interrogatives incorporate a semantically underspecified form, namely, a pause. From this perspective, the main difference between the two invented examples in (4) resides in the fact that the *in-situ-wh*-interrogative in (4a) specifies the semantics of the requested element (i.e., *where* refers to a location), whereas (4b) does not. At this point, it is important to note that none of the constructions in (4) is formally a declarative. For *in-situ-wh*-interrogatives, this option is excluded due to the presence of the *wh*-element. *In-situ-∅*-interrogatives, in contrast, cannot be interpreted as a declarative because their prosodic contour sets them apart from declaratives (see Section 3).

(4) a. *And you went where?*
    b. *And you went...?*

This difference between *in-situ* and *in-situ-∅*-interrogatives relates to an important parameter in the description of interrogatives, namely, context sensitivity, understood here as the degree of cognitive accessibility of the proposition (Dryer, 1996). Many studies have identified context sensitivity as a crucial predictor of the variation between *ex-situ*- and *in-situ-wh*-interrogatives. *In-situ-wh*-interrogatives are typically used in contexts in which the proposition can be inferred from the preceding co-text or the situational context, whereas the usage of *ex-situ* interrogatives (such as *Where have you gone?*) is much less restricted in this regard (for French and Spanish, cf. Chang, 1997; Cheng and Rooryck, 2000; Mathieu, 2004; Myers, 2007; Boucher, 2010; Hamlaoui, 2011; Kaiser and Quaglia, 2015; Chernova, 2017; Biezma, 2018; Rosemeyer, 2018b; Larrivée, 2019; Garassino, 2022). In Spanish, the use of *in-situ-wh*-interrogatives is typically infelicitous in "New Topic information requests" (Rosemeyer, 2018b; 2022), which serve to establish a new topic in a conversation (5a).

(5) a. *Bueno, ¿habéis hecho qué este fin de semana?*
    b. *Alors, vous avez fait quoi ce week-end?*
        'So, what did you guys do this weekend? (lit. you guys
        did what this weekend?)'

Note that the French equivalent in (5b) seems much more acceptable. Indeed, in a recent corpus-based study, Garassino (2022) showed that French *in-situ-wh*-interrogatives are governed to a lesser degree by the degree of cognitive accessibility of the proposition than Italian *in-situ-wh*-interrogatives, which behave much more like their Spanish counterparts. This result hints at a historical process by which *in-situ-wh*-interrogatives have entered into competition with *ex-situ wh*-interrogatives and gradually left their original functional niche (cf. also Larrivée, 2019; Rosemeyer, 2019a; b; Guryev and

Larrivée, 2021 for historical evidence for such a process in French and Brazilian Portuguese). However, even in contemporary informal spoken French *in-situ-wh*-interrogatives are still typically used in situations in which their propositions either repeat material from the preceding co-text or can be inferred from a previous proposition (Garassino, 2022).

From an interactional perspective, one important correlate of context sensitivity is answerability. As was shown by Myers (2007), French information-requesting *in-situ-wh*-interrogatives are typically used in contexts in which there is a strong expectation that the hearer knows the answer to the question.[1] This result was replicated for Spanish (Rosemeyer, 2018a). This is due to the fact that if the proposition of an interrogative is highly accessible, it is likely to be part of the interlocutors' Common Ground, i.e., represent shared knowledge (Stalnaker, 1973; Clark, 1996: ch. 4; Stalnaker, 2002). In that case, however, it is equally more likely for the hearer to know the answer to the information request. Consider, for instance, example (6) below, taken from an informal friendly conversation at home.[2] M has asked C to tell her what she did on the weekend. In lines 1-2 C asserts that she had a quiet day yesterday and adds in line 3 that she went to visit a friend to watch a movie. M reacts to this information with the *in-situ-wh*-interrogative in line 4. The interrogative is used to ask which movie C and her friend watched. In line 5, C supplies the requested information.

(6) *film* (ffamdl01, 2001, Poitiers, C-ORAL ROM)

```
01 C:     ben mOI bé h° tranQUI-=
          'okay, as to me, quiet'

02        =bEn je te dis hier tranQUIlle;
          'okay, I tell you (it was) quiet yesterday'

03        hier sOIr je suis allée mater un film chez <XXX>³;
          'yesterday evening I went to watch a movie at XXX's place'

04 M: ->  vous êtes euh vous avez regardé QUOI?
          'you are euh you have watched what'

05 C:     on a regardé euh arnaque crime et botaNIque;
          'We have watched euh "Arnaque Crime Et Botanique"'
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[1]An anonymous reviewer asked whether it would be possible to quantify answerability as an interactional criterion. Indeed, such a quantitative analysis was undertaken for Spanish in Rosemeyer (2018a), with the result that use of an *in-situ-wh*-interrogative was significantly more likely than all other interrogative constructions to lead to a subsequent response by the interlocutor (Rosemeyer, 2018a: 306-308). In line with the *Next Turn Proof Procedure*, developed in Conversation Analysis (Sacks et al., 1974: 728), this suggests that in general, French *in-situ-wh*-interrogatives are likely to be interpreted as requests for information, as opposed to other discourse-pragmatic functions.

[2]This and all other examples from the C-ORAL ROM corpus are transcribed in line with the GAT2 system for transcribing talk in interaction (Selting et al., 2009). A summary of the transcription guidelines can be found in the appendix. The C-ORAL ROM corpus is described in Section 3.

[3]The name of the person visited by CHA was replaced with a beep due to the corpus' privacy policy.

In (6) the proposition 'C and her friend watched X yesterday' of the *in-situ-wh*-interrogative in l. 4 is considered Common Ground on the basis of C's recent assertion of this proposition in l. 3. Consequently, M's interrogative is used to request more information about this event, elaborating the current conversational topic (see Rosemeyer, 2018b). In addition, M's confidence that C believes in the veracity of the proposition also leads to the strong expectation that C can answer her question. Put simply, if C did indeed watch a movie yesterday, she is very likely to know which movie it was.

Another important correlate of context sensitivity is anaphoricity. Studies have shown that in Spanish, the use of *in-situ-wh*-interrogatives is more acceptable when prefaced with conjunctions such as *y* 'and' (Biezma, 2018) and insubordinating *que* 'that' (Rosemeyer and Sansiñena, 2019), which serve as cohesive devices connecting the interrogative to the previous co-text. Furthermore, *in-situ-wh*-interrogatives frequently display *structural latency* (Auer, 2014: 14-18): they can be formally incomplete, which is why the hearer has to reconstruct their complete syntactic structure from the previous context. For example, in order to process the interrogative *una qué* in (7), the hearer needs to complete the utterance to *¿trabajáis con una qué?* 'you work with what?', using the previous utterance by P. The resulting full utterance repeats part of the previous context.[4]

(7) *bacteria*, apud Rosemeyer (2018b: 296)

```
01 P:      que: trabajAmos con bact (.) con_una bacteria
           del SUElo;
           'that we work with bact with a ground bacterium'

02         que se llama seudomonas PÚtidas;
           'called pseudomonas pútidas'

03 N: ->   una QUÉ?
           'a what'
```

From the theoretical premises established in this section, at least three hypotheses regarding the use of French and Spanish *in-situ-∅*-interrogatives can be derived. First, in line with my intuition that *in-situ* and *in-situ-∅*-interrogatives express similar situated meanings (Linell, 2009), we would expect both constructional types to display high degrees of context sensitivity, which can be measured in terms of answerability and anaphoricity. Second, given that *in-situ-∅*-interrogatives are less specific than *in-situ-wh*-interrogatives in terms of the requested information, we would expect *in-situ-∅*-interrogatives to display even higher context sensitivity than *in-situ-wh*-interrogatives. Indeed, Persson (2017: 236) suggests that "DIUs [=designedly incomplete utterances, MR] are an apt resource for subsequently narrowing down the ("already-relevant") information sought".

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[4]As noted by an anonymous reviewer, structural latency may be a symptom of syntactic alignment (Pickering and Garrod, 2004), where interlocutors may be primed, to a certain extent, to align their speech production for the ease of processing.

Third, whereas in French *in-situ-wh*-interrogatives have undergone a routinization process by which their use is tied to a lesser degree to contexts in which the speaker has good evidence for the assumption that the proposition of the interrogative is shared knowledge and the hearer is in a position to answer the interrogative, no such process seems to have taken place for Spanish.[5] In addition, there is little evidence for a similar conventionalization process for *in-situ-∅*-interrogatives in either language.[6] In other words, I describe the use of *in-situ-∅*-interrogatives as an *ad-hoc* strategy for realizing information requests that are strongly dependent on the immediate preceding context. If *in-situ* and *in-situ-∅*-interrogatives do indeed compete for the expression of similar meanings in these languages, we can consequently assume that French speakers clearly prefer the use of *in-situ-wh*-interrogatives over *in-situ-∅*-interrogatives, whereas such a preference is much less clear for Spanish speakers.

3. CORPUS STUDY

To test these hypotheses, both a corpus and a questionnaire study were realized. In a first step, all tokens of *in-situ-∅*-interrogatives were extracted from the French and Spanish sections of the C-ORAL ROM, a reference corpus of spoken Romance languages (Cresti and Moneglia, 2005). The choice of this corpus was motivated by several factors. First, the use of *in-situ-wh*-interrogatives has already been studied in this corpus for French (Garassino, 2022) and Spanish (Rosemeyer, 2018b). The existence of these previous studies allows for a comparative analysis of the two interrogative constructions. Second, the C-ORAL ROM contains data representing various registers and situations. For instance, the corpus also contains telephone conversations, which will turn out to be important for the analysis. Taken together, the corpus contains $n = 194$ recordings for French and $n = 210$ recordings for Spanish, of varying length and word count. Each sub-corpus of the C-ORAL ROM totals about 300,000 words (Moneglia, 2005: 1).

The *in-situ-∅* interrogatives were extracted by manually analysing all turn breaks in the corpus. While I cannot exclude the possibility that *in-situ-∅*-interrogatives are sometimes used in turn-medial position, in such a context *in-situ-∅*-interrogatives would frequently be virtually indistinguishable from interrupted assertions not only to the analyzing linguist, but also to the interlocutor. Consider the invented example in (8), where the string *And you*

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[5]It is important to note that this routinization process is clearly not complete for French, either. Even French *in-situ-wh*-interrogatives expressing New Topic information requests seldom occur in thetical contexts (Rossi-Gensane and Ursi, 2020; Garassino, 2022). The difference in the degree of conventionalization of French and Spanish *in-situ-wh* is not categorical.

[6]One clear exception is the formulaic use of the interrogative *vous desirez...?* 'you want...?' common in customer-clerk interaction at a store or a reception (Janina Reinhardt, p.c.). Likewise, Persson (2017: 238) describes the interrogative *de la part de...?* 'on behalf of' as formulaic and typical of telephone conversations. As will be shown, the use of *in-situ-∅*-interrogatives is frequent in interactions that can be described as focusing on efficient transmission of information, which explains why these conventionalization processes are restricted to these particular interactional contexts. At the same time, the example of *vous desirez...?* demonstrates that the use of *in-situ* may also be perceived as polite. While further research on this pragmatic effect is necessary, it might be a correlate of such conventionalization processes.

Table 1. Syntactic formats and usage frequencies of French and Spanish *in-situ-Ø*-interrogatives in the C-ORAL ROM

Format	French	Spanish	Example
Preposition or conjunction	3	3	R: [des chôMEURS;] S: **des,** R: chôMEURS;
X + Preposition	1	1	D: sur les lieux de- E: **sur les lieux de-** D: de (.) de GUErre?
Sentence	1	2	O: °h aLORS **votre numéro** **c'est le:-**
Total	**5**	**6**	

bought... could in principle be interpreted as a *in-situ-Ø*-interrogative. However, when followed by another utterance, an information request interpretation is disfavoured. It stands to reason that even if an information request reading is intended in (8), such uses are marginal because they would contradict the speaker's intention to obtain the missing information.

(8) A: *I went to Milan yesterday.*
   B: *How interesting! And you bought... How was the weather?*

Inspection of the syntactic formats and usage frequencies of *in-situ-Ø*-interrogatives in Table 1 reveals the low productivity of this construction. In the entire corpus, only $n = 11$ tokens of *in-situ-Ø*-interrogatives were found. $N = 8$ of these constructions are syntactically extremely reduced, relying on structural latency; in a *in-situ-Ø*-interrogatives such as *des-,* both the syntax and the proposition of the interrogative have to be reconstructed from the preceding context. Only $n = 3$ cases of *in-situ-Ø*-interrogatives were found in which the interrogative is syntactically independent from the preceding context. My data revealed no evidence for a significant difference between French and Spanish regarding the usage frequency of *in-situ-Ø*-interrogatives.

Another interesting formal aspect concerns the type of interrogative pronoun or adverb that is left unexpressed. For all examples, if the *in-situ-Ø*-interrogative were to be paraphrased with an *in-situ*-interrogative, the pronouns *quoi/qué* would have to be used. In contrast, both in French and Spanish *in-situ*-interrogatives can be used with a variety of interrogative pronouns and adverbs, although the use of *quoi/qué* is most frequent (see Garassino 2022: 38).

Both for French and Spanish, the usage frequency of *in-situ-Ø*-interrogatives is surprisingly high in private telephone conversations. While private telephone conversations only make up 13 percent of the French corpus (26/196 recordings) and 5 percent of the Spanish corpus (11/201 recordings), with $n = 4$ tokens more than half of the *in-situ-Ø*-interrogatives in the C-ORAL ROM are found in these data. My qualitative analysis will suggest a reason for this unexpected correlation. It is also worth mentioning that $n = 4$ tokens of

in-situ-∅-interrogatives were found in teaching or professional explanation contexts, which in this corpus are rather monological in nature.

In the only previous study that explicitly focuses on the analysis of French *in-situ-∅*-interrogatives, Persson (2017) distinguished two functions of this construction in interaction, namely repair initiation (Persson, 2017: 239-240) and open-ended information requests (Persson, 2017: 241-245), and demonstrated that these functions are correlated with differences in prosodic contour. In particular, repair initiation *in-situ-∅*-interrogatives are characterized by a rise-from-low contour (L* H%) (Reinhardt, 2019: 32; Persson, 2020: 591), whereas in open-ended information requests we typically find "more-than-typical lengthening of the utterance-final vowel sound in the last syllable" and a falling contour (Persson, 2017: 241). This generalization appears to hold for my data, as well.

However, my corpus study will show that in order to adequately describe the degree of context sensitivity of *in-situ-∅*-interrogatives, as well as their relationship to the use of *in-situ-wh* interrogatives, it is necessary to take into account more situated meanings. In particular, results from previous studies on the situated meanings of *in-situ-wh*-interrogatives in spoken language (Rosemeyer, 2018b; Garassino, 2022) suggest that it is necessary to pay closer attention to Persson's category of open-ended information requests. These information requests differ in terms of their degree of context sensitivity, which in turn impacts their situated meanings.

The transcript in (9) exemplifies the first function of *in-situ-∅*-interrogatives, which was already identified by Persson (2017), namely repair initiation. In Persson's (2017: 239) words, repair initiation requests "completion of the bit of talk that was begun". The participant E is describing her work at the hospital to the interviewer D and has just mentioned how Alzheimer patients are special. In l. 1-2 of the transcript, E introduces the example of an old lady who was a Red Cross nurse. In l. 3, E wants to give the additional information that the nurse witnessed war scenes. However, she fails to produce the phrase *de guerre* 'of war' due to a tip-of-the-tongue-process. Note that the syntactic format of E's utterance *sur le lieux* strongly suggests that she will continue with a prepositional phrase introduced by *de*, which specifies which places she is talking about (after all, *le lieux* is discourse-new and unidentifiable to D without specification). D's *in-situ-∅*-interrogative in l. 6 repeats E's aborted utterance phrase, but adds the preposition *de*, thereby inviting E to repair her own previous utterance in l. 3. E tries to do so in l. 7, but is still unable to complete the utterance, which prompts a candidate answer by D in l. 8. In l. 9-10, E accepts D's proposed answer and continues her narration in l. 11.

(9) *croix-rouge* (ffamn23, C-ORAL ROM)

```
01 E:    je vais citer le cas d'une: (.) d'une DAme-
         'I want to tell you about the case of an old lady'

02       °h qui était une ancienne infirmière de la
         croix-ROUge-
         'who was an old Red Cross nurse'
```

```
03        °h et: qui avait donc euh:: (0.7) été sur
          les lieux (0.5) euh (.) sur les lieux_mm:-
```
          'and who had thus euh been at the places euh at the places mmh'

```
04        (1.0)
```

```
05        h°
```

```
06 D: ->  sur les lieux de,
```
          'at the places of'

```
07 E:     sur les lieux de-
```
          'at the places of'

```
08 D:     de (.) de GUErre?
```
          'of of war'

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09 E:     de GUErre-
```
          'of war'

```
10        OUI-
```
          'yes'

```
11        °h et: elle avait été témoin de: massacres d'
          enFANts-
```
          'and she had witnessed massacres of children'

D's *in-situ-∅-*interrogative is characterized by a high degree of anaphoricity, since its interpretation relies on structural latency. Repair initiation *in-situ-∅-* interrogatives are necessarily echoic and thus highly context-sensitive. Their use is not restricted to incomplete prior utterances, as repair initiation *in-situ-∅-* interrogatives can also ask the respondent to repeat an element from a previous utterance that the requester has not understood (cf. Persson, 2017: 239, for one such example from the C-ORAL ROM data). With a usage frequency of $n = 5$, repair initiation *in-situ-∅-*interrogatives make up the bulk of my data. In Rosemeyer (2018b) and Garassino (2022), it was shown that *in-situ-wh-* interrogatives can be used in the same discourse contexts.

In Persson's category of open-ended information requests, at least two subtypes of information requests can be distinguished. This difference crucially correlates to the productivity of *wh*-interrogatives in French and Spanish. As was shown in the discussion of example (6), Elaboration information requests "are used to clarify or to add further details to a discourse topic raised in the previous context" (Garassino, 2022: 33). This situated meaning arises in contexts in which the proposition of the interrogative is either active or inferable from a previous utterance. In this criterion, Elaboration information requests differ from New Topic information requests, a situated meaning that arises in contexts in which the proposition of the interrogative is not active or inferable. While information-requesting uses of *in-situ-wh-*interrogatives in Spanish are mostly restricted to Elaboration contexts, French allows for New Topic *in-situ-wh*.

In my data, I document the use of *in-situ-∅*-interrogatives both in Elaboration and New Topic functions for both languages. The transcript in (10) exemplifies the use of Elaboration *in-situ-∅*-interrogatives in Spanish. The sequence occurs in a telephone conversation between colleagues who have just finished talking about a different topic. In l. 1, A starts to talk about a form that J has filled out. After an aborted utterance in l. 2 followed by a pause in l. 3, he asserts that he has seen that J has written a number higher than ten in one of the slots in the form. The formulation *más de diez* 'more than ten' suggests that A did not expect the number to be this high, giving way to the inference that the number was too high. However, in l. 5, J corrects A, claiming that he put down an even higher number, fifteen. Given that A has signaled that he believed that any number higher than ten is unexpected, and maybe even problematic, J's assertion has a strong face-threatening potential. J seems to be aware of this fact. Directly after the assertion, he inhales loudly (l. 6). This intake of breath at a transition-relevant place seems to indicate that due to the controversial nature of this assertion, an explanation might be in order, which he might intend to deliver. This assumption is in line with previous studies on the functions of breathing in interaction, which have shown inbreaths to be "proxies for pragmatic completeness of the previous utterance" (Wlodarczak and Heldner, 2020). However, in l. 7, A leapfrogs J, requesting an explanation with the *in-situ-∅*-interrogative *por* 'for', a preposition that forms part of the fused interrogative adverb *porqué* 'why, lit. for what'. In l. 8-9, J delivers this explanation and achieves assent by A in l. 10.

(10) *quince* (etelef10, C-ORAL ROM)

```
01 A:      °h bueno vamos a ver al TEma;=
           'okay, let's return to the topic'

02         =entOnces (.) he visto que he deJAdo-
           'so I have seen that I have left'

03         (0.5)
04         que h has puesto más de DIEZ (.) no?
           'that you have put down more than ten, right?'

05 J:      he puesto QUINce;
           'I have put down fifteen'

06         [°h   ]
07 A: ->   [por-]
           'for?'

08 J:      porque:: Eso es lo que: va a venir BIEN-
           'because (lit. for that) this is what will be a handy size'

09         es que si nO (.) es muy GRANde no?
           'because otherwise it is very big, no?'

10 A:      [((assents))]
```

As in (9), the *in-situ-∅* interrogative *por* in example (10) is characterized by a high degree of anaphoricity. In particular, both the complete syntactical structure of *por* and the proposition of the interrogative have to be reconstructed through structural latency ([*has puesto quince*] *por.?* 'you put down fifteen for…?'). However, there is one crucial difference between (9) and (10). In particular, in the description of example (9) it was argued that the continuation of E's utterance with the preposition *de* is expected because the phrase *le lieux* would otherwise be unidentifiable to D. In contrast, in (10), J clearly did not intend to continue his utterance with *por*. From a discourse-pragmatic perspective, this means that A's interrogative in (10) requests additional information about a state of affairs that is already manifest to both A and J, i.e., it has the discourse-pragmatic function of Elaboration.

Given that the use of *in-situ-wh*-interrogatives is frequent in contexts such as the one in (10), we have to ask ourselves what motivates A's choice not to produce the *wh*-pronoun *qué* 'what' in (10). It seems reasonable to assume that A's choice of the *in-situ-∅*-interrogative is motivated by reasons of efficient language production. In line with my description, A is confident that J will be able to interpret his interrogative along the lines of 'you put down fifteen because of what?' because the structure of J's previous turn has signaled that J himself expects a continuation of the topic and, more specifically, that he might have to deliver an explanation for his choice to put down fifteen. Consequently, example (10) demonstrates an interaction between context sensitivity and efficient language production: the strong expectedness of A's information request licenses a minimal syntactic format. This interaction is well-known in typological studies; indeed, Haspelmath (2014: 196) argues that "the more predictable an aspect of a message is, the less coding effort one needs to get it across to the hearer."

In (10), a further factor that undeniably contributes to the strong expectedness of the information request is the high transitional probability between *por* and *qué* in Spanish due to the existence of the complex interrogative pronoun *por qué*. However, this realization does not contradict the relevance of context sensitivity for the interpretation of such interrogatives. For instance, similar effects apply to Elaboration *in-situ-∅*-interrogatives with *and*, as in the invented English example in (11).

(11) Parent: *What happened here?*
  Child: *I wanted to eat some pizza.*
  Parent: *And…?*
  Child: *I forgot to switch off the oven.*

As was mentioned in Section 2, another important correlate to context sensitivity is answerability. The strong expectedness of A's information request in (10) generates the expectation that J will be able to provide an answer to the question. A presents his information request such that he is in no position to volunteer a possible answer himself, whereas this should not pose any problem for J. The high degree of answerability contributes to the efficiency of A's information request: a *in-situ-∅*-interrogative such as the one in (10) is not only efficient in the minimality of its form, but also in function, as such an interrogative is extremely likely to generate the desired reaction by the hearer. This also explains the strong face-threatening potential of *in-situ-∅*-interrogatives in contexts such as (11), where

the use of *and...?* seems to implicate that the child should have produced this information even before the interrogative was uttered.

The final situated meaning expressed by *in-situ-∅*-interrogatives is the New Topic function, in which an interrogative is used to request an information that establishes a (relatively) new topic in conversation. Like *in-situ-wh*-interrogatives (cf. Rosemeyer, 2018b; Garassino, 2022), the use of *in-situ-∅*-interrogatives is least frequent in these contexts both in French and Spanish. In my data, only one clear example of this function was found for French (12), and this example was already described in Persson (2017: 234-236), which is why I will not describe it in detail here.

(12) *numéro* (ftelpv25, C-ORAL ROM)

```
01 O: ->  °h alors votre numéro c'est le:-
          'okay, your number is...?'
```

The transcript in (13) contains two *in-situ-∅*-interrogatives from a Spanish conversation in a professional explanation context. E (Enrique), a teacher, has been describing to I to which degree immigrant children can adapt to his school. In l. 1-3, I changes the topic to a detail related to E's previous account, namely the question of how many students are there in E's class. After offering a candidate answer in l. 4, E tries to respond to her request (l. 5-9). Given the somewhat convoluted structure of I's information request in l. 1-4, E first reassures her that he understands her request (l. 5) and then goes on to respond to it (l. 6). However, his response *mira, hay un grupo de primero* 'look, there is a first group' clearly does not answer I's information request, which might be why I responds by clearing her throat (l. 7). In l. 8, E goes on to describe this first group, for which he does give the number of students, i.e., the information relevant to I. There is a relatively short but significant pause after E's utterance (l. 9). The fact that I does not use this pause to take over the turn suggests that she waits for E to provide more information that might satisfy her request for information. When E fails to do so, she produces the *in-situ-∅*-interrogative *y* 'and' (l. 10). This *in-situ-∅*-interrogative very much resembles the English invented example in (11); I asks E to elaborate his response by providing more information that answers her initial information request. The small pitch step upwards (indicated in the transcript by exclamation marks) emphasizes the relevance of this request; I clearly does not know the answer to her information request and signals her strong interest in attaining a completion of the information through E. The interrogative has a strong face-threatening potential. It suggests that E should have already provided the information in his previous attempt to respond to I's initial information request. However, E clearly seems incapable of providing such an answer, which is why, in l. 11, he uses the "inferential" *es que* 'the thing is' construction (Delahunty, 1995) to introduce a reason for his non-preferred response. In l. 12, I interrupts this response and specifies her information request, now using the *in-situ-∅*-interrogative *hay plazas para* 'there are spots for', which can be paraphrased as 'how many slots are there?'.

In l. 13, E starts to respond to this more specific information request, but is again interrupted by I in l. 14, where she tries to accommodate E by ramping down her expectation as to the precision to the answer. Again, this strategy signals the relevance I attributes to obtaining this information. In l. 15, E is finally able to produce a complete response, which is continued until after the end of the transcript. Using the pragmatic marker *hombre* 'dude', he again signals his inability to provide this answer, but goes on indicating that there really seem to be few students, since some teachers have actually left the school because of this problem.

(13) *plazas* (enatpe02, C-ORAL ROM)

```
01 I:      °h Oye Enrique me ha llamado mucho la atención
           esto de [que:] o_sea que no hay aLUMnos para::-
           'listen enrique I found it striking the fact that I mean that there
           are no students for'

02 E:             [°h   ]
03 I:      o sea (.) que por ejemplo no sé: cuántos alumnos
           habrá: por CLAse-=
           'I mean that for instance I don't know how many students there
           might be in a class'

04         =me ima[gino] venti[CInco] yo que [sé; ]
           'I imagine twenty-five, I don't know'

05 E:                [°h   ]      [h°   ]          [bueno] te te
           sigo que SAbes-=
           'alright, I understand you know'

06         =mira (.) hay un grUpo (.) de priMEro;
           'look there is a first group'

07 I:      [((clears throat))]
08 E:      [un solo           ] grupo (.) °h con quince aLUMnos;
           'just one group of fifteen students'

09         (0.5)
10 I: ->   !y!;
           'and'

11 E:      es [que-]
           'the thing is'

12 I: ->      [hay ] plazas para-
              'there are spots for'

13 E:      °h [ho ]
14 I:         [más] o MEnos-
              'more or less'
```

```
15 E:      !hOmbre! aquí: (.) ya se han trasladado
           profe[sores porque    ] no llegaban aLUMnos-
```
           'dude some professors have left this place because there
           were no students'

```
16 I:               [((clears throat))]]
```

Apart from the lack of the *wh*-element, the *in-situ-∅*-interrogative in l. 12 (*hay plazas para…?*) is a syntactically complete structure, with a subject (*plazas* 'spots') and a verb (*hay* 'there are'). As a result, it is characterized by a much lesser degree of context sensitivity than, for instance, the *in-situ-∅*-interrogative *por…?* in example (10), whose interpretation relies on structural latency. Concomitantly, it expresses a discourse-pragmatic function that can be described as a New Topic information request. The interrogative establishes a discourse topic that is much less dependent on the previous context than the discourse topic established by Elaboration interrogatives.

To summarize, my corpus study has demonstrated that *in-situ-∅*-interrogatives are used in French and Spanish with the same situated meanings as *in-situ-wh*-interrogatives, which suggests some structured variation between the two types of interrogatives. Likewise, the analysis seems to confirm that this opposition is governed by the degree of context sensitivity of these interrogative types. In particular, the use of *in-situ-∅*-interrogatives is characterized by an even higher degree of anaphoricity and, concomitantly, a strong expectation that the hearer can and must respond to the information request, than the use of *in-situ-wh*. Consequently, my analysis makes the prediction that the difference between the two interrogative types is governed by efficiency considerations. Even more so than *in-situ-wh*-interrogatives, *in-situ-∅*-interrogatives allow for an extremely reduced syntactic format while at the same time ensuring an even higher conditional relevance (Schegloff, 1968: 1083) of the response, increasing the likelihood of such a response. This consideration explains why in my corpus, the use of *in-situ-∅*-interrogatives is relatively frequent professional telephone conversations and teaching and explanation situations. In contrast to informal conversations between friends, these contexts are centered around the transmission and receipt of information, which is why the use of less explicit, more economic linguistics expressions is particularly relevant in such situations.

4. QUESTIONNAIRE STUDY

While my corpus study has offered good evidence for two of the hypotheses established at the end of Section 2, namely that *in-situ-∅*-interrogatives are used in similar contexts as *in-situ-wh*-interrogatives but are characterized by an even higher degree of context sensitivity than *in-situ-wh*-interrogatives, due to the scarcity of data no evidence for the third hypothesis (differences in the preference of using *in-situ-wh*- over *in-situ-∅*-interrogatives between French and Spanish) was found. In particular, it is unclear to which degree the use of *in-situ-∅*-interrogatives differs across French and Spanish, and whether such a difference is related to the productivity of *in-situ-wh* in these languages.

In order to confirm the results from the corpus study and assess the validity of the third hypothesis, I conducted a questionnaire study on the use of *in-situ-∅* and *in-situ-wh* in French and Spanish. I restricted this study to a context in which the productivity of French and Spanish *in-situ-wh* differs, i.e., information requests. As was mentioned in Section 2, according to Biezma (2018), the use of *in-situ-wh*-interrogatives in contexts such as (14) is only possible in the presence of a conjunction such as *y* 'and', which explicitly anchors the interrogative in the preceding context.

(14) A: *Ana y Susana fueron ayer de compras. ¡Ana se compró una*
          falda preciosa!
          'Ana y Susana went shopping yesterday. Ana got herself an
          amazing skirt!'
     B: *¿Y Susana se compró qué?*
          'And Susana bought what?'

Crucially, the use of *in-situ-∅*-interrogatives seems acceptable in such contexts, as well (15), and omission of the conjunction *y* seems to impact this acceptability negatively. If *in-situ-wh* and *in-situ-∅*-interrogatives do indeed differ in terms of context sensitivity, we would expect omission of the conjunction to affect the acceptability of *in-situ-∅*-interrogatives to a greater degree than *in-situ-wh*-interrogatives.

(15) B: *¿Y Susana se compró ...?*
          'And Susana bought...?'

A second prediction relates to the issue of the productivity of these constructions in French and Spanish. If, as has been shown by studies such as Lefeuvre (2020) and Garassino (2022), the use of *in-situ-wh*-interrogatives has become frequent in New Topic contexts at least in spoken French, they should be more acceptable to French speakers than to Spanish speakers in contexts such as (15). Such a conventionalization process would likewise entail that the original functional specialization of *in-situ-wh*-interrogatives gradually disappears as the construction starts to replace *ex-situ wh*-interrogatives in spoken French. In contrast, my corpus study has shown *in-situ-∅*-interrogatives to be infrequent in both spoken French and Spanish, and likewise shown its situated meanings to be predictable from the anaphorical usage contexts that these interrogatives are typically used in. As a result, there is no reason for assuming a difference in the acceptability of *in-situ-∅*-interrogatives in the two languages. Taken together, this would lead to the prediction that French speakers prefer the more conventional and productive *in-situ-wh* over *in-situ-∅*-interrogatives, whereas due to the low productivity of *in-situ-wh* in Spanish, no such difference can be found for Spanish.

Twenty native speakers of French and 20 native speakers of Spanish read 20 dialogues varying the structure in (14) on the online experiment platform onexp.co.[7] For the French participants, age varied between 18 and 40 years, for

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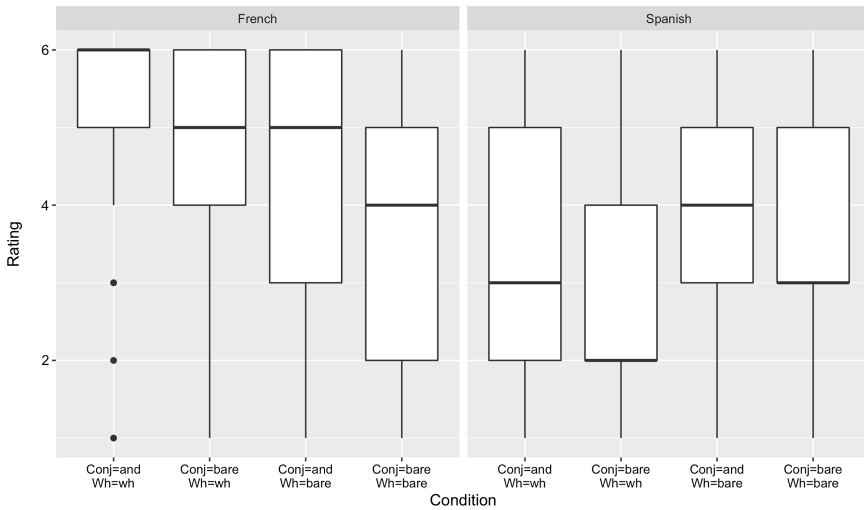[7]The full list of materials can be found in the appendix.

Figure 1. Mean ratings for the four conditions in the French and Spanish questionnaire studies on *in-situ* and *in-situ-∅*-interrogatives

the Spanish participants, between 18 and 31 years. Participation in the experiment was paid according to the platform policies.

The materials were varied according to the two variables CONJ (whether or not a conjunction is used) and WH (*in-situ-wh* vs. *in-situ-∅*), yielding four conditions. (16) illustrates these conditions for my initial Spanish example:

(16) a.   *¿Y Susana se compró qué?*   [+CONJ, +WH]
    b.   *¿Susana se compró qué?*   [−CONJ, +WH]
    c.   *¿Y Susana se compró...?*   [+CONJ, −WH]
    d.   *¿Susana se compró...?*   [−CONJ, −WH]

The materials were presented in a Latin Square design, such that each participant saw five examples of each of the conditions in (16), without repetition of a single stimulus. They were asked to evaluate on a Likert scale between 1 and 6 to which degree the target sentence (i.e., the interrogative) seems natural to them, where 1 was described as 'not at all natural' and 6 as 'totally natural'. No distractor stimuli were used because of the obviousness of the task to the participants.

Figure 1 visualizes the mean ratings for the four conditions in the French and Spanish questionnaire studies.[8] With respect to the impact of conjunction usage on *in-situ-* and *in-situ-∅*-interrogatives, results demonstrate a monotonic effect of conjunction usage. Irrespective of the language and the construction, interrogatives receive a higher rating when prefaced with the conjunctions *et* or *y* 'and'. As regards the acceptability of *in-situ-wh* and *in-situ-∅*, the results

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[8]The plot was produced using the package ggplot2 (Wickham, 2016) in R (R Development Core Team, 2021).

demonstrate a difference between French and Spanish participants. In general, French participants rated both *in-situ-wh* and *in-situ-∅* higher than Spanish participants. However, in terms of the *relative* acceptability of *in-situ-wh* and *in-situ-∅*, French participants preferred the use of *in-situ-wh* (mean rating 5.5) over *in-situ-∅* (mean rating 4.5), whereas results for Spanish show the opposite picture: Spanish participants preferred *in-situ-∅* (mean rating 3.5) over *in-situ-wh* (mean rating 2.5). These effects were tested for significance using a linear mixed-effects regression model, with the random effects STIMULUSID and PARTICIPANTID (referring to the specific dialogue, i.e. stimulus, and the participant) in R (Kuznetsova et al., 2017; Pinheiro et al., 2018).[9] The regression model, reported in detail in the appendix, found all of the reported effects to be statistically significant, with the important exception of the difference in the acceptability of *in-situ-∅*-interrogatives in French and Spanish. Consequently, the model establishes that French and Spanish speakers did not differ at all in their acceptability of *in-situ-∅*-interrogatives, whereas strong differences are documented for *in-situ-wh*-interrogatives.

5. DISCUSSION AND CONCLUSIONS

This article has established a description of the usage of *in-situ-∅*-interrogatives in French and Spanish, comparing its distribution with *in-situ-wh*-interrogatives. In a first step, the use of *in-situ-∅*-interrogatives in a corpus of spoken French and Spanish was described. *In-situ-∅*-interrogatives and *in-situ-wh*-interrogatives can be used with the same situated meanings: as repair initiators, Elaboration information requests, and New Topic information requests. *In-situ-∅*-interrogatives and *in-situ-wh*-interrogatives thus compete for the same usage contexts and can be described as variants. However, the analysis also showed important differences between these interrogative types. In particular, use of *in-situ-∅*-interrogatives is even more strongly associated used to anaphoric contexts, where the precise nature of the requested information is evident to the hearer even though it is not specified using a *wh*-element. Crucially, in such contexts the information request itself is highly expected by the hearer, and the requester is particularly certain that the hearer will be able to respond in the preferred manner to the information request. Consequently, *in-situ-∅*-interrogatives realize particularly efficient information requests both in terms of the speaker's aims in discourse (high probability to receive the requested information) and production efficiency (minimal syntactic format). This explains another interesting finding, i.e., the fact that the usage of *in-situ-∅*-interrogatives is typical for situations centered around the transmission and receipt of information. The corpus study showed a relatively high usage frequency of *in-situ-∅*-interrogatives in professional telephone conversations, teaching contexts, and professional explanations.

The proposed trade-off between context sensitivity and efficient language production has important ramifications for the description of the variation

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[9]The decision to use a linear, as opposed to an ordinal, regression model even though the response variable is ordinally scaled, was taken on the basis of the fact that in practice, this violation of scale levels does not significantly affect results (Janda and Endresen, 2017: 220-224).

between *ex-situ-wh-*, *in-situ-wh-* and *in-situ-∅*-interrogatives. In particular, the article suggests a continuum between these interrogative types in terms of answerability, i.e., expectation that the hearer will be able to provide an answer, and the degree of complexity of the syntactic format (Rosemeyer, 2019a: 173-174). This continuum can be modeled schematically as in (17).

(17) Construction type   *ex-situ-wh*   *in-situ-wh*   *in-situ-∅*

	ex-situ-wh	*in-situ-wh*	*in-situ-∅*
Answerability	+	++	+++
Complex syntactic format	+++	++	+

The model in (17) suggests that *ex-situ-wh-*interrogatives display the greatest degree of conventionalization and consequently, the most complex syntactic format (high degree of explicitness and preposed *wh-*constituent). As a result of their high degree of conventionalization, *ex-situ-wh-*interrogatives are least restricted in terms of discourse functions. *In-situ-wh-*interrogatives display a lower degree of conventionalization than *ex-situ-wh-*interrogatives, but a higher degree than *in-situ-∅*-interrogatives.[10] They also occupy a mid-position in the continuum in terms of complexity of syntactic structure: while most arguments are typically explicit, *in-situ-wh* can be described as less complex than *ex-situ-wh* in that they formally resemble declaratives. Finally, *in-situ-∅*-interrogatives display the lowest degree of conventionalization and the least complex syntactic structure. As a result, they occur with the most restricted set of discourse functions.

Note that the differences in terms of syntactic complexity between the studied *wh-*interrogative constructions are also reflected in the type of requested information. The analysis has suggested that use of *in-situ-∅* is restricted to contexts in which the interrogative pronouns *quoi/qué* would be used. In contrast, both *ex-situ-* and *in-situ-wh-*interrogatives can be used with different interrogative pronouns/adverbs, such as *quel/cuál* 'which', *combien /cuánto* 'how much' or *comment/cómo* 'how' (Garassino 2022: 38). Given that selection of interrogative pronouns/adverbs represents semantic differences between the asked-for elements (e.g., *who* for persons, *where* for places etc., cf. Le Goffic, 2007: 21-23), this means that information requested by *in-situ-∅*-interrogatives is necessarily of a particular type.

Larrivée (2019: 127) suggests that "rare emerging grammatical variables [the use of *in-situ-wh*] representing less than 1% of uses in a grammatical category are characterised by a pragmatic value of explicit activation". The continuum proposed in (17) offers an explanation of this effect: historical conventionalization of the use of interrogative constructions leads to an intrusion of these interrogatives into low-answerability contexts (cf. also Waltereit, 2018; Rosemeyer, 2019a). In such contexts, however, these interrogatives need to be clearly marked as interrogatives in order to be recognizable as such (recall the discussion of example 8 in Section 3).

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[10]For French, this is only true to some extent, as in informal French *in-situ-wh-*interrogatives have clearly been conventionalized to a great degree. This might also entail a levelling of the differences in terms of answerability. This points to the assumption that one typical pathway of historical change of interrogative constructions leads to the acquisition of more topic-marking functions (Rosemeyer, 2019c; 2021).

Interestingly, the corpus study did not find any evidence for differences in the productivity of *in-situ-∅*-interrogatives in French and Spanish. I conducted a questionnaire study measuring the acceptability of French and Spanish *in-situ* and *in-situ-∅*-interrogatives. In line with previous studies, results indicated that in both languages, *in-situ* and *in-situ-∅*-interrogatives are more acceptable in such contexts when introduced with *et/y*. Likewise, the study demonstrated a higher acceptability of *in-situ-wh*-interrogatives for French than for Spanish. Crucially, however, no evidence was found for the assumption of a difference in acceptability of *in-situ-∅*-interrogatives in French and Spanish. French speakers thus prefer *in-situ-wh* over *in-situ-∅* in the studied contexts, whereas Spanish speakers actually prefer *in-situ-∅*, mirroring the lack of conventionalization of *in-situ-wh* in Spanish.

These results are in line with a description of *in-situ-∅*-interrogatives as a non-conventionalized *ad-hoc* strategy for realizing information requests. Indeed, one might argue that the possibility of a conventionalization of *in-situ-∅*-interrogatives as a more common type of information request is blocked by the fact that *in-situ-∅*-interrogatives lack a *wh*-element. Due to the underspecified semantics of this interrogative type, *in-situ-∅*-interrogatives are necessarily anaphoric and resist generalization to New Topic information requests, unlike *in-situ-wh*-interrogatives.

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Appendix

Summary of the most important GAT 2 transcription conventions

cf. Selting et al. (2009)

<u>Sequential structure</u>

[ ] [ ]	overlap and simultaneous talk
=	fast, immediate continuation with a new turn or segment (latching)

<u>In- and outbreaths</u>

°h/h°	in-/outbreaths of appr. 0.2-0.5 sec. duration
°hh/hh°	in-/outbreaths of appr. 0.5-0.8 sec. duration
°hhh/hhh°	in-/outbreaths of appr. 0.8-1.0 sec. duration

<u>Pauses</u>

(.)	micro pause, estimated, up to 0.2 sec. duration appr.
(-)	short estimated pause of appr. 0.2-0.5 sec. duration
(–)	intermediary estimated pause of appr. 0.5-0.8 sec. duration
(—)	longer estimated pause of appr. 0.8-1.0 sec. duration
(0.5)/(2.0)	measured pause of appr. 0.5/2.0 sec. duration (to tenth of a second)

<u>Other segmental conventions</u>

:	lengthening, by about 0.2-0.5 sec.
::	lengthening, by about 0.5-0.8 sec.
:::	lengthening, by about 0.8-1.0 sec.
ʔ	cut-off by glottal closure
and_uh	cliticizations within units
uh, uhm, etc.	hesitation markers, so-called "filled pauses"

<u>Laughter and crying</u>

haha, hehe, hihi	syllabic laughter
((laughs)), ((cries))	description of laughter and crying
<<laughing> >	laughter particles accompanying speech with indication of scope
<<:-)> so>	smile voice

<u>Continuers</u>

hm, yes, no, yeah	monosyllabic tokens
hm_hm, ye_es, no_o	bi-syllabic tokens
ʔhmʔhm	with glottal closure, often negating

<u>Accentuation</u>

SYLlable	focus accent
sYllable	secondary accent
!SYL!lable	extra strong accent

Final pitch movements of intonation phrases

?	rising to high
,	rising to mid
–	level
;	falling to mid
.	falling to low

Pitch jumps

↑	smaller pitch upstep
↓	smaller pitch downstep
↑↑	larger pitch upstep
↓↓	larger pitch downstep

Changes in pitch register

<<l> >	lower pitch register
<<h> >	higher pitch register

Intralinear notation of accent pitch movements

`SO	falling
´SO	rising
¯SO	level
^SO	rising-falling
ˇSO	falling-rising
↑`	small pitch upstep to the peak of the accented syllable
↓´	small pitch downstep to the valley of the accented syllable
↑¯SO bzw. ↓¯SO	pitch jumps to higher or lower level accented syllables
↑↑`SO bzw. ↓↓´SO	larger pitch upsteps or downsteps to the peak or valley of the accented syllable

Loudness and tempo changes, with scope

<<f> >	forte, loud
<<ff> >	fortissimo, very loud
<<p> >	piano, soft
<<pp> >	pianissimo, very soft
<<all> >	allegro, fast
<<len> >	lento, slow
<<cresc> >	crescendo, increasingly louder
<<dim> >	diminuendo, increasingly softer
<<acc> >	accelerando, increasingly faster
<<rall> >	rallentando, increasingly slower

Changes in voice quality and articulation, with scope

<<creaky> >	glottalized
<<whispery> >	change in voice quality as stated

Other conventions

<<surprised> >	interpretive comment with indication of scope
((coughs))	non-verbal vocal actions and events
<<coughing> >	...with indication of scope
()	unintelligible passage

(xxx), (xxx xxx)	one or two unintelligible syllables
(may i)	assumed wording
(may i say/let us say)	possible alternatives
((unintelligible, appr. 3 sec))	unintelligible passage with indication of duration
((...))	omission in transcript
->	refers to a line of transcript relevant in the argument

Materials employed in the questionnaire study

Note that the target sentence (marked in bold font) was modified according to the two conditions CONJ (use of conjunction) and WH (use of *wh*-element). Here, only the condition [+CONJ, +WH] is given. The English translation is given for clarity of presentation and was not part of the experiment. Abbreviations: S = Stimulus.

S		English translation	French	Spanish
1	Gino:	Anna and Louis went out shopping. Anna bought a dress.	Anna et Louis sont allés faire du shopping. Anna a acheté une robe.	Anna y Louis salieron de compras. Anna se compró un vestido.
	Lisa:	**And what did Louis buy?**	**Et Louis a acheté quoi?**	**¿Y Louis compró que?**
	Gino:	A scarf.	Une écharpe.	Una bufanda.
2	Sandra:	Gino and Lisa had dinner together. Gino ate a pizza.	Gino et Lisa ont dîné ensemble. Gino a mangé une pizza.	Gino y Lisa cenaron juntos. Gino comió una pizza.
	Mario:	**And what did Lisa eat?**	**Et Lisa a mangé quoi?**	**¿Y Lisa comió qué?**
	Sandra:	A salad.	Une salade.	Una ensalada.
3	Julio:	Sandra and Mario practiced painting. Sandra painted a tree.	Sandra et Mario pratiquaient la peinture. Sandra a peint un arbre.	Sandra y Mario practicaron la pintura. Sandra pintó un árbol.
	Pia:	**And what did Mario paint?**	**Et Mario a peint quoi?**	**¿Y Mario pintó qué?**
	Julio:	A castle.	Un château.	Un castillo.
4	Mina:	Julio and Pia read books. Julio read a romance.	Julio et Pia lisent des livres. Julio a lu une romance.	Julio y Pia leyeron libros. Julio leyó un romance.
	Tom:	**And what did Pia read?**	**Et Pia a lu quoi?**	**¿Y Pia leyó qué?**
	Mina:	A thriller.	Un thriller.	Un thriller.

(*Continued*)

(Continued.)

S		English translation	French	Spanish
5	Albert:	Mina and Tom played a concert. Mina played the guitar.	Mina et Tom ont joué un concert. Mina a jouait de la guitare.	Mina y Tom hicieron un concierto. Mina tocó la guitarra.
	Regina:	**And what did Tom play?**	**Et Tom a joué quoi?**	**¿Y Tom tocó qué?**
	Albert:	A cajón.	Un cajón.	Un cajón.
6	Zoe:	Albert and Regina played with Lego. Albert built a tower.	Albert et Regina ont joué avec Lego. Albert a construit une tour.	Albert y Regina jugaron con Lego. Albert construyó una torre.
	David:	**And what did Regina build?**	**Et Regina a construit quoi?**	**¿Y Regina construyó qué?**
	Zoe:	A ship.	Un bateau.	Un barco.
7	Isaac:	Zoe and David took a pottery course. Zoe made a bowl.	Zoe et David ont suivi un cours de poterie. Zoe a fait un bol.	Zoe y David tomaron un curso de alfarería. Zoe hizo un cuenco.
	Lena:	**And what did David make?**	**Et David a fait quoi?**	**¿Y David hizó qué?**
	Isaac:	A cup.	Une tasse.	Una taza.
8	Sarah:	Isaac and Lena had a drink together. Isaac drank a beer.	Isaac et Lena ont pris un verre ensemble. Isaac a bu une bière.	Isaac y Lena tomaron una copa juntos. Isaac bebió una cerveza.
	Bruno:	**And what did Lena drink?**	**Et Lena a bu quoi?**	**¿Y Lena bebió qué?**
	Sarah:	A wodka.	Un wodka.	Un vodka.
9	Aaron:	Sarah and Bruno selected their toys. Sarah selected a ball.	Sarah et Bruno ont sélectionné leurs jouets. Sarah a choisi une balle.	Sarah y Bruno seleccionaron sus juguetes. Sarah eligió una pelota.
	Tina:	**And what did Bruno select?**	**Et Bruno a choisi quoi?**	**¿Y Bruno eligió qué?**
	Aaron:	A puppet.	Une marionnette.	Un muñeco.
10	Laura:	Aaron and Tina dressed up. Aaron put on a suit.	Aaron et Tina se sont déguisés. Aaron a mis un costume.	Aaron y Tina se disfrazaron. Aaron se puso un traje.
	Boris:	**And what did Tina put on?**	**Et Tina a mis quoi?**	**¿Y Tina se puso qué?**
	Laura:	A blazer.	Une veste.	Una chaqueta.
11	Nina:	Laura and Boris gave Linda their presents. Laura gave her a book.	Laura et Boris ont offert leurs cadeaux à Linda. Laura lui a offert un livre.	Laura y Boris le dieron sus regalos a Linda. Laura le dio un libro.
	Juri:	**And what did Boris give her?**	**Et Boris a offert quoi?**	**¿Y Boris le dio qué?**
	Nina:	A bracelet.	Un bracelet.	Una pulsera.

(*Continued.*)

S		English translation	French	Spanish
12	Olga:	Nina and Juri prepared a salad. Nina chopped a tomato.	Nina et Juri ont préparé une salade. Nina a coupé une tomate.	Nina y Juri prepararon una ensalada. Nina cortó un tomate.
	Frank:	**And what did Juri chop?**	**Et Juri a coupé quoi?**	**¿Y Juri cortó qué?**
	Olga:	A cucumber.	Un concombre.	Un pepino.
13	Tavi:	Olga and Frank wrote new songs. Olga wrote a ballad.	Olga et Frank ont écrit de nouvelles chansons. Olga a écrit une ballade.	Olga y Frank escribieron nuevas canciones. Olga escribió una balada.
	Kim:	**And what did Frank write?**	**Et Frank a écrit quoi?**	**¿Y Frank escribió qué?**
	Tavi:	A hymn.	Un hymne.	Un himno.
14	Ida:	Tavi and Kim carved wood figures. Tavi carved a squirrel.	Tavi et Kim sculptaient figurines en bois. Tavi a sculpté un écureuil.	Tavi y Kim tallaron figuras de madera. Tavi talló una ardilla.
	Romeo:	And what did Kim carve?	Et Kim a sculpté quoi?	¿Y Kim talló qué?
	Ida:	A mouse.	Une souris.	Un ratón.
15	Martin:	Ida and Romeo looked for mushrooms. Ida found a portobello.	Ida et Roméo cherchaient des champignons. Ida a trouvé un portobello.	Ida y Romeo buscaron setas. Ida encontró un portobello.
	Flora:	**And what did Romeo find?**	**Et Romeo a trouvé quoi?**	**¿Y Romeo encontró qué?**
	Martin:	A morel.	Une morille.	Una morilla.
16	Marta:	Martin and Flora visited the library. Martin took a book.	Martin et Flora ont visité la bibliothèque. Martin a pris un livre.	Martin y Flora visitaron la biblioteca. Martin se llevó un libro.
	Jan:	**And what did Flora take?**	**Et Flora a pris quoi?**	**¿Y Flora se llevó qué?**
	Marta:	A CD.	Un CD.	Un CD.
17	Robert:	Marta and Jan received prices. Marta won a laptop.	Marta et Jan ont reçu des prix. Marta a gagné un ordinateur portable.	Marta y Jan recibieron los premios. Marta ganó una computadora portátil.
	Helene:	**And what did Jan win?**	**Et Jan a gagné quoi?**	**¿Y Jan ganó qué?**
	Robert:	A lamp.	Une lampe.	Una lámpara.
18	Samira:	Robert and Helene went to the party. Robert brought a cake.	Robert et Hélène sont allés à la fête. Robert a apporté un gâteau.	Robert y Helene fueron a la fiesta. Robert trajo un pastel.
	George:	**And what did Helene bring?**	**Et Hélène a apporté quoi?**	**¿Y Helene trajo qué?**
	Samira:	A pudding.	Un boudin.	Un pudín.

(*Continued*)

(*Continued.*)

S		English translation	French	Spanish
19	Pierre:	Samira and George sold some old furniture. Samira sold an armchair.	Samira et George ont vendu de vieux meubles. Samira a vendu un fauteuil.	Samira y George vendieron algunos muebles viejos. Samira vendió un sillón.
	Eva:	**And what did George sell?**	**Et George a vendu quoi?**	**¿Y George vendió qué?**
	Pierre:	A couch.	Un canapé.	Un sofá.
20	Anna:	Pierre and Eva planted trees. Pierre planted an oak.	Pierre et Eva ont planté des arbres. Pierre a planté un chêne.	Pierre y Eva plantaron árboles. Pierre plantó un roble.
	Louis:	**And what did Eva plant?**	**Et Eva a planté quoi?**	**¿Y Eva plantó qué?**
	Anna:	A beech.	Un hêtre.	Una haya.

Results from the mixed-effects linear regression model measuring the correlation between acceptability rates and the variables CONJ, WH, and LANGUAGE, in the questionnaire study

Model evaluation statistics: AIC $= 1854.4$, marginal $R^2 = 0.2$, conditional $R^2 = 0.5$.

```
Linear mixed model fit by REML. t-tests use Satterthwaite's method ['lmerModLmerTest']
Formula: Rating ~ Conj + Wh + Language + Wh:Language + (1 | StimulusID) +
    (1 | ParticipantID)
   Data: q

REML criterion at convergence: 1838.4

Scaled residuals:
    Min      1Q   Median      3Q      Max
-3.10540 -0.60491  0.03128  0.66652  2.67822

Random effects:
 Groups        Name        Variance Std.Dev.
 ParticipantID (Intercept) 0.32839  0.5731
 StimulusID    (Intercept) 0.02022  0.1422
 Residual                  0.46355  0.6808
Number of obs: 820, groups:  ParticipantID, 41; StimulusID, 20

Fixed effects:
                     Estimate Std. Error        df t value Pr(>|t|)
(Intercept)           0.24115    0.14255  51.25650   1.692   0.0968 .
Conjbare             -0.37729    0.04778 764.33428  -7.896 9.98e-15 ***
Whwh                  0.56648    0.06814 758.31540   8.314 4.28e-16 ***
LanguageSpanish      -0.15611    0.19128  44.31227  -0.816   0.4188
Whwh:LanguageSpanish -0.99879    0.09522 758.61212 -10.489  < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Correlation of Fixed Effects:
            (Intr) Conjbr Whwh   LnggSp
Conjbare    -0.168
Whwh        -0.239  0.000
LangugSpnsh -0.687  0.000  0.178
Whwh:LnggSp  0.171  0.000 -0.716 -0.249
```