Givenness and the difference between *wh*-fronted and *wh*-in-situ questions in Spanish*

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Abstract

In the last fifteen years, the literature on *wh*-questions has tried to understand speakers' intuitions regarding the meaning differences between *wh*-in-situ (WIQs) and *wh*-fronted (WFQs) questions. The different proposals agree in that WIQs require *givenness*, but there is no consensus on what notion of givenness is at stake. In this paper I argue that in Castilian Spanish WIQs presuppose that the WIQ is embedded in a specific discourse: what is *given* is then the (hierarchical) discourse-structure in which the question is embedded. Spanish illustrates a possibility on the spectrum of variation, imposing very specific discourse-structural conditions to allow WIQs. From a broader theoretical perspective, the proposal made in this paper makes a contribution to the study of presupposition, since I argue that there are conventional linguistic devices that target discourse-structure.

Keywords: *wh*-questions, *wh*-in-situ questions, discourse structure, presupposition

1 Introduction

It is well known that some Romance languages have two strategies available for *wh*-question formation: the wh-word can be left in-situ (WIQ) or placed at the front (WFQ). This is illustrated below for French (1), Brazilian Portuguese (2) and (Castilian) Spanish (3) (examples are in a WFQ/WIQ sequence).[1]

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[1]Notice that the English paraphrase is misleading. As we will see below there is a meaning difference between WIQs and WFQs in Castilian Spanish and the same has been argued for some dialects of French and Brazilian Portuguese.

(1)   *Qu' est-ce que vous faites ce   soir?   /Vous faites quoi ce*
      what QUES   you do   this evening /you   do   what this
      soir?
      evening
      'What are you doing tonight?'[2]

(2)   *O que você está lendo? / Você (es)tá lendo   o quê?*
      what you are reading / you are   reading what
      'What are you reading?'

(3)   *¿Qué hacéis   esta tarde?   / ¿Hacéis qué   esta tarde?*
      what do.2PL this evening / do.2PL   what this evenening
      'What do you do this afternoon?'

Part of the literature on the contrast between WIQs and WFQs in Romance languages has focused on investigating the underlying syntax allowing both distributions of the *wh*-word (see Bayer and Cheng In Press for an overview). Another line of research in the literature tries to understand whether there is a meaning difference between the different strategies available to ask otherwise very similar questions. I am concerned here with the second issue, and leave for future research an exploration of possible consequences for the syntax.

The proposal I offer in this paper is based on (Castilian) Spanish data and the claims are argued to hold for this language. I argue that WIQs in Spanish have very specific discourse conditions: a WIQ presupposes that there is an immediately preceding discourse utterance with assertoric force. The WIQ is a follow-up inquiry related to such discourse move (see Roberts 1996 a.o. for the notion of discourse move). The larger agenda in this paper is thus concerned with understanding the discourse function of the various questions that are members of the *wh*-question family. In Biezma and Rawlins (2012, 2017) it is claimed that *wh*-questions (WFQs in particular) can introduce a (new) question under discussion (QUD) (while non-*wh*-questions cannot). This paper addresses the question whether WFQs and WIQs differ on this respect. A second part of this larger agenda would be to understand how pragmatic and discourse-level constraints interact in the construction of syntactic structure, but this will be set aside here for the future.

At the end of this paper we will be left with a challenging open question, namely, whether this proposal also accounts for data in other languages, and, if it doesn't, why not. Prima facie, we will see that the proposal presented here seems to handle at least much of the data found in the literature regarding other Romance languages, but empirical work needs to be done to find out whether this is indeed the case and if not, where different languages vary.

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[2]A reviewer points out that (1) is not just a fronted interrogative but a cleft. The (purely) fronted version *Que vous faites ce soir?*, is not possible. *Que faites vous?*, featuring inversion, is grammatically possible. It is not clear whether it is acceptable in this scenario.

At any rate, it is not unexpected to find variation across languages regarding the meaning differences between WIQs and WFQs. Romance languages, for example, seem to have evolved from having only one strategy to form *wh*-questions, namely *wh*-fronting and subject-verb inversion, to both *wh*-fronted with subject-verb inversion and *wh*-in-situ without subject-verb inversion.[3] In fact, synchronically, we find variation in frequency regarding the different strategies (for example, WIQs are more frequent in Quebecois French than European French) and in felicity conditions (e.g. in Quebecois French the difference between WIQs and WFQs seems to be less sharp than in European French). Hopefully, differences between languages will be explained by evaluating and taking into account the overall strategies available to speakers to convey different meanings.

The remainder of the paper is organized as follows: in §2 I review the different notions of *givenness* proposed in the literature to account for the contrast between WIQs and WFQs in French and Brazilian Portuguese. In §3 I provide new data showing that in Castilian WIQs trigger a discourse-structure presupposition, i.e. they are felicitous if they are integrated in a discourse-structure with specific characteristics. In this sense, what is *given* is a specific (hierarchical) discourse structure. This special presupposition is discussed in §4. I conclude with open questions and the sketch of a research agenda to investigate how this hypothesis in other languages.

2 The meaning of *wh*-in-situ questions

2.1 French

Discussing (1) above, Déprez et al. (2013) noted that in asking the WIQ, the speaker is taking for granted that the addressee plans on doing something that evening (or that if they don't already have plans, they are likely eager to make some). However, such assumptions are not necessary in order to utter the WFQ version. The idea of taking something for granted (as *given*) when uttering a WIQ was first mentioned in Coveney (1989). According to Coveney (4-a) is fine but (4-b) is anomalous in the context described:

> (4) The speaker asks her friend, who is looking in through a shop window:
>
>   a. *Qu' est-ce que tu veux?*   WFQ
>   What is-it   that you want
>   'What do you want?'
>   b. *Tu veux quoi?*
>   you want what

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[3]In some languages such as Dolomitic Ladin WFQs are possible without subject-verb inversion (Georg Kaiser p.c.).

'What do you want?'

By uttering (4-b) the speaker is[4] "…strongly presupposing that [her friend] wanted something, whereas [her friend] had not given any indication of this." This inspired proposals such as Chang (1997); Cheng and Rooryck (2000), according to which, at least in some dialects of French, WIQs occur in discourse contexts characterized as *strongly presuppositional*. These contexts would exclude negative answers such as *rien/personne* ('nohing'/'no one'). However, Adli (2006); Hamlaoui (2009, 2010); Mathieu (2009) have offered counterexamples in naturally occurring speech showing that such responses are in fact allowed,[5] opening the door to debates regarding the different notions of *givenness* that may underlie the contrast between WIQs and WFQs. Recent proposals have claimed that WIQs are felicitous when the non-*wh* part of the question is not *new* but given à la Schwarzschild (1999); Wagner (2006) (see Hamlaoui 2009, 2010 as well as Déprez et al. 2013 for a variation on this approach). From this perspective, neither (truth-conditional) presuppositions nor obligatorily positive answers characterize the contexts for *wh*-in-situ. *Givenness* in these proposals does not require having been mentioned either. The notion of *givenness* at stake is one in which "[m]arking a constituent as given requires that an appropriate antecedent is either salient or can be constructed from material salient in the current discourse" (Wagner 2006:6).[6]

2.2   *Brazilian Portuguese*

The difference between WIQs and WFQs has also been studied in Brazilian Portuguese.[7] For example, examining corpus data, Pires and Taylor (2007) showed that the distribution of WIQs is more constrained than that of WFQs. For example, WIQs are found when the speaker is requesting "more specific information about something mentioned immediately prior". (In Pires and Taylor 2007 ↑ marks raising intonation and ↓ falling intonation).

(5)   The employee in a bakery is giving the manager the daily report.

Employee: I made desserts.

Manager: Você fez [que ↑tipo de sobremesa↓]?   WIQ
'You made what kind of desserts?'

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[4]Cited from Chang (1997).

[5]See also Déprez et al. (2013) for further disassociation of the bias towards positive answers and the question-meaning, realized by (an abstract) intonation (morpheme).

[6]Notice that this notion of *givenness* is not in opposition to discourse-*new*.

[7]It has been claimed that in European Portuguese WIQs have an *echo*-interpretation (see Ambar and Veloso 2001; Pires and Taylor 2007 a.o.), but it seems that further examination of the data may lead to the conclusion that differences between WIQs and WFQs in European Portuguese are similar to those argued for below in Brazilian Portuguese (thanks to Gabriela Matos p.c. for discussion on this point).

WIQs are also possible if "further questioning for new information is expected, as in legal questioning":

(6)   Attorney: Você pode dizer o que aconteceu no dia 1o de janeiro
             de 2005, às 4 da tarde.
             'Tell me what happened on January 1st, 2005 at 4 pm.'
        Defendant: Eu estava dirigindo na Avenida dos Andradas.
             'I was driving along Andrews Avenue.'
        Attorney: E você estava dirigindo em que↑ direção↓?   WIQ
             'And you were driving in which ↑ direction↓?'

Furthermore, Pires and Taylor (2007) show that WIQs are not possible in general out of the blue:

(7)   You approach a colleague at work and ask, out of the blue:
        B: #Você conhece quem em São Paulo?   WIQ
             You know who in Sao Paolo?

On the basis of these and other examples, Pires and Taylor (2007) conclude that WIQs "are special in that the set of possible answers to them is part of the CG. [...] [W]h-in-situ in English and Brazilian Portuguese (in the more restrictive dialect we are considering) is possible when the information being requested is expected (by the speaker) to be part of the [Common Ground]" (Pires and Taylor 2007:205-206). This is a different notion of *givenness*, though it is not entirely clear how the answer to the question could be part of the common ground in the examples above given that the questioner does not know the answer and is actually requesting it.[8] In any case, the data shows clearly that WIQs are special and have a more restricted distribution than WFQs, which are possible out of the blue without constraints.

2.3   Interim summary and a look ahead

What we have seen so far is that at least for some Romance dialects there seems to be a difference in meaning between WIQs and WFQs, with WIQs having a more restricted distribution. Attempts to account for this meaning difference have tried to cash it out in terms of *givenness*, and one of the great debates in this literature concerns the correct notion of givenness needed to explain the data.

   In what follows I offer a description of the data in Castilian Spanish and argue that here too the difference between WIQs and WFQs can, in a sense, be characterized in terms of *givenness*. However, contrary to earlier proposals,

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[8]It has been claimed that in rhetorical questions the answer to the question is already part of the CG (see Caponigro and Sprouse 2007), but this doesn't apply here since the questions in (5) and (6) do not have a rhetorical reading in those contexts.

I argue that, in Spanish, the relevant notion of *givenness* must be structural. In my proposal, the difference between WIQs and WFQs is stated in terms of presuppositional constraints on discourse structure (where discourse is understood as a hierarchical order of moves with internal rules, e.g. Roberts 1996). I argue that WIQs differ from WFQs in that the former trigger the presupposition that the move is part of a discourse structure with specific characteristics.

3 WIQs in Spanish

It has been claimed that WIQs in Spanish differ from French and Portuguese in that the *wh*-word has to be placed at the very end of the clause (see Uribe-Etxebarria 2002). However, the following examples are possible in Castilian Spanish,[9] showing that in this language too the *wh*-word can appear in any position where the corresponding fleshed-out constituent could appear:

(8)   A: ¿Cuándo compraste todos estos instrumentos musicales?
                'When did you buy all this musical instruments?'
        B: Compré la trompeta el lunes.
                'I bought the trumpet on Monday.'
        A: ¿*[Y] compraste [cuándo] la guitarra [cuándo]?*   WIQ
                and bought   when   the guitar   when
                'And when did you buy the guitar?'

While I will show that WIQs in Spanish have a narrower distribution than WFQs, they are actually very much like WFQs in many other respects. Like WFQs, WIQs can have either an information-seeking reading or a rhetorical one, and also as with WFQS, WIQs with multiple *wh*-words are possible:

(9)   B is making a thorough record of what has been bought for the party, and where.
        A: Susana compró las bebidas en el supermercado mientras que Antonio compró la comida en el bar de la esquina.
                'Susana bought the drinks at the supermarket whereas Roberto bought the food at the bar at the corner'.
        B: ¿*Y Juan compró qué dónde?*   WIQ
                and John bought what where
                'And where did John buy what?'

In addition, adopting a framework in which the meaning of a question is the set of its possible answers (Hamblin 1973), the semantics of WIQs must be the same as the semantics of WFQs since the possible answers are the same.

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[9]All examples have been checked in a pilot study with native speakers of Castilian Spanish.

Given the discussion so far, differences between WFQs and WIQs must lie in their felicity conditions. In what follows I provide evidence indicating that WIQs' felicity conditions in Spanish have to do with discourse-structure.

3.1 The discourse distribution of WIQs in Spanish

It has been noted for a long time that there is a meaning-contrast between WIQs and WFQs in Spanish, and several proposals have been put forward to account for the differences. Let us consider the example in (10):

(10)   My father, my mother and myself went to the store to get some eggs, milk and coffee.

  A: My mother bought the eggs.
  B: *¿Y   tu   padre compró qué?*   WIQ
    and you father bought what
    'And what did your father buy?'

Jiménez (1997) (see also Etxepare and Uribe-Etxebarria 2005 a.o. for slightly different but similar proposals) argued that the domain the *wh*-word ranges over is very restricted in WIQs: the speaker presupposes that the variable introduced by the *wh*-word finds a value within a restricted set (above: {eggs, milk, coffee}). However, this claim is not confirmed by the data. The WIQ in (11) is felicitous despite the fact that there isn't obviously a restricted set in which the *wh*-variable must find its value:

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

WIQs in Spanish cannot be uttered out of the blue. This explains the infelicity of the WIQ in (12), in which the WFQ is fine (context adapted from Coveney 1995):

(12)   Three friends are sitting at the table after finishing brunch on a Sunday afternoon. After a long pause during which people simply ate, A asks (initiating a new conversation topic):
  A: *¿Qué   hacéis esta tarde?*   WFQ
     what do.2PL this afternoon
    'What are your plans for the afternoon?'
  A':   ?#*¿Esta tarde   hacéis   qué?*
    this   afternoon do.2PL what

'What are your plans for the afternoon?'

The WIQ in A'-(12) would be felicitous if it had been preceded by an utterance spelling out what the speaker him or herself was doing that afternoon:[10]

(13)   A":   *Esta tarde   voy a visitar a mi abuela. ¿Y*
                this afternoon go to visit   to my grandma and
                vosotros esta tarde   hacéis qué?
                you   this afternoon do   what
                'This afternoon I'm visiting my grandma. And you guys?,
                what are your plans?'

The speaker in (13) does not necessarily expect the addressees to (already) have made plans. The important difference with the unacceptable example A' in (12) is that in (13) the topic of afternoon plans has been already introduced.

WIQs cannot be out of the blue, but not just any antecedent will do. In (11), for example, the utterance of the WIQ *y Susana compró dónde?* ('and where did Susana get something?') wouldn't be felicitous, even though 'buying something' invokes 'buying somewhere' and could be *given* in Wagner's (2006) terms. A more complex case is presented in (14), where we can clearly see that a notion of *givenness* à la Wagner (2006) would not be enough: the WIQ about the book John bought in (14) is not acceptable, even though under Wagner's characterization of givenness that John bought X is *given*.

(14)   A: No te lo vas a creer, vi a Juan comprando un libro.
                You won't believe this, I just saw Juan buying a book!
        B: ¿Qué libro compró Juan?   WFQ
                'What book did John buy?'
        B':   #¿Juan compró qué libro?   WIQ
                'What book did John buy?'

However, if the WIQ is about what A had seen, which is the ongoing topic of conversation in (14), the WIQ is felicitous, and of course the WFQ is (as always) felicitous.

(15)   B":   ¿Qué libro viste comprár a Juan?   WFQ
                'What book did John see Juan buying?'
        B"':   ¿[Pero] Viste a Juan comprár qué libro?   WIQ
                '(But) What book did you see John buy?'

The discussion so far leads us to the following informal characterization:

(16)   WIQs are *follow-up moves*   (Informal 1)

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[10]According to data in Pires and Taylor (2007), it seems that in Brazilian Portuguese the extra-linguistic context would be enough to make the WIQ felicitous.

> The utterance of a WIQ is felicitous when requesting further information based on the immediately preceding utterance with assertoric force, or when asking for more information to obtain a complete answer to the ongoing questioning/line of inquiry.[11]

In what follows I formalize this proposal using the Question Under Discussion (QUD) discourse model, in which discourse is understood as hierarchical order of moves (see Roberts 1996 a.o.).

3.2   WIQs as follow-up moves

The QUD model is an intentional model in which there are conversational goals, with participants developing strategies in order to achieve them. In this conception, discourse is a cooperative inquiry (Grice 1975; Stalnaker 1978; Lewis 1979 a.o.), where an inquiry is the investigation of alternatives, i.e. the comparison of different possible ways things might be in order to determine which reflects better the way things are. Questions are the linguistic counterpart of inquiries and they are used to pose a subject matter for inquiry, that is, a set of alternatives to investigate, the semantic meaning of interrogative sentences (the canonical means for posing a question, but not the only one). Questions are then the formal objects reflecting the interlocutor's goals. Once participants agree on a communal inquiry, they commit to solving it, and their utterances (discourse moves) either attempt to resolve some QUD (*payoff* moves) or posit a question that could be answered by discourse participants (*setup* moves) and would contribute to solving the main question (the *Big Question*). The assumption is that "All that is given at the sentential level, conventionally, are certain sorts of presuppositions about the place and function of the utterance in the information structure of the discourse in which it occurs" (Roberts 1996).

Hierarchical discourse models of this sort are designed to predict well-formedness in conversational exchanges and allow us to make predictions regarding question-answer sequences by assuming notions of relevance and congruence. The hierarchical structure of the dialogue in (17) is illustrated with the D(discourse)-tree in (18) (superscripts indicate the order of spelled-out moves while moves between parenthesis are implicit moves).

(17)   A[1]:   I can offer you something to drink, do you want coffee

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[11]Notice that this proposal is further supported by the fact that WIQs in Spanish can always be preceded by *y* ('and') or *pero* ('but'), which are in this case discourse markers (see Asher and Lascarides 2003 a.o.) indicating that the question is integrated in a larger discourse structure, while this is not the case for all felicitous WFQs. Examples above where the WIQ is infelicitous wouldn't improve by the presence of these markers. Research on the exact meaning of these markers and their distribution, in particular in their licensing in WIQs/WFQs as well as non-*wh*-questions, is left for the future.

	or tea?
B:	Hum!..., I don't know
A^2:	Do you want coffee?

(18)   (WHAT do you want to drink?)
                      |
            ^{1}Do you want coffee or tea?

    ^{2}Do you want coffee?   (Do you want tea?)

Following Biezma and Rawlins (2012, 2017), I take it that only constituent questions can introduce new QUDs (*what do you want to drink?* in (18)) while non-*wh* questions are tools to discover some or all of the alternatives that are possible answers to a QUD: they are strategies to answer the QUD, i.e. sub-questions that help find an answer to the QUD. Linguistic cues and discourse constraints such as question/answer congruence based on focus structure and relevance allow us to identify the QUD and predict discourse wellformedness (for the sake of simplicity, I set aside focus marking in what follows).

(19)   **Relevance:** A move M is *Relevant* to a question q iff M either introduces an (at least) partial answer to q in context c_M (M is an assertion) or is part of a strategy to answer q (M is a question).

(20)   **Answerhood:** (Assumption: Following Hamblin 1973, the semantic meaning of a question is the set of its possible answers.)

   a.   A partial answer to a question q is a proposition which contextually entails the evaluation – either true or false – of at least one possible answer to q.

   b.   A complete answer is a proposition that contextually entails an evaluation for each element in its semantic meaning.

The following algorithm (from Biezma and Rawlins 2017) identifies closest dominating constituent question to serve as QUD. QUDs are functions from moves to question-denotations, i.e. $QUD(M)$ are semantically questions:

(21)   **QUD percolation**
        Where M is a move, a tree fragment containing M is licensed only if:

   a.   (i)   If M is an overt move, $\text{Content}(M) = [\![\alpha_M]\!]^{c_M}$, where α_M is the linguistic form uttered in move M and c_M is the context of utterance of M (a set of live worlds at the time of utterance, $c_M \subseteq W$).

        (ii)   Otherwise, $\text{Content}(M) \subseteq \mathcal{P}(W)$. ($\approx$ implicit moves are questions.)

   b. $\text{Content}(M)$ is relevant to $QUD(M')$ for every dominating

move M'.

c. $\text{QUD}(M) = \text{Content}(M')$, where M' is the move immediately dominating M (if it exists).

d. $\text{QUD}(M) = \emptyset$ (if there is no immediately dominating move; M is the first move in the discourse structure).

In this proposal, constituent questions can either introduce a new QUD or a relevant subquestion. Assertions introduce at least partial answers. Any other move preserves the QUD from their dominating move. With this machinery in hand we can revisit our proposal for WIQS as *follow-up* moves:

(22)   WIQs are *follow-up* moves: (Informal 2)
A M_{WIQ} is part of a strategy to obtain a complete answer to an ongoing QUD to which the immediately preceding payoff move is a partial answer, or to request undisclosed information about the immediately preceding payoff move.

In order to properly cash out this notion we need some more details regarding the semantics of questions. I adopt a Hamblin approach to questions (Hamblin 1973) in which the denotations of interrogative clauses are sets of propositions, each corresponding to a possible answer to the question.

(23)   Let M be the move of uttering a declarative clause and e a variable ranging over eventualities (I will informally use 'P' as a place-holder for what would intuitively be recovered as the main event predicate in the clause, setting aside complex cases for future research):
$\llbracket M \rrbracket = \{\lambda w.\exists e.P(e)(w)\}$

We can then informally characterize the associated argument-based questions and adjunct-based questions as follows (where 'Q' stands in for an adjunct predicate):

(24)   Let M_{q} be the move of uttering a *wh*-interrogative clause (either in-situ or fronted), and y any type:
Argument question:
$$\llbracket M_{\text{q}} \rrbracket = \{p_{\langle s,t \rangle} | \exists x \in D_{\langle y \rangle} : p = \lambda w. \exists e P(x)(e)(w)\}$$
Adjunct question:
$$\llbracket M_{\text{q}} \rrbracket = \{p_{\langle s,t \rangle} | \exists Q \in D_{\langle y \rangle} : p = \lambda w. \exists e (P(e)(w) \& Q(e)(w))\}$$

Felicity conditions for WIQs will be stated in terms of *follow-up questions*:

(25)   Let M_{WIQ} be the move made by the utterance of a WIQ, and M_{WFQ} its WFQ parallel.

a. $\llbracket M_{\text{WIQ}} \rrbracket = \llbracket M_{\text{WFQ}} \rrbracket$

    b.   Felicity conditions: M_{WIQ} are felicitous iff M_{WIQ} is a *follow-up question*.

(26)   ***Follow-up questions*:** Let $QUD(M_1)$ be a question in a discourse tree dominating a pay off discourse move M_1 (where QUDs can remain implicit):

M_{FU} is a follow-up question iff M_1 immediately precedes (the utterance of) M_{FU}, M_1 is an answer to $QUD(M_1)$, and either

    a.   There is a QUD immediately dominating $QUD(M_1)$, i.e. a higher QUD dominating M_1,
$QUD(QUD(M_1)) \underset{\text{def}}{=} H\text{-}QUD(M_1)$, s.t. $[\![M_{\mathrm{FU}}]\!] \in H\text{-}QUD(M_1)$
Paraphrase: M_{FU} is a question that is part of a strategy to answer the closest yet un-answered QUD.

<u>or</u>

    b.   Given $[\![M_1]\!] = \{\lambda w. \exists e P(e)(w)\}$,[12]
    (i) $[\![\ulcorner M_1]\!] = \lambda w. \exists e P(x)(e)(w)$,
          $[\![M_{\mathrm{FU}}]\!] = \{p | \exists x \in D_{\langle y \rangle} : p = [\![\ulcorner M_1]\!]\} = [\![?\ulcorner M_1]\!]$

    or

    (ii) $[\![\ulcorner M_1]\!] = \lambda w. \exists e (P(e)(w)\ \&\ Q(e)(w))$,
          $[\![M_{\mathrm{FU}}]\!] = \{p | \exists Q \in D_{\langle y \rangle} : p = [\![\ulcorner M_1]\!]\} = [\![?\ulcorner M_1]\!]$
    Paraphrase: M_{FU} is a requests of further (argument or adjunct) information regarding the event described in M_1.[13]

The proposal is that WIQs are follow-up questions as defined in (26). Let us see now how this proposal can handle the data we have seen above. Obviously the first prediction is that WIQs are not possible out of the blue, since there is no immediately dominating move with assertoric force (e.g. (12)). In the case of (11), B's utterance signals that the discourse has the following structure:

(27)
                (Who bought what?)
(What did Ana buy?)   ²What did Susana buy?$=M_{\mathrm{WIQ}}$
¹Ana bought herself a skirt $=M_1$

The WIQ is felicitous because M_{WIQ} is part of a strategy to answer the closest QUD dominating M_1 that has not been completely answered ($[\![M_{WIQ}]\!] \in H\text{-}QUD(M_1)$). M_1 answers the (implicit) question *what did Ana buy?*, and the follow-up is a question that contributes to obtaining a complete answer to the

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[12] $[\![\ulcorner M_1]\!]$ is an auxiliary definition.

[13] It remains for future work to investigate whether and, if so, how, WIQs are related to *sprouting*, a subtype of sluicing in which the remnant of ellipsis has no overt correlate in the antecedent clause, e.g. *She applied for the position but nobody could figure out why* (see Chung et al. 2011 for an overview of various approaches to the phenomena) and whether variation with respect to WIQs across languages is related to variation on language-specific constraints on sprouting.

(immediately) higher question *who bought what?*, namely, *what did Susana buy?* (the in-situ word order merely signals that the inquiry is already ongoing). This is the same discourse structure that the WIQ in (13) signals:

(28)

(Who does what this evening?)

(What are the speaker's plans this evening?) ^{2}What are the addressee's plans this evening?$=M_{\text{WIQ}}$

^{1}I'm visiting my grandmother$=M_1$

The utterance of the M_{WIQ} is felicitous, and it's predicted to be so, since the discourse model can easily generate a discourse structure like (28), reflecting speakers' intuitions regarding (13).

Let us now consider the D-Tree in (29), corresponding to the dialogue in (14) before the WIQ is uttered:

(29)

(What happened to you?)

(What did you see?)   (What was done to you?)   (…)

I just saw Juan buying a book

(30)   Deriving infelicity:
$$[\![M_{\text{WIQ}}]\!] = \{p|\exists x \in D_{\langle y \rangle} : p = \lambda w.\exists e.\text{Juan\_buy}(x)(e)(w) \ \& $$
$$\text{book}(x)\} = [\![\text{What book did Juan buy?}]\!]$$

    a. $H\text{-}QUD(M_1) = \{\ [\![\text{What did you see?}]\!], [\![\text{What was done to you?}]\!] \dots\}$

       Hence $[\![M_{\text{WIQ}}]\!] \notin H\text{-}QUD(M_1)$

    b. $[\![M_1]\!] = \{\lambda w.\exists e \exists e' \text{A\_saw}(\text{Juan\_buy\_book}(e'))(e)\}$
       $[\![?^\ulcorner M_1]\!] =$
       $\{p|\exists x \in D_{\langle y \rangle} : p = \lambda w.\exists e \exists e' \text{A\_saw}(\text{Juan\_buy}(x)(e'))(e)\}$
       Hence $[\![M_{\text{WIQ}}]\!] \neq [\![?^\ulcorner M_1]\!]$

The WIQ in (14) is infelicitous because it is not a *good* follow-up question: it doesn't follow up on a yet unanswered question (the dominating yet-unanswered QUD at the time of utterance of M_1 is about what happened to A, not about what Juan did or bought) and the WIQ is not about the main event that $[\![M_1]\!]$ predicates about, i.e. what A saw (the WIQ is not an adjunct question of M_1 either). We predict that a WIQ about what A *saw*, B''' in (15), should be felicitous, and this predictions is indeed borne out (see (31)-(32)):

(31)   A: You won't believe this, I just saw Juan buying a book!
      B: ¿Viste a Juan comprar qué libro? M_{WIQ}
        'What book did see John buy?'

(32) $[\![M_{\text{WIQ}}]\!] =$
     $\{p|\exists x \in D_{\langle y \rangle} : \lambda w.\exists e.\exists.e'.\exists x. \text{A\_saw}(\text{Juan\_buy}(x)(e'))(e) \ \&$
                                           $\text{book}(x)\} =$

     {A saw Juan buying Emma; A saw Juan buying 1984…}

$$\llbracket ?^\ulcorner M_1 \rrbracket = \{p \mid \exists x \in D_{\langle y \rangle} : p = \lambda w. \exists e \exists e' \text{A\_saw}(\text{Juan\_buy}(x)(e'))(e)$$
$$\& \; \text{book}(x)\}$$

Hence $\llbracket M_{\text{WIQ}} \rrbracket = \llbracket ?^\ulcorner M_1 \rrbracket$

In sum, WIQs signal/trigger a discourse-structure presupposition: WIQs presuppose that there has been a previous discourse move of a certain type (I further develop this idea in section 4). This property explains the difference in discourse function with respect to WFQs: contrary to WFQs, WIQs cannot introduce a new QUD and explicitly signal that they are embedded in an ongoing discourse with specific characteristics.[14]

This proposal appears, in principle, to be able to handle much of the data in French and Brazilian Portuguese that was presented in §2, but further research would be needed to have a complete understanding of the data in those languages and to evaluate whether this proposal fully applies to them. At any rate, it wouldn't be surprising to find differences across languages, with (Castilian) Spanish presenting one possibility in the spectrum.

3.3   A brief note on echo-questions

Before discussing the status of discourse-structure presuppositions, I will say a brief word about *echo*-questions, often related to WIQs in the literature. According to the proposal made here, echo-questions would not be an instance of WIQs as follow-up moves, since there are cases of echo questions that follow a question, not an assertion (as required for WIQs in (26)):

(33)   A: *¿Qué trajo   María de la fiesta?*   WFQ
            what brought María of the party
            'What did María bring from the party?'

       B: *¿Qué trajo   María de dónde?*   Echo Question
            what brought María of where
            'What did María bring from where?'

In a way, it is not surprising that echo questions are not what we are calling WIQs here. Echo questions require very specific discourse and intonational constraints, i.e. they require parallelism with the previous utterance as well as

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[14]The current theory accounts for the licensing of WIQs and appeals to discourse (structural) constraints. Notice, however, that a WFQ is always possible when a WIQ is licensed. The reasons why a speaker decides to conventionally indicate, by uttering a WIQ, that her/his question requests further (yet undisclosed) relevant information in the ongoing discourse may vary: WIQs can be used to naively request further information or, e.g. to object to inferences triggered by a previous claim by requesting this information (B''' in (15) may use the WIQ to raise his/her suspicions that Juan doesn't consume *prestigious* literature). At any rate, just as with other constructions, additional meanings are a byproduct of the conventional meaning of WIQs together with other indicators of the speaker's attitude such as prosody, and the interaction of the utterance with the particular context (including background information).

a particular intonational contour in the *wh*-word, not found in regular WIQs. On the semantic side, they do not introduce the so called existential presupposition triggered by *wh*-questions[15] and their meaning contains propositions expressing the (potential) content of what the speaker said (asked because either s/he didn't hear it or couldn't believe it) or was about to say but didn't (because s/he changed her/his mind or got interrupted).[16] One could in principle speculate that a language that syntactically allows *wh*-words to remain in situ also allows echo-questions like (33), but their semantics is not the same. Echo questions resemble cases of expression focus (see Krifka 2007).[17]

4 Discourse-structure presupposition

In the sections above I have shown that by uttering a WIQ the speaker presupposes that there has been a previous utterance, i.e. a manifest event of the speech-act kind, with assertoric force of a certain type.[18] In this sense, WIQs are presupposition triggers, that is, the use of a WIQs triggers the presupposition that the there is discourse structure of a certain kind (a payoff move) immediately dominating it. This aligns strictly with Stalnaker's idea of speakers' presuppositions according to which "[t]o say that a certain expression "triggers" a presupposition ϕ is to say something like this: the data suggest that the expression is normally inappropriate or infelicitous when used in contexts in which the speaker is not presupposing (taking it to be common

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[15]Notice that this so called existential presupposition in questions is an entailment of the disjunction of the possible answers (assuming that the semantics of a question is the set of its possible answers) and not a speaker's presupposition in the Stalnakerian sense (see Stalnaker 2014:74, ftn. 23, for discussion).

[16]For example, for (33), the meaning of the echo questions is the set containing the proposition that A asked what María brought from the party, that A asked what María brought from her house etc.

[17]Krifka (2007) provides the following definition:

(i)   A property F of an expression α is a focus property iff F signals

      a.   The alternatives of (part of the expression) α or   Expression focus
      b.   alternatives of the denotation of (parts of) α are relevant for the interpretation of α.   Denotation focus

The utterance *They live in* $[BerLIN]_F$ *(not BERlin)* in response to *They live in BERlin* illustrates an instance of expression focus.

[18]"A manifest event is something that happens in the environment of the relevant parties that is obviously evident to all. A goat walks into the room, or all of the lights suddenly go out. In such a case, it immediately becomes common knowledge that the event has happened that there is a goat in the room, or that the lights have gone out. Speech acts will themselves be manifest events (at least when all goes well): when one produces an utterance, it becomes common ground that it has been produced, and when the semantics of the language is common ground, it will be manifest that an utterance with a certain meaning has been produced." (Stalnaker 2014:47)

ground) that ϕ." (Stalnaker 2014:7) The notion of a presupposition trigger, in this characterization, is a descriptive notion used to characterize some data that needs to be explained, and not a concept in any theory used to explain the data, allowing for variety in the phenomena. WIQs are then questions that trigger a discourse-structure presupposition and are what Simons (2005) called "dedicated presupposition triggers": the sole difference between WIQs and WFQs is that WIQs trigger a discourse-structure presupposition.

As presupposition triggers, WIQs are special. They differ from other (traditionally considered) presupposition triggers with respect to what they presuppose. They presuppose discourse structure, i.e. that there has been a manifest event of the speech act kind with assertoric force, and these manifest events cannot be accommodated (accounting for the difference in behaviour between this type of trigger and those that can be accommodated). What is presupposed is that there has been an assertion immediately preceding the WIQ. Thus, such hierarchical information needs to be considered as part of the Stalnakerian CG, entailing that the information in the CG needs to be hierarchically structured (see Roberts 1996), i.e. the CG does not store information in a flat fashion: the CG does not contain just a record of what has been said, it also contains information regarding the shape of the exchange in which it was said.

5 Looking forward: WIQs in other languages

Given the specific discourse conditions for WIQs in Spanish, WIQs are bound to be less frequent than WFQs, whose distribution is not constrained in the same way and can be uttered in any circumstances in which their *wh*-question-meaning is felicitous (via relevance). Full comparisons between the meaning and distribution of Spanish WIQs and WIQs in other languages need to be made on the basis of data other than general text-corpora, which may no contain utterances in the required discourse-context. Investigations based on corpora built experimentally via elicitation tasks capitalizing in specific discourse conditions, as well as hypothesis testing where negative evidence can be found to support the proposal made, are crucial for such comparison. This line of research is left open for future work.

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