Chapter 1

Non-assertive speech acts and their QUDs

Lisa Brunetti ^a & Arndt Riester^b ^aUniversité Paris Cité/CNRS ^bUniversität Bielefeld

Abstract goes here

1 Introduction

Starting from the name itself – *information structure* – the notion of *information* is central in the characterization of notions such as focus and topic. Indeed, focus can be defined as the part of an utterance that contributes new information at a certain point of discourse (Halliday 1967, Lambrecht 1994, Vallduví & Engdahl 1996). A focused constituent has also been viewed as the piece of information that answers a question (a question being an information-seeking device) (Roberts 1996, Büring 2003). A topic has been defined as what the utterance is about, that is, what the utterance provides some information on (Reinhart 1981), at the same time establishing a *link* to what has already been mentioned (e.g. Gundel & Fretheim 2006, Brunetti 2009).

In speech-act theories, the notion of information is important to characterise the speech act of *assertion*. Depending on the account, the notion of information has or has not been included in the definition of assertion; see Jary (2010) for a review of the literature and a discussion. However, as Jary points out,

"[i]t is [...] legitimate – and necessary – to ask why the practice of assertion exists, and an adequate answer to this question must surely give informativeness centre stage. Assertions exist, and we are disposed to attend to them, because they are a source of information about the world beyond our

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perceptual capacities. [...] Consequently, a complete understanding of assertion cannot be arrived at without considering its informative function." (Jary 2010: 10)

The correspondence between focus and assertion has also long been acknowledged (see, for instance, Lambrecht 1994, Jary 2010, Matić & Wedgwood 2013). Matić and Wedgwood report data from Saeed (1999) and Tosco (2002) on the Somali focus marker *baa*, and data from Faller (2002) on the Quechua focus morpheme *-mi/-n*. The Somali morpheme can occur in a sentence like (1) and is associated with a realis meaning. This meaning, as they say, "is directly related to assertion, the defining feature of which is the speaker's commitment to the truth of the proposition expressed (Jary 2010)" (Matić & Wedgwood 2013: 140).

Somali (Tosco 2002: 36)
 Nin baa waa ari badan lahaa.
 man BAA time sheep many had
 'There was once a man who had many sheep.'

The Quechua morpheme is part of the evidentiality system and "(a)s argued by Faller (2002: 140), it 'indicates that the speaker has best possible grounds for making his or her statement', via direct evidence or otherwise" (ibid.). Again, such a meaning is related to assertion, which is a commitment of the speaker to the truth of what s/he says. Interestingly, Matić and Wedgwood point out that "(s)ince Quechua allows for different scopes of the evidential, the veridicality claim may pertain to the whole proposition expressed by the sentence or to various parts thereof. All this has an effect of explicit marking of different scopes of assertion, much like the traditional notion of different focus scopes" (ibid.).¹

The notion of informativeness related to focus loses some of its intuitive appeal when the information structure (IS) of non-assertive utterances is taken into account. The notion of information is so closely connected to IS that it is legitimate to ask whether non-assertive utterances can be considered to have an ISpartition at all. Clearly, it is assertions that answer questions and, therefore, come with a clearly designated focus constituent. But what about other speech acts and,

¹Matić and Wedgwood do not conclude from these data that focus coincides with assertion. Their claim is rather that focus markers can be associated with a range of different semantic or pragmatic properties, and that the notion of focus is eventually vacuous. We will argue in this paper that the link between focus and assertion can be maintained and in fact be used as the starting point for an illocutionary approach to information structure, along the lines of Jacobs (1984), Krifka (2001, 2011), Beyssade (2017, 2013, 2006).

in particular, questions themselves? That even they exhibit some kind of informational partition is obvious when we examine their form: in many languages non-assertive utterances (interrogatives, imperatives, exclamatives, etc.) clearly display linguistic markings that, in the corresponding declarative sentences, are related to the identification of focus, topic, or contrast.

In English – a language that heavily uses intonation to mark focus and topic, see (2) – interrogatives can bear a pitch accent, as in (3) (by convention, the accented word is given in capital letters):

- (2) a. Who went to the party?b. BILL_F went to the party.
- (3) Krifka (2011: 1780)a. Did BILL go to the party?b. What did BILL bring?

In Japanese, the topic marker *wa* is present in sentences realizing different speech acts. Tomioka (2009) provides the following examples, where the *wa* marker is in an interrogative, an imperative, and an exhortative sentence respectively:

- (4) Japanese (Tomioka 2009: 122)
 - a. Interrogative
 - ... Zyaa Erika-WA/ERIka-wa doko-e itta-no?
 - ... then Erika-TOP where went-Q
 - '..., well then, where did ERIka go?'
 - b. Imperative
 Eego-WA/EEgo-wa tyanto yatte-ok-e.
 English-тор without-fail do-prepare-IMP 'At least, prepare yourself for ENGlish.'
 - c. Exhortative
 Kyooto-NI-WA/KYOOto-ni-wa iko-o
 Kyoto-LOC-TOP
 go-EXH
 'At least, let's go to KYOto.'

In Italian, different syntactic constructions typically related to IS in declaratives are also present in interrogatives. Consider, for instance, yes/no interrogatives. In Italian, they are morphosyntactically identical to the corresponding declarative counterparts, except for the questioning or asserting intonational contour at the end (D'Imperio 2002). In (5), both the declarative and the interrogative display a

clitic right dislocation (the direct object *la borsa* 'the bag' occupies a peripheral position at the end of the sentence and is doubled by a resumptive clitic pronoun), a construction that typically marks a topic (Benincà et al. 1988).²

- (5) Italian
 - a. L'-ha data a Leo, la borsa (non a Linda). CL.3SG.ACC-has given to Leo the bag not to Linda 'S/he gave the bag to Leo (not to Linda)'
 - b. L'-hai data a Leo, la borsa (o a Linda)?
 cL.3sG.Acc-has given to Leo the bag or to Linda
 'Did s/he give the bag to Leo (or to Linda)?'

In the wh-interrogative in (6), the object is dislocated, this time to the left, again to mark the constituent as a topic.³

(6) Italian

- a. Lo zaino, l'-ha dato a Leo. the backpack CL.3sG.ACC-has given to Leo 'The backpack, s/he gave it to Leo'
- b. Ma lo zaino, a chi l'-hai dato?
 but the backpack to whom CL.3SG.ACC-has given
 'As for the backpack, whom did s/he give it to?'

In the present paper we assume that all utterances – both assertive and nonassertive ones – have an information structure. In order to account for the IS of both assertive and non-assertive utterances, we adopt an illocutionary view of IS along the lines of Jacobs (1984), Krifka (2001, 2011), Beyssade (2013). We present such a view in Section 2. In Section 3 we discuss some of the analyses that have been proposed in the literature on the data presented above. We then present our own analysis in Section 4, mostly focusing on interrogatives (and on the act of questioning). Specifically, we investigate how the QUD-based model proposed for assertions in Riester et al. (2018), Riester (2019), Brunetti et al. (2021)

²Or more precisely an *antitopic*, in Lambrecht (1994)'s terms. See also footnote 3.

³The topic represented by a clitic left dislocated element and the one represented by a clitic right dislocated element are pragmatically different in declaratives, for instance they have a different anaphoric link with their antecedent (cf. Brunetti et al. 2020 on Catalan), and they vary in acceptability if the topic is contrastive, see Benincà et al. (1988), Brunetti (2009), among many others. Whether these differences also apply to interrogatives is not clear and won't be discussed in the present paper.

can account for the information structure of such sentences, and propose some adjustments to it. We finally sketch, in Section 5, how other non-assertive utterances can be analysed in a similar fashion. We eventually draw our conclusions and future perspectives in Section 6.

2 An illocutionary approach to information structure

According to some analyses, the focused constituent in French declaratives is marked by prosodic phrasing, in particular by a boundary tone on its right edge (Féry 2001, Féry & Feldhausen 2020, Beyssade et al. 2003, 2004). It has also been observed that in interrogatives, prosodic phrasing marks the right boundary of the part of the interrogative that is specifically questioned. In the example of a wh-question, in (7), from Beyssade (2006), the different possible phrasings illustrated by the parentheses in (8) mark the different parts of the sentence that are directly questioned, and therefore give rise to the different paraphrases in (9) respectively.

- (7) French (adapted from Beyssade 2006: 190)
 Où as-tu caché ton sac ? where have-you hidden your bag
 'Where did you hide your bag?'
- (8) a. (Où) (as-tu caché ton sac)
 - b. (Où as-tu) (caché ton sac)
 - c. (Où as-tu caché) (ton sac)
- (9) a. Where did you hide your bag?
 - b. If it's you who hid your bag, where did you hide it?
 - c. If you did hide your bag, where did you hide it?

In the example of the polarity question below, adapted from Beyssade (2013: 222), Beyssade argues that the different positions of the terminal boundary tone (indicated in this work by T%), which are illustrated in (11), produce the nuances in meaning given by the paraphrases in (12a-c) respectively.

(10) French

Pierre est sorti avec Bernadette hier soir? Pierre is gone-out with Bernadette yesterday night 'Did Pierre go out with Bernadette last night?'

- (11) a. Pierre est sorti avec Bernadette hier soir? T%
 - b. Pierre est sorti avec Bernadette T% hier soir?
 - c. Pierre est sorti T% avec Bernadette hier soir?
- (12) a. Is it true (*or not*) that Pierre went out with Bernadette last night?
 - b. Is it with Bernadette *(or with someone else)* that Pierre went out last night?
 - c. Is it to go out *(or something else)* what Pierre did last night with Bernadette?

On the basis of the correspondence between the boundary-tone marking of the right edge of the focus constituent in declaratives and the same marking of the questioning part in interrogatives, Beyssade and collaborators adopt an illocutionary account of focus (Beyssade et al. 2003, Beyssade et al. 2004, Beyssade 2013, Beyssade 2017). They start by comparing a definition of IS in informational terms and one in illocutionary terms. The former defines background as "the part of the propositional content that is shared or inferable from the context", while the focus is "the part of the propositional content that is new in the context" (Beyssade et al. 2004: 458). On the illocutionary view, originally proposed by Jacobs (1984), focus is "the part of the content that is specifically affected by the illocutionary operator associated with the sentence" (ibid.). The definition of focus as new information and the illocutionary definition overlap in assertions, since assertions provide new information; "[h]owever, the illocutionary definition is more general than the informative one since it covers all illocutionary types of utterances." (ibid.). In (13), the same partition into focus (Chirac) and background (Mathilde a voté pour x) can stay under the scope of different illocutionary operators and therefore be used to accomplish different acts: Chirac, which is the focus, is either the informative part of the sentence (Mathilde voted for Chirac and not for other candidates, see (13b)), or the part that is questioned (did Mathilde vote for Chirac or for other candidates? see (13c)), or it is the source of surprise for the speaker (it is surprising that she voted for Chirac and not for other candidates, see (13d)), and so on.

- (13) Beyssade (2013: 321)
 - a. C'est pour Chirac que Mathilde a voté.'It is Chirac that Mathilde voted for.'
 - b. ASSERT < x Mathilde a voté pour x, Chirac>
 - c. QUEST < x Mathilde a voté pour x, Chirac>

d. SURPRISE < x Mathilde a voté pour x, Chirac>

In this paper we adopt the illocutionary view to IS described above and tackle the IS of non-assertive speech acts (in particular, of questions) within this view. At the same time, we maintain a QUD-based account of IS, i.e. the view that every utterance serves the purpose of advancing the discourse by contributing something new, which may include both resolving an existing question or asking a new one.

Before proposing our revised version of the QUD-model, in order to account for questions and other speech-acts, we briefly discuss some analyses made in the literature on the IS of questions.

3 Previous proposals on the IS of questions

In the literature, we can distinguish between two approaches to the definition of focus in non-assertive utterances, and, in particular, in questions. Roughly speaking, the first one determines focus and topic on the basis of formal criteria (prosodic and morphosyntactic marking), which are analogous to those of assertions; the second one takes the meaning of questions as the starting point to derive the IS partition of the utterance, independently from how coherently the linguistic marking reflects such a partition.

According to the first view, we may assume, for instance, that, just like in the case of assertions, the focus of a question is prosodically marked by some kind of prominence. In the English sentence (3b), repeated below, with an accent on *Bill*, the latter is interpreted as the focus.

(14) What did $BILL_F$ bring?

The second approach is based on the meaning of questions and their corresponding answers. From the perspective of question-answer congruence, adopted in various semantic frameworks like *Alternative Semantics* (Rooth 1992, see also Büring 2007, Brunetti 2009), the wh-element in the question semantically corresponds to the focused element in its answer. According to this view, the focus in (14) is *what*, which, however, leaves the prominence on *Bill* unaccounted for (but see more on this below).⁴

⁴Notice that this idea demands to accept the counter intuitive assumption that an element that by definition is not informative – the wh-element – is the focus. The illocutionary account we propose can overcome this problem. See more on this in Section 4.3.1

The correspondence between wh-phrase and focus is empirically supported by the identical marking of wh-phrases and focus phrases in typologically unrelated languages: either both occupy the same position, as in Hungarian, or they are accompanied by the same morpheme, as in Chinese, or they bear the same prominence, as in Romanian (cf. (15), see Eckardt 2019, Bocci et al. 2021, and references quoted in there).

 (15) Romanian (Bocci et al. 2021: 415) UNDE l' ai cumpărat? where it have bought 'Where did you buy it?'

Nevertheless, there also exist languages where such a correspondence does not hold. In Italian declaratives, the sentence nuclear accent falls on the rightmost position of the clause (Nespor & Vogel 1986, Gili Fivela, Barbara and Avesani, Cinzia and Barone, Marco and Bocci, Giuliano and Crocco, Claudia and D'Imperio, Mariapaola and Giordano, Rosa and Marotta, Giovanna and Savino, Michelina and Sorianello, Patrizia 2015). Since Italian has a relatively free word order and the focus constituent must bear the nuclear accent, the focus constituent usually occupies that position. In wh-interrogatives, however, the accent systematically falls on the verb (see Calabrese 1982, Ladd 1996, Marotta 2001, and more recently Bocci et al. 2021). In a wh-question like (16), the nuclear accent falls on the verb *andata* 'gone'. Notice that such a prosody does not even correspond to the given-new partition of the interrogative, since *ci è andata* 'went there' is clearly given.

(16) Italian

A: Francesca è andata a Firenze. 'Francesca went to Florence' B: Come ci è ANDATA? how CL-LOC is gone 'How did she go there?'

Analogously in English, as Ladd (1996) observes, the nuclear accent falls on the last constituent of the interrogative (*Where are you GOING?*), which obviously is not the wh-phrase.

It is well known, since earlier works like Jackendoff (1972), that prominence may also mark a contrastive topic. That is what Krifka (2011) argues for the accent on *Bill* in (17a). The wh-interrogative can be paraphrased as in (17b):⁵

⁵Beyssade (2006: 190) also suggests that in cases like (7), when the intonation marks a focus

- (17) a. What did BILL bring?
 - b. As for Bill, what did he bring?

For Krifka, what we have in this example is a "set of speech acts as alternatives", namely "the speaker, at the current point in discourse, has reasons to select, out of this set, the one speech act that is actually made." Krifka further adds that "(t)his is quite similar to the role of contrastive topics, which also occur in questions" (Krifka 2011: 1780). In an earlier paper, Krifka had already suggested that topics must stay outside the scope of speech acts: his examples showing a topic outside the scope of a question, a request, or a curse, are repeated below:

- (18) Krifka (2001: 25)
 - a. As for Al, which dishes did he make?
 - b. The hamburger, please hand it to me.
 - c. This guy, he should go to hell.

Taking inspiration from Jacobs (1984) and Krifka (2001), Tomioka (2009) provides a similar account for the Japanese morpheme *-wa*, which, as we have seen in (4), can occur in sentences realising different acts. Tomioka assumes the existence of speech-act alternatives and proposes that the *wa*-phrase stays outside the scope of the utterance's speech act. Prominence on the *wa*-phrase triggers such alternatives.

Within a contrastive-topic analysis of prominence in an interrogative sentence, the correspondence between the wh-phrase and the focus can be maintained. In the next section, we are going discuss what the QUD-based model of discourse proposed by Riester et al. (2018) has to say about the IS of non-assertive utterances. We will first and mostly focus on questions, because they occupy a special place in this model.

4 The information structure of questions within a QUD-based model of discourse

4.1 The QUD model

It is nowadays a widely accepted claim that the information structure of an utterance can be derived via the formulation of an implicit or explicit question, of

that is not just the wh-phrase but goes beyond it, then the interpretation is that of a question *under some condition*, which is basically what a contrastive topic does. A similar view is also adopted in Viesel (2023: 10).

which the utterance is the answer. The idea, within the so-called *Question under Discussion* (QUD) models of information structure (von Stutterheim & Klein 1989, Roberts 1996, Ginzburg 1995, Onea 2016, Riester et al. 2018, see Velleman & Beaver 2016 for a review of some of these models) is that each utterance pushes the discourse forward by providing a piece of information that answers an implicit QUD, which is relevant at that point of discourse, in order for the communicative goal of the discourse to be achieved (no matter if the discourse is a dialogue, conversation or a monologue, whether it is spontaneous or guided, written or spoken).

In Riester et al. (2018), we propose that, in order to reconstruct the (generally implicit) QUD of each (non-contrastive) utterance, three rules must apply, which are called Q-A-CONGRUENCE, Q-GIVENNESS, and MAXIMIZE-Q-ANAPHORICITY. Q-A-CONGRUENCE states that the QUD must be congruent with its answer, namely the wh-phrase of the question must correspond to the focus of its answer (see also Cruschina & Mayol 2022, and references quoted there). Consider, for instance, the example in (19), from a spoken interview by journalist Laura Kuenssberg (LK) to former UK Prime Minister Boris Johnson (PM). The example is annotated according to the guidelines in Riester et al. (2018). By convention, the implicit QUD is labelled Q and numbered; the same number is given to its – congruent – answer (labelled A). The indentation means that the answer occupies a lower position in the QUD tree that is built from the annotation.⁶ Implicit QUDs are written inside curly brackets. The focus part is put within square brackets and labelled with an F, while if a contrastive topic is present, it is labelled with CT.

The answer's focus – *about as well as could be* – is a congruent answer to Q_1 , which is about the manner in which things are going.⁷

(19) Interview

 Q_1 : [LK] How do you think this is going?

> A_1 : [PM] Well, I think that it's going [about as well as could be]_F

The second principle, Q-GIVENNESS, assures that the QUD only contains given material, introduced in the immediately preceding context. Consider (20), from a written review of BMW's car called Active Tourer.⁸ All linguistic material in Q_1 represents content that is already given in A_0 , except for the wh-word *how*.

(20) Car review

⁶See Riester et al. (2018), Riester (2019) for more details on the properties of the QUD tree.

⁷From now on, examples extracted from this interview will be labelled *Interview*.

⁸From now on, examples extracted from this text will be labelled *Car review*.

A₀: BMW cheerfully tells us the 2-series Active Tourer, the company's first stab at a people carrier, is doing rather better than expected. Q₁: {How is 2-series Active Tourer doing better than expected?} > A_{1'}: [The production line's running at full capacity,]_{*F*} > A_{1'}: [there's an eight-month waiting list for petrol models]_{*F*} > A_{1''}: and [...] it's [become the third best-selling car in the BMW range]_{*F*}.

The third principle, MAXIMIZE-Q-ANAPHORICITY, finally garantees that the given content is maximal, namely that the QUD contains as much given content from the answer as possible. This principle is respected to the extent to which the speaker's speech is coherent. In (20), for instance, A_0 introduces a discourse topic, namely the 2-series Active Tourer's success. The QUD in Q_1 asks to develop this topic, specifically by saying in what way the car is being successful. The question thus shows the coherence of what follows. A question like 'What is going on at BMW?' would not equally capture the coherence of the subsequent discourse.

In conclusion, the principles provides a way to (locally) identify new content, which corresponds to the informative part of the utterance.

4.2 Explicit questions in the QUD model

In Riester et al. (2018), it is argued that interrogatives that are present in a discourse function as overtly realized QUDs. Given their special role in the model, non-assertive utterances realizing an act of questioning will occupy a prominent place in our discussion.

While explicit questions function as QUDs, they do not need to follow the principles mentioned above for QUD-formulation, since they are free to introduce new material into the discourse. Firstly, explicit questions may not be congruent with the response that they receive.⁹ Consider (21), from the Boris Johnson interview, which revolves around Brexit. The journalist asks two questions in a row, namely "How (are extra checks obtained for Ireland)?" and "Where (are they taken from)?". The Prime Minister's answer neither specifies how nor where the extra checks are obtained.

(21) Interview

LK: So let's be completely clear, under the proposals that you were about to take to Brussels, there would be extra checks on the island of Ireland, how and where?

PM: Well, I mean, if I made- the the proposals are not yet made

⁹In fact, it is a common trait of political interviews that questions seldom receive a direct, congruent answer (cf. Bull & Mayer 1993, Deck 2023).

The PM's answer is rather a congruent answer to a question like "What about these proposals?", as shown by the QUD structure in (22). The beginning of the PM's response (*Well, I mean, ...*) signals an accommodation, namely that he is aware that he is uttering an incongruent answer, that he is deviating from the way the journalist, through her questions, intended to develop the discourse topic.

(22) Interview

A1: LK: [...] under the proposals that you were about to take to Brussels, there would be extra checks on the island of Ireland, Q_2 : how Q_3 : and where? Q_4 : {What about these proposals?} >A_4: PM: Well, I mean, if I made- the the proposals [are not yet made]_F

Q-A congruence is violated when the question is not consistent with its *upcoming* answer. Q-GIVENNESS and MAXIMIZE-Q-ANAPHORICITY are violated when an explicit question is not maximally coherent with the *preceding* utterance. Consider this example of the car review text:

(23) Car review

How good is the Gran Tourer at the whole MPV thing? [...] A folding front passenger seat is an option, enabling a total load length of 2.4m, handy for skirting boards or other DIY detritus. [...] Q_4 : How easy is it to get in the rearmost seats? > A_4 : [About as difficult as most seven-seat MPVs]_F

 Q_4 represents a change of topic: the writer is still talking about how good the Gran Tourer is as a multiple purpose vehicle (MPV), but s/he is now addressing a new issue related to that, namely the facility to get in the rearmost seats. The writer had been mentioning the reviewed car's seats before, but the rest is not mentioned in previous discourse, so it is not given. Explicit questions that most interest us here are precisely those that contain new material, as in (23). Indeed, it is in such cases that the IS-partitioning is not straightforward. We are going to discuss that in the following section.

4.3 Finding questions for questions

The QUD-based model assumes that focus is the answer to a question. Such an assumption is problematic when an utterance accomplishes an act of questioning

(or any other act that is not expected after an information-seeking move, such as advising, menacing, thanking, promising, requesting, and so on). Recall that, in line with Beyssade and collaborators, we assume that focus corresponds to the part of the utterance that is under the scope of an illocutionary operator, namely that is specifically asserted, questioned, ordered, etc.¹⁰ In order to still capture the idea that the QUD is *answered* by a non-assertive act, e.g. by an explicit question, we propose that the QUD asks a meta-question about the speaker's act. In other words, the QUD asks what the semantic content is, which is bound by the illocutionary operator.

Let us see, through some examples extracted from the two annotated texts, how our proposal is implemented with wh-questions. An example from the car review text is given below. The meta-QUD is given in boldface.

(24) Car review

 A_1 : So it's with less trepidation that the company ushers in this larger seven-seater version, the 2-series Gran Tourer, at a £1700 premium over the Active Tourer.

 Q_2 : {What does the speaker ask about the Gran Tourer and the Active Tourer?}

 $>Q_{2.1}$: [How different]_F is the BMW 2-series Gran Tourer from the Active?

The implicit QUD in Q_2 asks what the explicit question $Q_2.1$ asks, concerning the two cars. Since Q_2 is formulated according to Q-GIVENNESS, it must mention the two cars, which are given in the preceding discourse. The explicit question asks about how different these cars are, where *how different* is the focus, namely the part that cannot be retrieved from previous discourse. Another example from the same text is (25).

(25) Car review

>A₂: Let's talk practicality.

>Q₃: {What does the speaker ask concerning the practicality of the Gran Tourer?}

 $> >Q_{3.1}$: [How good]_{*F*} is the Gran Tourer at the whole MPV thing?

¹⁰Following Krifka (2001, 2011) and partly Tomioka (2009), we also assume that a topic is the part of the utterance that stays outside the scope of the illocutionary operator. We do not follow Tomioka though in his explanation of the difference between focus and contrastive topic in terms of exhaustivity. See more on this below.

The expression *the Gran Tourer* is given, since it denotes the car that the whole text is talking about, and *at the whole MPV thing* can be considered as a paraphrase of *practicality* mentioned in A_2 , so given content too. The focus is therefore just the wh-phrase *how good*.

In these two examples, where the only focus is the wh-phrase, the preceding QUD could in fact be dispensed with, since the explicit question behaves like regular QUDs, in that it is only made of given content except for the wh-phrase (it hence complies with Q-GIVENNESS). We saw though that explicit questions can contain new material. In (23), repeated below as (26), the explicit question *How easy is it to get in the rearmost seats?* is entirely new.¹¹

(26) Car review

How good is the Gran Tourer at the whole MPV thing? [...] A folding front passenger seat is an option, enabling a total load length of 2.4m, handy for skirting boards or other DIY detritus. [...] How easy is it to get in the rearmost seats? About as difficult as most seven-seat MPVs.

In Riester et al. (2018), new content can be either focus, or focus *and* contrastive topic. In the latter case, the QUD itself contains new material which is the part corresponding to the contrastive topic. The principle of (*Complex*) *Parallelism* (Riester et al. (2018: XXX) – which operationalizes Büring's analysis of contrastive topics – overrides Q-GIVENNESS and allows for the formulation of a QUD that is partly new.

In the context preceding the question *How easy is it to get in the rearmost seats?*, the writer is discussing various aspects of the Gran Tourer that contribute to assessing this car's practicality, and in particular its possible use as a multipurpose vehicle (MPV). Right before the explicit question, the writer says that the car allows for a folding front passenger seat, which creates space to carry large objects. The explicit question introduces a new aspect to be considered in order to assess the Gran Tourer's potential as an MPV, namely how easy it is to get in the rearmost seats.¹² Given such an interpretation, this example can be analyzed as an instance of Complex Parallelism, where $Q_{3.1}$ is paraphrased as: "As for getting in the rearmost seats (that is, as for another aspect that helps assessing whether the car is an MPV), how easy is it?". The answer to this question is interpreted as part of a strategy to exhaustively answer Q_3 . As a consequence, $Q_{3.1}$ will be preceded

¹¹Though the denotation of *the rearmost seats* can be inferred to be the Gran Tourer's seats.

¹²Such an interpretation is supported by the fact that the answer specifies that it is as difficult *as it is for most MPVs.*

by a question that asks what the speaker asks in $Q_{3,1}$, and will also contain a CT corresponding to the remaining new content of $Q_{3,1}$:

(27) Car review

>Q₃: How good is the Gran Tourer at the whole MPV thing? [...]
> >Q_{3.1}: {As for getting into the rearmost seats, what does the speaker
ask?}
> > >Q_{3.1.1}: [How easy]_F is it [to get in the rearmost seats]_{CT}?

 $>>>A_{3,1,1}$: [About as difficult as most seven-seat MPVs]_F

The presence of a contrastive topic in wh-interrogatives is made more transparent in languages that syntactically may mark the topic by left dislocating it. An example comes from Italian, see the following excerpt of a blog interview, where the subject of $Q_{24.1}$ and that of $Q_{24.2}$ are left dislocated (they precede the fronted wh-phrase).¹³

(28) Italian

A23: Facciamo degli esempi.

'Let's make some examples'

>Q₂₄: {What do different mothers do?}

> >Q_{24.1}: {What does the speaker ask (about the mother who speaks a minority language)?}

> > > $Q_{24.1.1}$: [La mamma che parla la lingua minoritaria per crescere I suoi bambini bilingui]_{CT}, [cosa]_F fa?

'The mother who speaks the minority language[...] what does she do?' $> > > A_{24,1,1}$: [Parla la propria lingua]_{*F*} ai figli. [...]

'She speaks her own language to her children'

>Q_{24.2}: {What does the speaker ask (about the mother who is not a native-speaker)?}

 $>> > Q_{24,2,1}$: E [la mamma non madrelingua]_{CT} [cosa]_F fa?

'And the mother who is not a native-speaker, what does she do?'

 $>>>>A_{24,2,1}$: [La stessa cosa]_F.

'The same thing'

With such constructions, the speaker signals that she is giving different examples of mothers' behaviours, namely that the explicit questions are sub-QUDs of the larger QUD (Q_{24}).¹⁴

¹³The annotation of this text is discussed in De Kuthy et al. (2019).

¹⁴Some scholars argue that from a discourse-structure point of view, a dislocated expression

Notice that, in line with meaning-based approaches (see Section 3), in our analysis the wh-phrase is always the focus. Within the illocutionary approach, this is totally plausible, since the focus corresponds to the part of the utterance expressing the illocutionary act, and it is obvious that in questions the wh-phrase is the part that expresses the act of questioning. As already seen in Section 3, however, in some languages such as Italian or English the nuclear accent (marking the right boundary of the focus in declaratives) does not fall on the wh-phrase. The Italian example in (16), where the accent falls on the verb, is repeated below, enriched with its QUD structure.

(29) Italian

A₁: Francesca è andata a Firenze. 'Francesca went to Florence' **Q**₂: **{What does the speaker ask, about Francesca going to Florence?}** >Q_{2.1}: [Come]_F ci è ANDATA? how CL.LOC is gone 'How did she go there?'

We think that such a mismatch can be explained without discharging the idea that the wh-phrase is focused. What is special in wh-interrogatives is the fact that the focused element – the wh-phrase – must be fronted, while the prosodic constraint of nuclear-accent assignment in these languages requires the accent to fall on the rightmost element, as mentioned above. In a situation where the focused expression does not occupy the rightmost position, one solution is to change the word order so that the focus can occupy such a position. This is what happens in declaratives (in Italian, as well as in other Romance languages), as illustrated below, where the canonically preverbal subject occupies a postbverbal position:

(30) Italian

a. 'Who arrived?'
 E' arrivato [GIANNI]_F.
 has arrived Gianni
 'Gianni arrived'

is an independent discourse segment (Onea 2016, Ott 2017). Within such a view, a dislocated expression introduces a topic but is also what answers the QUD (cf. Brunetti et al. 2021 for a similar account of the IS status of adjuncts). Such a double role brings to mind what an explicit question does too: it answers a QUD and therefore has its own IS, but it is also a QUD itself, that is a new (discourse) topic. We will return to the ambiguous status of questions in Section 4.4.

b. 'Who opened the door?' L'ha aperta $[GIANNI]_F$. CL.ACC-has opened Gianni 'Gianni opened it'

Since the wh-phrase must obligatorily occupy a fronted position, this strategy cannot be used with wh-phrases. Bocci et al. (2021) propose a (syntactic) explanation of how the mismatch is solved. They assume that in Italian a) the nuclear accent must be assigned to the rightmost element that is phonologically overt and b) it must be assigned to an element that bears a (syntactic) focus feature. Given their syntactic analysis, which we will not detail here, and the way they account for the spreading of the focus feature, in wh-interrogatives it is the verb – rather than the wh-phrase – that satisfies both conditions and is therefore accented. In French, wh-in-situ is possible, and indeed Beyssade (2006) argues that when the wh-phrase is in-situ, the question must continue the current discourse topic, which means that it is not a question containing new material, and the wh-phrase is its only focus (cf. the focused *come* in (29)).

Let us now move on to yes/no questions. If a yes/no question does not have focal marking on some specific constituent, then the whole proposition is interpreted as being under the scope of the questioning operator. In such a scenario, the preceding QUD does not contain any additional material apart from *What does the speaker ask?*, cf. Q_5 in (31).

(31) Interview

PM: What we've got, basically, is a situation in which the people voted for leaving the EU in the greatest expression of popular will in favour of any party or proposition in history. And, yes, there are many people in all sorts of positions, who don't think that was the right way to go. And I am tasked with getting it over the line, getting Brexit done by October 31. And I think we always knew that as we came up to that deadline, things would get choppy, but...

>Q₅: {What does the speaker ask (given what the PM did)?} > >Q_{5.1}: LK: So [you are blaming all of your woes on people who are trying to stop Brexit]_F? > > >A_{5.1}: PM: No

If some marking of a non-final word or constituent is present, then there are two possible scenarios. The first one is exemplified in (32), where both *Bill* and *party* bear prominence. As Krifka (2001) suggests, accent on *Bill* can be analyzed

as contrastive-topic marking (see discussion in Section 3). Accent on *party* then will mark the right edge of the focus *Anna's party*. As a matter of fact, in this context the yes/no question is a sub-question that contributes to answer the larger preceding question about the place where Bill and John went.

(32) A: Where did Bill and John go last night? Did BILL_{CT} go to Anna's PARTY_F?B: No, he went to the cinema.

The second possible scenario is exemplified by (33). Here the only accent is on *Bill* and the material following *Bill* is deaccented. The preceding question asks who went to Anna's party, and the yes/no-question suggests one possible answer (*Bill*). In this scenario, *Bill* must be interpreted as the sentence focus.

(33) English

A: Who went to Anna's party? Did $BILL_F$ go (there)? B: No, JOHN did.

In sum, a constituent that is marked as focus in a yes/no-question can also be interpreted as a contrastive topic. Crucially, however, if that is the case, then another element must constitute the focus (and be marked as such). In other words, we do not assume that a contrastive topic can occur without a focus. Indeed, given our definition of focus as the part of the utterance that realises the speech act, no utterance can be without a focus.

An empirical challenge for this view is when a sentence clearly marks a contrastive topic but not a focus. In Japanese, where a CT is *wa*-marked, prominence does not always identify a different constituent as focused. Tomioka (2009) accounts for such cases by making a difference between prominence with and prominence without *wa*-marking. He adopts an Alternative semantics framework and assumes that a phrase that bears prominence triggers alternatives. If the phrase is not marked by *-wa*, the alternatives are focus ones, while if the phrase is marked by *-wa*, then the alternatives are contrastive-topic ones and they operate on speech acts. This difference leads to an interpretive difference: alternative speech acts convey a sense of incompleteness that (propositional) focus alternatives do not convey. For instance, (34) makes the hearer suspect that the speaker may know more than what s/he states but does not wish to communicate more. With the suffix *-ga* instead of *-wa*, this effect does not arise.

(34) Japanese (Tomioka 2009:8) A: Who passed? B: KEN-wa/Ken-WA ukat-ta Ken-тор pass-PST '(At least) Ken passed'

It is not completely clear to us how the exhaustivity of the focus alternatives and the non-exhaustivity of the topic alternatives are derived in Tomioka's work. Also, the link is not clear between the topic function of the *wa*-phrase and the fact that the alternatives are speech acts. Tomioka makes a link between the *high position* of the topic phrase and such an interpretation, but no link is made with the *pragmatic function* of the *wa*-phrase as a topic. In fact, it is not clear what a topic eventually is in Tomioka's analysis.

We would like to suggest an alternative account, which instead makes such a link. Assuming that a *wa*-phrase is a topic, and that a topic is a referent inside the background, then a *wa*-phrase must be part of the QUD. Prominence on the *wa*-phrase signals that the topic is, unexpectedly, new. That means that a complex discourse strategy is at stake. In (34), in order to answer the question *Who passed?*, the speaker decides first to answer the question *What did Ken do?*, where *Ken* denotes one of the relevant individuals in the context that might or not have passed. *Ken* has not been mentioned before, but it still is part of the question. The answer to *What did Ken do?* is not exhaustive in that it does not allow to exhaustively answer the explicit question *Who passed?*, because only the answer to all questions of the same set (*What did x do?*) would lead to know who passed. Lack of exhaustivity is therefore just an effect of the fact that the discourse strategy used by the speaker is not to answer *Who passed?* but to answer a different question about a specific member (*Ken*) of the set of possible individuals who passed (*What did Ken do?*).

(35) Japanese (Tomioka 2009:8) Q_1 : Who passed? $>Q_2$: What did Ken do? $> >A_2$: B: [KEN-wa/Ken-WA]_{CT} [ukat-ta]_F Ken-TOP pass-PST '(At least) Ken passed'

A problem with this analysis is that it would predict a focal accent on the verb 'passed'. According to Tomioka (and the references he quotes) the prosody of (34) is identical to that of the same sentence with *-ga*, namely the accent on *Ken* is a focal accent followed by post-focus reduction. While a detailed study of Japanese data would be necessary to fully challenge Tomioka's analysis, we can at least

say that our QUD-model straightforwardly accounts for the lack of exhaustivity, simply by the fact that the *wa*-phrase is part of the background and therefore of a QUD.

Our account is also in line with another QUD-based analysis, made by Marandin (2010), to explain the lack of exhaustivity in a totally different phenomenon: the preverbal subject position of Portuguese sentences in contexts where a postverbal position would be expected. Following Beyssade et al. (2004), Marandin "links the notion of given content to that of discourse topic" (Marandin 2010: XXX), where the discourse topic "is defined by a question (the question under debate)" (ibid.). We can update such a definition in QUD terms by simply saying that the given content corresponds to the content of the QUD (cf. Q-GIVENNESS), and that the discourse topic is basically the current QUD (see more on the function of QUDs as discourse topics in Section 4.4). As Marandin says, "[a]n utterance develops the DT [= Discourse Topic; in our terms, the QUD] when it resolves the question under debate at the moment of utterance; that is, it conveys a proposition that belongs to the denotation of this question." (ibid.).

Marandin discusses Portuguese examples like (36), where the subject *Joana* answers the question *Who ate the cake?* and therefore is expected to occupy a postverbal (focused) position. Ambar (1999), quoted by Marandin, explains the contrast between (36b) and (36e) in terms of exhaustiveness, as Tomioka (2009) does for Japanese: she says that the preverbal subject in (36e) is a non-exhaustive focus and for that reason it occupies a preverbal position.

- (36) Portuguese (Marandin 2010: 329, taken from Ambar 1999: 27)
 - a. Who ate the cake?
 - b. (A tarte) comeu a Joana.
 the cake ate the Joana
 'Joana ate it'
 - c. #A Joana comeu (a tarte). the Joana ate the cake
 - d. # (A tarte) comeu a Joana (about the others I do not know).
 - e. A Joana comeu (about the others I do not know).
 the Joana ate
 'Joana ate it'

Marandin observes that "the opposition exhaustive vs non exhaustive focus only partially characterizes the effect associated with this type of utterance and leads to an inadequate explanation. After all, the answer may be complete with regard to the question [...] since in the context, Joana may be the only one who ate the cake. It remains incomplete with regard to the DT [=Discourse Topic] initiated by the question: The respondant has more to say about the cake or the eating of the cake or the persons related to the cake and its eating." (Marandin 2010: 347) The same could be said about the Japanese example in (34). In our QUD representation, the difference between (36 b) and (36 e) is in the QUD that precedes them: while the sentence with a postverbal subject answers the question *Who ate the cake?*, the sentence with a preverbal subject answers a different question: *What did Joana do?*, which is a member of a set of questions of the type *What did x do?*, as seen for (34):

(37) Portuguese
Q₃: Who ate the cake?
>Q₄: What did Joana do?
>A₄: A Joana comeu (about the others I do not know). the Joana ate
'Joana ate it'

The incompleteness effect again is explained as the result of the fact that the speaker, as Marandin puts it, "considers several instantiations of the focal variable, along with several instantiations of the variable (or variables) introduced in the collection of questions that define the discourse topic". In (37), the "collection of questions" would be as in (38):

```
(38) {What did Joana do?, What did Pedro do?, What did Maria do?, ... }
```

Therefore, *What did Joana do?* is one of the possible questions that can be asked at that point of discourse, and the others are pending questions that could be addressed too.

The Portuguese data support our analysis of sentences like (34) in terms of complex QUD structure, because they clearly show that the subject *Joana* is not a focus: instead of occupying an expected postverbal – hence focused – position, it occupies a preverbal – typically topic – one, while the accent – and its focus interpretation – falls on the verb (cf. Ambar 1992, 1999, Soares 2006).

4.4 On the special status of explicit questions in discourse

Recapitulating the analysis of explicit questions presented above, an explicit question "answers" its own implicit QUD, which is obtained by following the same principles proposed by Riester et al. (2018) for assertions. Unlike with assertions, however, the QUD is a *meta*-QUD, which asks the content of the speech act that the utterance realizes; in other words, a meta-QUD asks *what is asked* by the explicit question. By formulating the QUD that precedes the explicit question, a given-new partition is obtained, where new content, like in assertions, corresponds to the focus part (or the focus part plus a contrastive topic, as discussed in Section 4.3).

At the same time, an explicit question is a QUD, and a QUD has been described in the literature as a *discourse topic* (cf. Roberts 1996, 2012, McNally 1998, Beyssade et al. 2004, Marandin 2010).¹⁵ Indeed, a QUD and its sub-QUDs reveal what the discourse is about at a given point, and what direction or goal the speaker wants to give to it (cf. Roberts 1996, 2012).

Within the illocutionary view of IS, this apparent contradiction of explicit questions (being at the same time focus and topic) is accounted for by the fact that the definition of focus as new material (highlighted by Riester et al's ISannotation procedure) is independent from the focus' discourse function (represented by the illocutionary operator that the focus scopes under), which is a questioning one in the case of questions. Explicit questions (at least canonical ones, cf. Farkas 2022) are information-seeking devices, requiring an answer. Through questions (and their answers), speakers push the discourse forward, and steer it towards a certain direction; in other words, they introduce new discourse topics. This is also true when the discourse is not a dialogue, as it is the case for the car-review text, which is a (written) monologue. Despite its monological status, the text contains several questions, which are answered right away by the same writer. While an exhaustive analysis of the pragmatic functions of such questions is beyond the scope of the present work, we can suggest that they are generally exploited to direct the discourse towards its goal - which is to make a car review - by introducing new topics related to the qualities or defects of the reviewed car, and by developing such topics (through the questions' answers).

Summarizing, an explicit question has a double status: on the one hand, like any other utterance of a discourse, it "answers" its own QUD and therefore is partitioned into given and new content; on the other hand, since it is a question, and given the topic-introducing function of questions, it also functions as a discourse topic, pushing the discourse forward.

¹⁵Roberts (2012) interchangeably uses the term 'topic' and 'question': "The relevant alternatives are those proffered by the question, or topic, under discussion" (Roberts 2012:6); "We can now define the notion of a strategy of inquiry relative to some topic, or question under discussion" (Roberts 2012:18).

5 Other speech acts

Given the scope of the present paper, in this section we will only give a rapid sketch of how the proposal can extend to other non-assertive utterances.

In principle we do not see any obstacle in analysing the new-given partition of such utterances in the same way as we have analysed the new-given partition of questions. Let us start with imperative sentences. In the constructed Italian example in (39a), which can be uttered out-of-the-blue, the direct object *i denti* 'the teeth' occupies its canonical postverbal position, right after the verb. In (39b), where the imperative is preceded by an utterance mentioning the teeth, the direct object is clitic right dislocated.

(39) Italian

- a. Vai a lavarti i denti!
 go to brush the teeth
 'Go brush your teeth !'
- b. Daughter: Non mi piacciono i miei denti.
 'I don't like my teeth' Mother: Vai a lavarte-li, i tuoi denti! go to brush-CL.PL the your teeth
 'Go BRUSH your teeth!'

The whole proposition in (39a) is under the scope of the illocutionary operator; consequently, the QUD preceding the imperative will be as in (40) (taking for granted that the mother's speech act is an order):

(40) Q₁: {What does the speaker order?}
>A₁: [Vai a lavarti i denti!]_F
'Go brush your teeth !'

If on the contrary the imperative sentence contains given material, as in (39b), then the QUD must contain such material too, as in the QUD structure below:

```
(41) Non mi piacciono i miei denti.
'I don't like my teeth'
Q<sub>1</sub>: {What does the speaker order, concerning the addressee's teeth?}
>A<sub>1</sub>: [Vai a lavarte-li]<sub>F</sub>, i tuoi denti!
go to brush-cL.PL the your teeth
'Go BRUSH your teeth!'
```

The imperative differs from the previously analysed interrogatives in that the sentence is inserted in the discourse structure as an A(nswer), while interrogatives have a special discourse-structuring role and are therefore used as QUDs (Qs) themselves.

Notice that the discourse role of imperatives may be a different one. This is the case of 1st person inclusive *let*-imperatives (Huddleston et al. 2002: 934-936) followed by a verb of saying, which are found both in the Car review text and in the Interview. The illocutionary values of this type of imperatives either consist of "a proposal for joint action, which the addressee can accept or reject" (Huddleston et al. 2002: 936, cf. (42)) or they are "expository directives" (Huddleston et al. 2002: 931) as in (43).

(42) Interview

PM: And the most complex thing is clearly trying to unravel our relationship with the EU customs union and the EU single market, and the empire of the EU law as it were. LK: Let's talk about that.

(43) Car review

Let's talk practicality. How good is the Gran Tourer at the whole MPV thing?

In both cases, these utterances seem to serve the purpose to introduce a new discourse topic. Indeed, the speaker invites the addressee – be it a real invitation to a visible addressee, as in the example from the spoken Interview, or a rhetorical invitation to a potential reader, as in the written Car review example – to engage in a joint verbal action (a speech act) about some topic. This kind of utterances seem to have a similar function as an indefinite expression in examples like Lambrecht's one below, where *a wizard* introduces a new referent, which is then resumed as a topic in subsequent discourse:

(44) Lambrecht (1994: 177)

Once there was a wizard. He was very wise, rich, and was married to a beautiful witch.

Analogously, at the discourse level, a discourse topic can be introduced via a *let*-imperative and then be discussed in the chunk of discourse that follows. For instance in (43), the new discourse topic introduced by the *let*-imperative ("practicality"), is developed in the text that follows. The resulting QUD structure is given below: A_1 is a suggestion to discuss the new topic of how practical the car

is, and $Q_{1.1}$ introduces a sub-topic (recall that being an MPV vehicle means to be a practical vehicle).

(45) Q₁: {What does the speaker suggest (concerning the car review)?}
>A₁: Let's [talk practicality.]_F
>Q_{1.1}: {What does the speaker ask about the practicality (of the reviewed car)?}
>Q_{1.1}: [How good]_F is the Gran Tourer at the whole MPV thing?

The Italian example in (28), *Facciamo degli esempi* 'Let's give some examples', which precisely is translated into an English *let*-imperative, seems to have a topic introducing function too. In this case, there is no verb of saying, but the utterance is still an invitation to engage the addressee into a new joint verbal action (that of giving examples). The exact linguistic properties that make an imperative function as a QUD (that is, as a topic-introducing device) awaits a deeper study, which we leave to future research.

Let us now briefly look at exclamations. We found no exclamatives in the naturalistic data that we analyzed. Yet, we can suggest the same analysis as above via the constructed Italian example below, of a wh-exclamative. The QUD preceding the exclamative (cf. Q₂) asks for the speaker's feelings towards the given content (that the children have come home).¹⁶). In particular, next to the expressive function, the extent to which an exclamative also has an assertive role is debated (see Castroviejo XXXXX). Indeed, a question like Q2 in (46) could also receive an answer that is an assertion ('I am very happy that they are back'). Perhaps Q2 should rather be : What feelings does the speaker expresses about their return? FINIRE!!!!!!!

(46) A₁: - The children have just come home.
>Q₂: {What are the speaker's feelings about their return?}
>A₂: [Come sono contenta]_F che siano tornati! how am happy that are back
'How happy I am that they are back!'

To conclude, this section has sketched a tentative analysis of non-assertive, non-questioning utterances along the same lines as the analysis proposed in the previous sections for questions, which is an adaptation of the QUD-based analysis of the IS of assertions proposed in Riester et al. (2018) and following work.

 $^{^{16}}$ To add further complication to the analysis, there is no consensus on the illocutionary value of a wh-exclamative like the one in (46

While Riester et al. (2018)'s principles and the adjustments that we have proposed for questions seem to smoothly also apply to other non-assertive utterances, the exact role of these utterances in the discourse structure – whether they have a discourse-topic (that is, QUD) role like explicit questions do, or not – is less obvious and needs a future study on its own.

6 Conclusions and future perspectives

In this paper we have adopted an illocutionary approach to information structure, namely we have assumed that the focus of an utterance is the part that is under the scope of an illocutionary operator and the topic what stays outside of it. This approach has been around for some time (Jacobs 1984, Krifka 2001, 2011, Tomioka 2009, Beyssade 2013) but we have the feeling that the literature still tends to ignore it, probably because of the little attention that is generally being payed to the IS of non-declarative sentences. Within such an illocutionary approach, we have mainly analyzed interrogatives, or more precisely non-assertive utterances that realize an act of questioning.

We have adopted Riester et al. (2018)'s model of QUD and IS structure annotation and we have proposed that their principles to reconstruct QUDs that precede assertions can also apply to reconstruct QUDs preceding explicit questions. In order to maintain the idea that the QUD is actually *answered* by the explicit question, the QUD is a meta-question about the content of the illocutionary (questioning) act. The QUD therefore basically has the form: *What does the speaker ask...?*. and it allows one to retrieve the given-new partition of the explicit question. In assertions, the new content provides some missing information, it is the informative part of the utterance. In questions, however, new content is not informative in that it does not make any contribution to enrich the addressee's knowledge store, but represents the questioning part. Moving to other speech acts, the new content corresponds to the content of the relevant speech act (the ordering part, the advising part, and so on).

Within our proposal, explicit questions play a double role in discourse. Like any other illocutionary act, they have their own focus, background, and topic parts, which are obtained in the same way as in assertions, that is by reconstructing the preceding QUD. At the same time, following Riester et al. (2018), we have assumed that explicit questions play the same role as implicit QUDs do, that is they introduce a discourse topic and thus mark the structuring of discourse. Nonassertive speech acts that are not questions may also have a discourse-structuring role. For instance, we have seen that English *let*-imperatives with a verb of saying (*Let's talk about...*) clearly function as topic-introducing devices.

This paper explored how the IS of questions and other non-assertive utterances can be implemented within Riester et al. (2018)'s model. In order to have a complete picture on this subject, future work will have to further explore how precisely non-assertive utterances and their meta-questions are incorporated into the QUD-tree deriving from the annotation of QUDs. According to Riester et al. (2018)'s model, the QUD-tree's non-terminal nodes correspond to the QUDs (labeled "Os") and the terminal nodes correspond to the answers to the QUDs (labeled "As" - the actual utterances of the text).¹⁷ If non-assertive utterances are included in the annotation as we have attempted to do in the present paper, various problems arise concerning how to derive the corresponding QUD-tree. Explicit questions' ambiguous role (see discussion in Section 4.4) makes them eligible to be assigned both the label "Q" and "A". Indeed, since it is a QUD, an explicit question can legitimately occupy a non-terminal position of the OUDtree and be labelled as "Q" - a notational choice that was made in past work and in the present paper.¹⁸ At the same time, however, the explicit question could legitimately occupy an "A" node, since it provides an answer for the (meta-)QUD.

As a matter of fact, one may wonder if a meta-QUD is the same as a regular QUD. A meta-QUD serves to identify the given-new partition of an explicit question, but it does not really play a discourse structuring role in the same way as QUDs do. Such a role is rather taken by the explicit question itself. It therefore seems that the meta-QUD and the explicit question accomplish *together* what an implicit QUD does alone. If this idea is correct, then the QUD-tree should be built in such a way as to represent the meta-QUD and the explicit question as one single node. A full implementation of this idea is left to future research.

Abbreviations

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...

¹⁷A representation of QUDs and their answers as a structured tree is already in early work on QUDs, see Roberts (1996) and Büring (2003).

¹⁸In fact, this choice comes to the cost of accepting non-terminal nodes to be made of linguistic material and not just implicit abstract objects.

References

- Ambar, Manuela. 1992. Para uma sintaxe da inversão sujeito-verbo em português (Colecção Estudos linguísticos). Edições Colibri. https://books.google.fr/ books?id=YqkdAQAAIAAJ.
- Ambar, Manuela. 1999. Aspects of the Syntax of Focus in Portuguese. In Georges Rebuschi & Laurice Tuller (eds.), *Linguistik Aktuell/Linguistics Today*, vol. 24. Amsterdam: John Benjamins Publishing Company. DOI: 10.1075/la.24.02amb.
- Benincà, Paola, Gianpaolo Salvi & Lorenza Frison. 1988. L'ordine degli elementi della frase e le costruzioni marcate. In Lorenzo Renzi (ed.), *Grande grammatica italiana di consultazione. 1: La frase, i sintagmi nominale e preposizionale* (Strumenti Linguistica e critica letteraria), 115–225. Bologna: Il Mulino.
- Beyssade, Claire. 2006. La structure de l'information dans les questions : quelques remarques sur la diversité des formes interrogatives en français. *Linx* (55). 173–193. DOI: 10.4000/linx.470.
- Beyssade, Claire. 2013. Sous le sens : recherche sur la modélisation des aspects dynamiques de la communication et de l'interprétation. Université de Paris 8. (Mémoire d'Habilitation à diriger des Recherches).
- Beyssade, Claire. 2017. Chapitre 6. Sens et intonation: accent initial et stratégies discursives. In *Sous le sens* (Sciences du langage), 159–182. Saint-Denis: Presses universitaires de Vincennes.
- Beyssade, Claire, Elisabeth Delais-Roussarie, Jenny Doetjes, Jean-Marie Marandin & Annie Rialland. 2004. Prosodic, syntactic and pragmatic aspects of information structure. An introduction. *Handbook of French semantics*. 455–475.
- Beyssade, Claire, Jean-Marie Marandin & Annie Rialland. 2003. Ground/focus revisited. A perspective from French. In *Proceedings of LSRL 2001*. Benjamins.
- Bocci, Giuliano, Valentina Bianchi & Silvio Cruschina. 2021. Focus in whquestions: Evidence from Italian. *Natural Language & Linguistic Theory* 39(2). 405–455. DOI: 10.1007/s11049-020-09483-x.
- Brunetti, Lisa. 2009. On links and tails in Italian. *Lingua* 119(5). Number: 5, 756–781.
- Brunetti, Lisa, Kordula De Kuthy & Arndt Riester. 2021. The Information-Structural Status of Adjuncts: A Question-under-Discussion-Based Approach. *Discours* (28). 28. DOI: 10.4000/discours.11454. (25 August, 2023).
- Brunetti, Lisa, Laia Mayol & Xavier Villalba. 2020. Bridging Strength, Monotonicity, and Word Order Choices in Catalan. *Discourse Processes* 57(8). 703–724. DOI: 10.1080/0163853X.2020.1768623.

- Bull, Peter & Kate Mayer. 1993. How not to answer questions in political interviews. *Political Psychology* 14(4). 651–666.
- Büring, Daniel. 2003. On D-Trees, Beans, and B-Accents. *Linguistics and Philosophy* 26(5). Publisher: Springer, 511–545. (29 August, 2023).
- Büring, Daniel. 2007. Intonation, semantics and information structure. In G. Ramchand & C. Reiss (eds.), *The oxford handbook of linguistic interfaces*. Oxford: Oxford University Press.
- Calabrese, Andrea. 1982. Alcune ipotesi sulla struttura informazionale della frase in italiano e sul suo rapporto con la struttura fonologica. *Rivista di Grammatica Generativa* (13). 489–526.
- Cruschina, Silvio & Laia Mayol. 2022. The Realization of Information Focus in Catalan. *Languages* 7(4). DOI: 10.3390/languages7040310.
- D'Imperio, Mariapaola. 2002. Italian intonation: An overview and some questions. *Probus* 14(1). DOI: 10.1515/prbs.2002.005. (20 March, 2024).
- De Kuthy, Kordula, Lisa Brunetti & Marta Berardi. 2019. Annotating Information Structure in Italian: Characteristics and Cross-Linguistic Applicability of a QUD-Based Approach. In Annemarie Friedrich, Deniz Zeyrek & Jet Hoek (eds.), *Proceedings of the 13th Linguistic Annotation Workshop, LAW@ACL 2019, Florence, Italy, August 1, 2019,* 113–123. Stroudsburg: The Association for Computational Linguistics.
- Deck, Oliver. 2023. Bullshit, pragmatic deception, and natural language processing. *Dialogue & Discourse* 14(1). 56–87.
- Eckardt, Regine. 2019. Inherent focus on wh-phrases. Proceedings of Sinn und Bedeutung. 209–228. DOI: 10.18148/SUB/2007.V11I0.641.
- Faller, Martina. 2002. *Semantics and pragmatics of evidentials in Cuzco Quechua*. Stanford University. (Doctoral dissertation).
- Farkas, Donka F. 2022. Non-Intrusive Questions as a Special Type of Non-Canonical Questions. en. *Journal of Semantics* 39(2). 295–337. DOI: 10.1093/ jos/ffac001. https://academic.oup.com/jos/article/39/2/295/6534147 (12 January, 2024).
- Féry, Caroline. 2001. Focus and Phrasing in French. In Caroline Féry & Wolfgang Sternefeld (eds.), A Festschrift for Arnim von Stechow, 153–181. Berlin, Boston: Akademie Verlag. DOI: doi:10.1515/9783050080116.153.
- Féry, Caroline & Ingo Feldhausen. 2020. Intonation meaning in French. In Andrea Pešková Gabriel Christoph & Maria Selig (eds.), *Contact, variation, and change in romance and beyond* (Studienreihe Romania (StR)), 573–592. Berlin: Erich Schmidt.

- Gili Fivela, Barbara and Avesani, Cinzia and Barone, Marco and Bocci, Giuliano and Crocco, Claudia and D'Imperio, Mariapaola and Giordano, Rosa and Marotta, Giovanna and Savino, Michelina and Sorianello, Patrizia. 2015. Intonational phonology of the regional varieties of Italian. In Frota, Sónia and Prieto, Pilar (ed.), *Intonation in romance*, 140–197. Oxford University Press. DOI: 10.1093/acprof:oso/9780199685332.001.0001.
- Ginzburg, Jonathan. 1995. Resolving Questions, I. *Linguistics and Philosophy* 18(5). Publisher: Springer, 459–527.
- Gundel, Jeanette & Thorstein Fretheim. 2006. Topic and focus. In Laurence Horn & Gregory Ward (eds.), *The handbook of pragmatics*, 175–196. Blackwell.
- Halliday, M. A. K. 1967. Notes on transitivity and theme in english: part 2. *Journal of Linguistics* 3(2). 199–244. DOI: 10.1017/S0022226700016613.
- Huddleston, Rodney, Rodney Huddleston & Geoffrey K. Pullum. 2002. Clause type and illocutionary force. In *The Cambridge Grammar of the English Language*, 851–946. Cambridge University Press.
- Jackendoff, Ray. 1972. *Semantic interpretation in generative grammar*. Cambridge, Mass., MIT Press.
- Jacobs, Joachim. 1984. Funktionale Satzperspektive und Illokutionssemantik. *Linguistische Berichte* 91. 25–58.
- Jary, Mark. 2010. Assertion. London: Palgrave Macmillan UK. DOI: 10.1057/ 9780230274617.
- Krifka, Manfred. 2001. Quantifying into question acts. *Natural Language Semantics* 9(1). 1–40.
- Krifka, Manfred. 2011. Questions. In Klaus von Heusinger, Claudia Maienborn & Paul Portner (eds.), Semantics. an international handbook of natural language meaning. vol. 2, 1742–1785. De Gruyter Mouton.
- Ladd, D. Robert. 1996. *Intonational phonology* (Cambridge studies in linguistics 79). Cambridge ; New York: Cambridge University Press.
- Lambrecht, Knud. 1994. Information structure and sentence form: topic, focus, and the mental representations of discourse referents. Cambridge University Press. DOI: 10.1017/CBO9780511620607.
- Marandin, Jean-Marie. 2010. Subject Inversion and Discourse in Romance. In Danièle Godard (ed.), *Fundamental Issues in the Romance Languages*, 319–367. Stanford: CSLI Publications.
- Marotta, Giovanna. 2001. I toni accentuali nelle interrogative aperte (wh) dell'italiano di Lucca. In Camilla Bettoni, Antonio Zampolli & Daniela Zorzi (eds.), *Atti del 2° Congresso dell'Associazione Italiana di Linguistica Applicata*, 175–194. Perugia: Guerra.

- Matić, Dejan & Daniel Wedgwood. 2013. The meanings of focus: The significance of an interpretation-based category in cross-linguistic analysis. *Journal of Linguistics* 49(1). 127–163. DOI: 10.1017/S0022226712000345. (13 February, 2024).
- McNally, Louise. 1998. On Recent Formal Analyses of Topic. In Jonathan Ginzburg, Zurab Khasidashvili, Carl Vogel, Jean-Jacques Lévy & Enric Vallduví (eds.), *The Tbilisi Symposium on Language, Logic, and Computation: Selected Papers*, 147–160. Stanford, CA: CSLI Publications.
- Nespor, Marina & Irene Vogel. 1986. *Prosodic Phonology*. Dordrecht: Foris Publications.
- Onea, Edgar. 2016. Potential questions at the semantics-pragmatics interface (Current Research in the Semantics/Pragmatics Interface 33). Leiden ; Boston: Brill.
- Ott, Dennis. 2017. The syntax and pragmatics of dislocation: a non-templatic approach. In Andrew Alexander Monti (ed.), *Actes du congrès de l'acl 2017 2017 cla conference proceedings*.
- Reinhart, Tanya. 1981. Pragmatics and Linguistics: an analysis of Sentence Topics. *Philosophica* 27(0). DOI: 10.21825/philosophica.82606. (28 September, 2023).
- Riester, Arndt. 2019. Constructing QUD Trees. In Malte Zimmermann, Klaus von Heusinger & Edgar Onea (eds.), *Questions in Discourse*, vol. 2: Pragmatics (Current Research in the Semantics / Pragmatics Interface 36), 163–192. Leiden: Brill.
- Riester, Arndt, Lisa Brunetti & Kordula De Kuthy. 2018. Chapter 14. Annotation guidelines for Questions under Discussion and information structure. In Evangelia Adamou, Katharina Haude & Martine Vanhove (eds.), *Information Structure in Lesser-described Languages* (Studies in Language Companion Series 199), 403–444. Amsterdam: John Benjamins Publishing Company. DOI: 10.1075/slcs.199.14rie.
- Roberts, Craige. 1996. Information Structure: Towards an integrated formal theory of pragmatics. *OSUWPL, The Ohio State University Department of Linguistics* Volume 49: Papers in Semantics.
- Roberts, Craige. 2012. Information structure in discourse: Towards an integrated formal theory of pragmatics. *Semantics and Pragmatics* 5. DOI: 10.3765/sp.5.6.
- Rooth, Mats. 1992. A theory of focus interpretation. *Natural Language Semantics* 1(1). 75–116. DOI: 10.1007/BF02342617.
- Saeed, John I. 1999. Somali. Amsterdam: John Benjamins.
- Soares, Carla. 2006. *LA SYNTAXE DE LA PERIPHERIE GAUCHE EN PORTUGAIS EUROPEEN ET SON ACQUISITION*. Université Paris 8 Saint Denis. (Doctoral dissertation).

- Tomioka, Satoshi. 2009. Contrastive topics operate on speech acts. In Malte Zimmermann & Caroline Féry (eds.), *Information structure*, 1st edn., 115–138. Oxford University Press. DOI: 10.1093/acprof:oso/9780199570959.003.0006.
- Tosco, Mauro. 2002. 'a whole lotta focusin' goin' on': information packaging in somali texts. *Studies in African Linguistics* 31. 27–53.
- Vallduví, Enric & Elisabet Engdahl. 1996. The linguistic realization of information packaging. en. *Linguistics* 34(3). 459–520. DOI: 10.1515/ling.1996.34.3.459.
- Velleman, Leah & David Beaver. 2016. Question-based Models of Information Structure. In Caroline Féry & Shinichiro Ishihara (eds.), *The Oxford Handbook of Information Structure*, vol. 1. Oxford University Press. DOI: 10.1093/ oxfordhb/9780199642670.013.29.
- Viesel, Yvonne. 2023. *Discourse relations and information structure: evidence from german discourse particles in embedded domains*. University of Konstanz. (Doctoral dissertation).
- von Stutterheim, Christiane & Wolfgang Klein. 1989. Referential movement in descriptive and narrative discourse. In Rainer Dietrich & Carl Graumann (eds.), *Language processing in social context*, 39–76. Amsterdam: North Holland.