Contrast in a QUD-based information-structure model

Lisa Brunetti (Université Paris Cité/CNRS)

Abstract

In this paper I look at contrast within the model of information-structure annotation proposed by Riester, Brunetti, and De Kuthy (2018), Riester (2019), Brunetti, De Kuthy, and Riester (2021), which is based on the notion of "Question under Discussion" or QUD (Roberts [1996] 2012, among many others). The model assumes that every utterance in a discourse is preceded by an implicit question, and proposes four principles that constrain the formulation of such questions. One principle, "Parallelism", accounts for two or more utterances answering the same QUD. Such a discourse configuration provides the ground for contrast (Umbach 2004, 2005, Repp 2016); specifically, what is called "Simple" Parallelism accounts for occurrences of contrastive focus, while "Complex" Parallelism is relevant when two alternative sets are evoked, namely with contrastive topics. I assume that contrast is accounted for in terms of contrastive discourse relations and make the working hypothesis that contrastive relations always co-occur with Parallelism. Partially following Repp (2016), I assume four contrastive relations, specifically: SIMILAR, OPPOSE, CORR(RECTION) and CONCESSION; and describe what contextual and semantic restrictions make these relations different. By analyzing naturalistic data from spoken and written interviews in Italian and French, whose utterances were annotated for their QUDs and information structure and for their contrastive relations, I show how the differences among these relations can be partially accounted for in terms of their QUD structure. I also look at the interplay between contrastive relations and Simple and Complex Parallelism. I eventually show and discuss cases where contrastive relations and Parallelism do not co-occur. This mostly happens when a CONCESSION relation holds between the discourse segments.

1 Introduction

Contrast is a much studied and yet still elusive notion in both information-structure and discourse studies. In this paper, I try to shed more light on this phenomenon by looking at occurrences of contrastive focus and topic in naturalistic data of two Romance languages, French and Italian, and by analyzing them through the lenses of the model of information-structure annotation proposed by Riester, Brunetti, and De Kuthy (2018), Riester (2019), Brunetti, De Kuthy, and Riester (2021). This model's assumption (from now on, RBK's model) is that sentence

information structure and discourse structure are strictly interdependent, and that discourse structure is obtained by formulating, for each utterance of a text, its "Question under Discussion" or QUD (van Kuppevelt 1995, Roberts [1996] 2012, Ginzburg 1996, Onea 2016, among many others), namely a (generally) implicit question that each utterance is meant to answer. The notion of Question under Discussion is by now well established in information-structure studies and there is a vast literature that proposes different models (see Velleman and Beaver 2016 for a review). While these models can be extremely sophisticated, they sometimes lack clear, applicable criteria to formulate QUDs, and are therefore less effective when naturalistic data are studied. One advantage of RBK's model is precisely that it provides specific, applicable principles to formulate QUDs. These principles are mainly based on the reconstruction of the utterance's given content, and have the advantage of not relying on linguistic form, namely they can be applied to languages whose representation of information-structure is not well understood yet.

RBK's model is based on four principles, which will be presented in Section 2. One of them, called "Parallelism", accounts for cases in which two or more utterances answer the same QUD. My starting point is that such a discourse configuration is the natural locus of contrast (Umbach 2005, Repp 2016).

My notion of contrast takes roots in the Alternative Semantics framework (Rooth 1985, 1992, Büring 1997). Alternative Semantics takes for focus and topic to be alternative-set evoking phenomena. I assume, following part of the literature (see Neeleman and Vermeulen 2013 and references quoted in there) that contrast needs, but does not reduce itself to, the presence of alternative sets. I argue that alternatives may get instantiated in the discourse by utterances that precede or follow the utterance that evokes them. In that case, following RBK's model, a QUD is formulated that is answered by the utterances that form the alternative set, namely, the principle of Parallelism mentioned above applies. When such a discourse configuration arises, a contrastive discourse relation holds between the two (or more) utterances. My working hypothesis is that the inverse is also true: whenever a contrastive relation holds between two utterances, the discourse structure is one accounted for by the principle of Parallelism.

Given the importance, for the purposes of this paper, of RBK's model of QUD and information-structure annotation, in the next section I will briefly summarize how the model works (for a detailed description, see Riester, Brunetti, and De Kuthy 2018, Riester 2019, Brunetti, De Kuthy, and Riester 2021). In Section 3 I will then give a more detailed account of the notion of contrast that I assume. I will try, along the lines of Umbach (2004, 2005), Repp (2016), to define contrast by combining an Alternative-Semantics-based definition with a

definition in terms of discourse relations. I will also present the contrastive discourse relations that I assume, namely SIMILAR, OPPOSE, CORR(ECTION) (cf. Repp 2016) and CONCESSION (Umbach 2004, Webber et al 2019), and define them with the help of the QUD structure that can be reconstructed when such relations occur. In Section 4 I will apply my analysis to naturalistic data from French and Italian oral and written interviews, and look at the interplay between contrastive relations and QUD structure, and in particular at the co-occurrence of contrastive relations and Parallelism. In Section 5 I will discuss cases of contrast without Parallelism. In Section 6 I will draw some conclusions.

2 A QUD- and IS-annotation model

As mentioned in the Introduction, the model I'm adopting is based on the assumption that a (generally implicit) question precedes each utterance of a discourse. The goal of the model is to provide criteria to formulate such a question and through it, to derive the information structure (from now on, IS) of each utterance.

Riester and colleagues assume an Alternative Semantics' (Rooth 1985, 1992, Büring 1997) framework for focus and topic, which I briefly resume below. Rooth (1992) proposes that a sentence containing a focus feature – represented in English by an accent – such as *[Mary]$_F$ likes Sue* has an ordinary semantic value plus an additional "focus semantic value" that corresponds to a set of propositions of the type *x likes Sue*, where the value of the variable in each proposition is one of the possible alternatives to the focus in the relevant context. Following Rooth's path, Büring (1997) proposes an alternative-based account for topic marking in German and English. A topic – again represented by an accent in these languages – evokes a set of alternatives, but in this case, they are alternative *questions*. For instance, in Büring's example in (1), the topic feature (marked by a topic accent on *female*) evokes a set of the type: *What did the x pop stars wear?*.

(1) (Büring 1997: 69)
    A: What did the pop stars wear?
    B: [The female]$_T$ pop stars wore caftans.

Since a question can be defined as a set of propositions corresponding to its potential answers (Hamblin 1973), it turns out that *two* sets of alternatives are at stake, as illustrated in (2), from Büring (1997), where the sets are represented by curly brackets.

(2) Büring (1997:68)

{{the female pop stars wore caftans, the female pop stars wore dresses, the female pop stars wore overalls,…},

{the male pop stars wore caftans, the male pop stars wore dresses, the male pop stars wore overalls,…},

{the female or male pop stars wore caftans, the female or male pop stars wore dresses, the female or male pop stars wore overalls,…},

{the Italian pop stars wore caftans, the Italian pop stars wore dresses, the Italian pop stars wore overalls,…},…}

The difference between the focus and the topic variables lies on their effects on discourse and can be accounted for by appealing to the notion of Question under Discussion: the value of the focus variable provides an answer to the current QUD, while the topic variable does not (Roberts [1996] 2012, Büring 2003). In order to understand whether an alternative set is a focus or a topic one, it is therefore crucial to know what the QUD structure is.

Within RBK's model, QUDs are formulated according to four principles, three of which are given in (3), from Brunetti, De Kuthy and Riester (2021). These principles basically state that a QUD must have a congruent answer (corresponding to the target utterance) and that it must contain all and only its answer's given content:

(3) Brunetti, De Kuthy and Riester (2021:17)

    i. Q-A-Congruence: A QUD must be answerable by the assertion that it immediately dominates.

    ii. Maximize-Q-Anaphoricity: the QUD should be formulated using all the given semantic content of its answer.

    iii. Q-Givenness: An implicit QUD can only consist of given content.

The formulation of the QUD is therefore a way to reconstruct the target utterance's given content (the background), while the focus is the new piece of information that answers the QUD. For instance, in (4), given the local linguistic context represented by A_1, the only given content of A_2 is *she.* The utterance's QUD must therefore only contain a reference to the speaker's mother (in addition to the wh-phrase and to anything that may be necessary to formulate a grammatical question). Consequently, *was born in a town on the other side of the world* is labeled as focus and *she* as background. Following Rooth's (1992) conventions, the annotation only marks the

focus by means of F-indexed square brackets, while the background is what is left outside the focus within the "focus domain" (the sum of focus and its background), marked by brackets and a squiggle sign ~.[1]

(4)   Brunetti, De Kuthy, and Riester (2021:18)

A₁   While studying here, my father met my mother.

Q₂   What about Obama's mother?

> A₂   [She [was born in a town on the other side of the world.]F]~

Through the formulation of QUDs, a discourse structure is derived in RBK's model, under the form of a tree whose terminal nodes are the answers to the QUDs (the actual utterances of the text). See Riester (2019) for a detailed explanation of how the QUD-tree is built. What is sufficient to know for the purposes of this paper is that, in the QUD-annotated examples that will follow, the symbols >, >>, >>>, etc. indicate the level of embedding of questions and answers in the discourse tree.

2.1 The principle of Parallelism

The fourth principle for the formulation of QUDs, Parallelism, is what mostly interests us for the present purposes, since it is strongly related to contrast (cf. Umbach 2005). The principle is given in (5), from Brunetti, De Kuthy, and Riester (2021), and accounts for pairs or lists of utterances – generally coordinated ones – that answer the same QUD:

(5) Brunetti, De Kuthy, and Riester (2021:18)

Parallelism: A QUD that is directly answered by two or more answers is formulated on the basis of the semantic content that is shared by the answers.

The principle overrides Q-Givenness, in that the QUD can be made of *new* content if that content is shared by all the utterances that answer the QUD. Example (6) is taken from a French spoken sociolinguistic interview (CFPP2000 corpus, Branca-Rosoff et al 2009). The speaker is

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[1] For the sake of simplicity, in the examples that follow the information-structure annotation will only be given on the utterances that are relevant for the discussion.

answering a question from the interviewer about what districts of Paris she likes. By convention, implicit QUDs are given in italics. [2]

(6) French, CFPP2000 (7$^{\text{ème}}$)

A$_{23}$ alors euh j'aime beaucoup euh tout c'qui est euh: aux environs de bah j'aime beaucoup le septième euh où qu'ce soit

'so ehm I love very much all that is close to… well I love the 7th district very much, no matter where'

Q$_{24}$ *Where specifically, within the 7th district?*

>A$_{24'}$ [que ça soit [vers la Tour-Maubourg]$_F$]~

'be it towards the Tour-Maubourg'

>A$_{24''}$ [que ce soit [ici]$_F$]~

'be it here'

This is an example of Simple Parallelism. The segments A$_{24'}$ and A$_{24''}$ share some semantic content (represented by the almost identical parts *que ça soit* and *que ce soit*) and differ with respect to the answer they give to Q$_{24}$: the principle in (5) therefore applies.

Example (7), from the same corpus, is an instance of Complex Parallelism. Spk1 is the interviewer (a linguist) and Spk2 is the interviewee, a person living in the 13$^{\text{th}}$ district of Paris.

(7) French, CFPP2000 (13$^{\text{ème}}$)

> Q$_1$ spk1   comment est-c'que euh toi ou tes parents vous êtes arrivés dans l'quartier (…)

'how did you or your parents arrive in the district (…)?'

> > Q$_{1.1}$ *How did you arrive in the district?*

> > > A$_{1.1}$ spk2   alors, donc [[moi]$_{CT}$ j'suis arrivé à Paris [j'étais tout petit]$_F$]~ (…)

'so, as for myself, I arrived in Paris as a little child'

> > Q$_{1.2}$ *How did your parents arrive in the district?*

> > > A$_{1.2}$ et [[mes parents]$_{CT}$ sont venus à Paris [pour le boulot]$_F$]~

'and my parents came to Paris for work'

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[2] Some of the pauses, fillers, repetitions, interruptions, etc. that are present in the transcription of the CFPP2000 corpus have been removed for the sake of clarity.

In this example, the QUD is not implicit but is explicitly uttered by the interviewer.[3] The characteristic of Complex Parallelism is that the question is only partially answered by each utterance ($A_{1.1}$ and $A_{1.2}$); each utterance however fully answers a subordinate QUD ($Q_{1.1}$ and $Q_{1.2}$). This is basically the QUD analysis that Büring (2003), following Roberts (1996 [2012]), gives to contrastive topics in English and German: a superordinate question is followed by sub-questions whose answers are partial answers to the super-question. Such a QUD structure not only identifies the focus variable but also the topic variable, which is indexed with CT (for Contrastive Topic) in (7).

The difference between Simple and Complex Parallelism is basically that, with the former, the topic is fixed and the only evoked alternative set is the one introduced by the focus, while with Complex Parallelism, the topic varies too. For the same discourse structures, Umbach (2005) talks about "simple contrast" and "double contrast". Indeed, the discourse structures where Parallelism applies represent what is required at the discourse level in order to have contrast: discourse segments that share some content and differ in some respects. This point is discussed in more details in the next section, where I present my assumptions about the notion of contrast.

3 What is contrast?

Contrast can be viewed as one of the possible "pragmatic uses" (Krifka 2008:250) of focus or topic alternatives. Focus or topic alternatives satisfy what Repp (2016) calls an intuitive definition of contrast – one that may be found in dictionaries – namely that contrast refers to "differences between similar things" (Repp 2016:270): the alternatives evoked by focus or topic share their content (similarity), except for the value given to the variable(s) (dissimilarity). Nevertheless, such a definition is not sufficient. In order to have contrast, the relationship between the alternatives must be subject to certain contextual or semantic constraints. Differences in these constraints give rise to different types of contrast (Krifka 2007, Cruschina 2021). For Rooth (1992), contrast arises in situations where the context provides a phrase/sentence whose semantic value corresponds to one of the alternatives evoked by the focus

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[3] QUDs can be questions that are actually produced by a speaker. Unlike implilcit questions, which follow the principles in (3), overt questions can be made of new content. Also, they are not necessarily answered by the utterance that follows; if not, an implicit QUD has to be formulated after the explicit one.

or the topic. Other scholars have pointed out that the alternatives should be clearly identifiable, others that they should be limited in number, others that they should be both (see Molnár 2002 for a survey). Neeleman and Vermeulen (2013) argue that the meaning of contrastive focus encodes at least one false alternative.[4] For contrastive topic, they propose that the additional interpretive effect of contrast is that the speaker is unwilling to utter (at least) one alternative.[5] Following Umbach (2004) and Repp (2016), I argue that a way to identify the defining properties of contrast (or better, of different types of contrast) is to look at this notion from a discourse perspective, namely to look at contrastive discourse (or rhetorical, or coherence) relations. I will focus on this line of studies in the next sub-section. I will argue that contrastive relations can be partially defined and differentiated by taking into account the QUD structure that is reconstructed for the contrasting segments and their preceding context.

3.1 Contrast as a discourse relation

Discourse relations (Hobbs 1985, Mann and Thompson 1988, Asher and Lascarides 2003, Webber et al 2019, among many others) are interpretative relations between utterances of a text: they give the function of an utterance with respect to the preceding utterance(s). For instance, an utterance can express the cause, the result, or the goal of what is described in the preceding utterance(s); it can elaborate on or explain what is said in the preceding utterance(s), etc. Discourse relations are often marked by discourse markers or by subordinating/coordinating conjunctions, such as 'therefore', 'however', 'in order to, 'but', 'yet', 'because'.

Among discourse relations, scholars have identified contrastive ones. Various classifications of contrastive relations have been proposed, and analyses differ with respect to the number of such relations and their exact definition (as well as their names), so that different aspects related to contrast are highlighted. I will not go through the proposals here but refer to Repp (2016) for a summary. Despite the variety of proposals, as Repp observes, "The basic ingredient to the CONTRAST relation in all theories is that there must be similarities as well as dissimilarities between two discourse segments." (Repp 2016:277). In other words, we are back to the property (similarity plus dissimilarity) of focus and topic alternatives, which is the premise for contrast (cf. Neeleman and Vermeulen 2013). That means that the informational and the discourse view on contrast are compatible and in fact complementary: the discourse segments that are in a contrastive relation make the alternative set (or a subset of it) explicit. In other words, a

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[4] In fact, they discuss *corrective* focus. See more on correction and how it differs from other types of contrasts in Section 3.1.
[5] See more on this in Section 4.3.

contrastive relation between two (or more) discourse segments satisfies Rooth's requirement for contrast, namely that one or more alternatives be explicitly provided by the context. In addition, each relation specifies the different contextual and interpretative constraints among discourse segments. According to Cuenca, Postolea, and Visconti (2019:6), "two discourse segments (S1 and S2) are in contrast when their meanings *conflict* [emphasis mine] either at the semantic or the pragmatic level. In the latter case, the opposition is established between inferences, not contents per se". I borrow from Repp (2016) the classification of contrastive discourse relations into SIMILAR, OPPOSE, and CORR(ection), and I add a CONCESSION relation. The type of "conflict" subsumed by each of these relations is described in the rest of this section through the QUD structure that can be reconstructed in each case, following RBK's principles.

Let us start with the SIMILAR relation. Repp defines SIMILAR as a relation where propositions can both be true in the evaluation world, and both "make the same kind of contribution to the current question under discussion" (Repp 2016 :8). An English constructed example from Repp (2016:8) is given in (8):

(8) *John was mowing the lawn. Pete was pruning the roses.*

Within RBK's framework, (8) may have the following QUD (and IS) structure.[6] The two utterances, like Repp says, answer the same QUD, but do it here indirectly through the sub-questions $Q_{1.1}$ and $Q_{1.2}$; in other words, this is a case of Complex Parallelism.

(9) Q_1 *What were John and Pete doing?*
  $> Q_{1.1}$ *What was John doing ?*
  $> > A_{1.1}$ *[[John]$_{CT}$ was [mowing the lawn]$_F$]~.*
  $> Q_{1.2}$ *What was Pete doing ?*
  $> > A_{1.2}$ *[[Pete]$_{CT}$ was [pruning the roses]$_F$]~.*

SIMILAR is what Cuenca, Postolea, and Visconti call a "weak contrast". Indeed, the only requirement for the contrasting segments is to (directly or indirectly) answer the same QUD. In other words, what is needed in order to have a SIMILAR relation is just a Parallelism configuration.

The OPPOSE relation is, like SIMILAR, one where both propositions are true in the evaluation

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[6] Since no context (under the form of a preceding utterance) is given, this is just the QUD structure that seems more plausible given the meaning of the sentences in (8).

world. Repp distinguishes OPPOSE from SIMILAR in that the former is such that the two utterances make *opposing* contributions to the current QUD. For instance in (10), the presence of *but* signals "that the first conjunct serves as an argument for some background assumption whereas the second conjunct serves as an argument against it", where "the background assumption might have been that John and Pete would mow the lawn together." The sentence "tells us that this expectation is violated" (Repp 2016:8).

(10)   Repp (2016:8)
       John was mowing the lawn but Pete was pruning the roses.

(11) Q_1 *Were John and Pete mowing the lawn ?*
       > $Q_{1.1}$ *What was John doing?*
       > > $A_{1.1}$ *[[John]$_{CT}$ [was mowing the lawn]$_F$]~*
       > $Q_{1.2}$ *What was Pete doing?*
       > > $A_{1.2}$ *but [[Pete]$_{CT}$ [was pruning the roses]$_F$]~.*

I propose, making Repp's definition more precise, that two utterances in an OPPOSE relation represent propositions of opposite polarity, each *partially* answering a preceding QUD that asks for confirmation of some background assumption. In other words, a Complex Parallelism configuration is at stake, where the super-question is a polar one. In the QUD structure in (11), the polar question Q_1 asks whether the background assumption that both John and Pete were mowing the lawn is true. Q_1 is indirectly answered through the answers to the two sub-questions $Q_{1.1}$ and $Q_{1.2}$, which partly confirm and partly disconfirm the truth of such assumption.

In this example the proposition of opposite polarity (*Pete was not mowing the lawn*) is inferred from $A_{1.2}$ and triggered by *but*. Cases like this are not uncommon in naturalistic data, as we will see in Section 4. The constructed English example in (12a) is however more transparent, since the two segments explicitly contain two predicates of opposite polarity.[7] Its QUD structure is given in (12b).

(12)   a.   *John mowed the lawn, but Pete did not.*
       b. Q_1 *Did John and Pete mow the lawn ?*
            > $Q_{1.1}$ *Did John mow the lawn ?*

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[7] Since the verb is the same, ellipsis applies to its second occurrence.

> > $A_{1.1}$ $[[John]_{CT} [mowed]_F \text{ the lawn}]\sim$

> $Q_{1.2}$ *Did Pete mow the lawn ?*

> > $A_{1.2}$ *but* $[[Pete]_{CT} [did\ not]_F \text{ mow the lawn}]\sim$.

The relation CORR(RECTION) is the only one expressing an "exclusive" contrast in Cuenca, Postolea, and Visconti's (2019) terms. That means that the two utterances are not compatible, namely one is negated to assert the other. In terms of QUD-structure, the contrasting utterance replaces an answer to a QUD that has been given before in the discourse, for instance by another participant in the conversation, or an implicit answer that contains some knowledge that is taken for granted by the speakers, given their world knowledge, as we will see in the French and Italian data presented in Section 4. Consider my constructed examples in (13).

(13) *a. Spk 1:* *John pruned the roses.*

  b'. Spk 2 : *John did not prune the roses,*

    he mowed the lawn.

  b''. Spk 2 : *Pete pruned the roses,*

    not John.

A QUD structure for (13a-b') follows Simple Parallelism and both assertions answer a QUD about the tasks that John performed in the garden, as illustrated in (14).

(14) Q_1 *What did John do in the garden?*

  > $A_{1'}$ *Spk 1 :* *John pruned the roses.*

  > Q_2 *Did John pruned the roses ?*

  > > A_2 *Spk 2 :* $[John [did\ not]_F \text{ prune the roses}]\sim,$

  > $A_{1''}$ $[he [mowed\ the\ lawn]_F]\sim$

The contrasting utterances are $A_{1'}$ and $A_{1''}$, which both answer Q_1. The proposition expressed by $A_{1'}$ is believed to be true by some participant in the conversation (Spk1) but not by the one who utters $A_{1''}$ (Spk2). The assertion in A_2 is uttered in order to reject $A_{1'}$, which is then replaced by the correct answer ($A_{1''}$). In (13a-b''), the order is different: the speaker first replaces $A_{1'}$ with $A_{1''}$ and then explicitly rejects $A_{1'}$, as shown in (15).

(15) Q_1 *Who pruned the roses?*

> A_1'   *Spk 1 :*   *[[John]$_F$ pruned the roses]~.*

> A_1''   *Spk 2 :*   *[[Pete]$_F$ pruned the roses]~,*

> Q_2 *Did John pruned the roses ?*

>> A_2 *[[not]$_F$ John]~.*

Note that the QUD and sub-QUDs with CORR are not polar questions. This is due to the difference between OPPOSE and CORR in terms of their function in discourse. With OPPOSE, the speaker partially agrees on and partially denies the truth of some background assumption that is still under discussion, represented by the polar QUD (cf. Farkas and Bruce 2010). With CORR, the speaker's assertion substitutes the addresee's one, or one that is assumed by the addressee to be true, as a correct answer to the QUD.

I finally add a CONCESSION relation to Repp's classification, namely a relation where one conjunct goes against the expectations triggered by the other, in that it contradicts the default inference from the other conjunct (Umbach 2004). In Webber et al's (2019) Penn Discours TreeBank annotation guidelines, "Concession is meant to be used when a causal relation expected on the basis of one argument is cancelled or denied by the situation described in the other" (Webber et al 2019:23). Example (16) from Repp shows a typical concessive marker in English, the subordinating conjunction *although*.

(16)   Repp (2016:277)

       Although Miller is a good politician, Smith was chosen for the task.

The QUD and IS structure of (16) are the following:

(17) Q_1 :   *Who was chosen for the task?*

      > Q_2 :   *Despite what ?*

      > > A_2 :   *[Although [Miller is a good politician]$_F$]~,*

      > A_1 :   *[[Smith]$_F$ was chosen for the task]~ .*

In this example, no Parallelism configuration applies to the contrasting segments. As we will see in Section 5.1, CONCESSION may indeed (though not always) occur in contexts that do not fit Parallelism's requirements, that is, where the two discourse segments do not both answer the

same QUD.[8] Unlike OPPOSE, the alternatives do not have to make predications of opposite polarity, because the "conflict" does not arise from that, but from the incompatibility of one alternative and the inference triggered by the other. Unlike CORR, all alternative propositions are true in the evaluation world, though one triggers the inference that the other *should* be false.

Summarizing, contrast requires the presence of focus or topic alternatives. It also demands that such alternatives be instantiated by actual utterances in the discourse, so that a contrastive relation can be established between them. The type of contrastive relation depends on particular contextual and semantic restrictions, which can be identified thanks to the QUD-structure associated with the contrasting pairs. SIMILAR and OPPOSE differ from each other in that with SIMILAR, the utterances provide different answers to the QUD (directly or indirectly) but they are not restricted in any particular way, while OPPOSE requires that the contrasting utterances make predications of opposite polarity, and that each of them partially contributes to answer a polar QUD. Hence, OPPOSE is only compatible with Complex Parallelism. With CORR, both utterances answer the same QUD but one is rejected as false, while the other substitutes it as the correct answer. Finally, CONCESSION has the additional requirement that one alternative goes against the expectations triggered by the other.

In the following section, I will test on naturalistic data of French and Italian the above proposals concerning the interplay between the QUD-structure and the different discourse relations, and see to what extent contrastive discourse segments follow the principle of Parallelism from RBK's QUD-model.

4 Contrastive focus and topic in QUD-annotated naturalistic data

The data I have analyzed in this study consisted of short excerpts from three spoken French interviews and two Italian written interviews, for a total of about 2630 words for French and 1770 for Italian. The French excerpts were part of the following corpora: two interviews of the CFPP2000 corpus (Branca-Rosoff et al 2009), namely one to a person living in the 13th district of Paris (*13ème*) and one living in the 7th district (*7ème*); and an interview with a French writer, from the Rhapsodie corpus (Lacheret, Kahane, and Pietrandrea 2019). The two Italian texts were

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[8] On the relationship between CONCESSION and QUD-structure, see also XXXX, this volume, though their definition of CONCESSION seems more restricted than mine.

taken from two blog interviews, one to the writer of a novel (*Senza etichette*),[9] and one to the author of a blog and an e-book on bilingualism (*Bilingue per gioco*).[10]

The texts were divided into discourse segments, for a total of about 430 segments, and each segment was annotated for QUDs and IS, according to RBK's model.[11] The distribution of words and segments is given in Table 1. An annotation was also realized of the four contrastive relations discussed above: SIMILAR, OPPOSE, CORR and CONCESSION. Table 1 also shows the number of contrasts and their distribution with respect to these relations.[12]

Table 1. Distribution of words, segments, and contrasts in the QUD-annotated texts.

	Words	Segments	Contrastive relations				TOTAL
			Similar	Oppose	Correction	Concession	contrasts
CFPP2000 (*13ème*)	1250	105	13	6	0	9	26
CFPP2000 (*7ème*)	1040	99	16	7	2	8	32
Rhapsodie	340	31	3	2	3	1	9
Total French	**2630**	**235**	**32**	**15**	**5**	**18**	**67**
Blog *S.E.*	702	84	18	0	0	3	20
Blog *Bil. per gioco*	1070	110	14	4	6	6	34
Total Italian	**1772**	**194**	**32**	**4**	**6**	**9**	**54**
TOTAL	**4402**	**429**	**64**	**19**	**11**	**27**	**121**

As shown in Table 1, SIMILAR was the most frequent relation. That is expected since the only restriction among the alternatives is for them (or part of them) to be instantiated by discourse segments that answer the same QUD. CORR was the least frequent relation, and this is expected too, since this relation is used to deny the truth of a proposition, so it can only be found in an exchange, unless the speaker/writer contradicts some implicit general assumption. Such a property reduces the contexts of occurrence of this relation. OPPOSE and CONCESSION were also more frequent than SIMILAR, because they must satisfy additional constraints: with OPPOSE, the

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[9] http://www.deaplanetalibri.it/blog/intervista-allautrice-di-senza-etichette-m-verdiana-rigoglioso

[10] https://www.lacasanellaprateria.com/bilingue-per-gioco-intervista-a-letizia/

[11] Following Riester, Brunetti, and De Kuthy (2018), discourse segments were constituted by (full or elliptical) independent sentences. Coordinating sentences were also divided into separate segments. Also, following Brunetti, De Kuthy, and Riester (2021), appositive relative clauses, adjunct clauses, and even non-clausal adjuncts could be considered as separated segments, depending on their information-structural status.

[12] The annotation of contrastive relations was done by the author with the help of Ting He and Serin Lahcene, whom I thank here. The QUD annotation of the Italian blog interviews was done by both the author and Marta Berardi (see De Kuthy, Brunetti, and Berardi 2019 for inter-annotator agreement). The French QUD annotation was done by the author.

contrasting segments must represent predications of opposite polarity, while in the case of CONCESSION, one utterance must deny the expectation of the other.

I will now discuss various examples and see to what extent and in what way contrastive relations occur with Simple and Complex Parallelism in my data.

4.1 Contrastive relations with Simple Parallelism

Example (6), repeated below, is a clear case of Simple Parallelism and the two discourse segments are in a SIMILAR relation. Indeed, they provide two possible answers to the question *Where specifically, within the 7th district?*

(6) French, CFPP2000 (7ème)

A$_{23}$ alors euh + je euh j'aime beaucoup euh tout c'qui est euh: aux environs de bah j'aime beaucoup le septième euh où qu'ce soit

‘so ehm I love very much all that is close to… well I love the 7th district very much, no matter where’

Q$_{24}$ *Where specifically, within the 7th district?*

>A$_{24'}$ [que ça   soit [vers   la Tour-Maubourg]$_F$]~

‘be it towards the Tour-Maubourg’

>A$_{24''}$ [que ce   soit [ici]$_F$]~

‘be it here’

As we noticed earlier, the shared content is (almost) syntactically identical. That helps to identify the two alternatives. No other marking is present, which is typical of a SIMILAR relation in my data.

No examples of OPPOSE were found with Simple Parallelism. Indeed, as I said above, the definition of an OPPOSE relation requires the presence of two sets of alternatives, hence Complex Parallelism.

A CORR relation with Simple Parallelism is illustrated in (18), which is taken from a spoken interview of a journalist with a French writer, Françoise Giroud.

(18)   French, Rhapsodie

> Q_2		*What about your father ?*
> > $A_{2'}$:	Spk 1 :	votre père était riche
		'Your father was rich'
> > Q_3 :		*Was he 'rich'?*
> > > A_3 :	Spk 2 :	[riche [c'est un grand mot]$_F$]~
		'*rich* is a big word'
> > $A_{2''}$:		mais enfin disons qu'[il [appartenait à cette bourgeoisie euh qui n'a pas de problèmes d'argent]$_F$]~
		'but well let's say that he belonged to that bourgeoisie ehm who does not have money problems'

The writer corrects the journalist who says that her father was rich, by explaining that 'rich' is not the right word to define her father's financial situation; she specifies that her father rather 'belonged to that bourgeoisie that did not have money problems'. We can interpret the speaker's comment in A_3 as a way to deny the interviewer's statement ('Your father was rich'). $A_{2''}$ answers the same QUD about the father as $A_{2'}$.

The example just seen is one where CORR occurs between two explicit utterances, which are uttered by two different speakers. This is however not common in my data. In my data CORR mostly occurs between an explicit utterance and an implicit one, corresponding to some background assumption whose truth the speaker explicitly denies. Consider (19), from the same French interview. The writer is here talking about her poor childhood. We can assume that *ce qui est dur* 'what is hard' and *ce qui est horrible* 'what is horrible' are in this context meant to be synonymous (the speaker is simply varying her language for stylistic reasons, in order not to repeat the same adjective twice).

(19)	French, Rhapsodie
> A_7	c'est une expérience ça que je n'ai jamais oubliée
	'That is an experience I've never forgotten'
> Q_8	*What is hard, in this experience?*
~~> > $A_{8'}$~~	~~*[What is hard is [to be poor]$_F$]~ .*~~
> > Q_9	*Is it hard to be poor?*
> > > A_9	[ce qui est dur [(…) ce n'est vraiment pas]$_F$ d'être pauvre (…)]~
	'What is hard (…), it is not really to be poor'

> > A$_{8''}$ [ce qui est horrible [c'est de se dire je n'en sortirai jamais]$_F$]~

'What is horrible, it is to tell oneself: "I'll never get out of it"'

The speaker is correcting the easily inferable statement that being poor is a hard experience. The CORR relation is between that implicit statement ('It is hard to be poor', added to the QUD structure as A$_{8'}$) and the explicit one in A$_{8''}$ ('It is hard to tell oneself "I'll never get out of it"').[13] The implicit statement is easily reconstructed thanks to the explicit denial of its truth ('What is hard is not to be poor', in A$_9$). With A$_9$, the speaker wants to deny that A$_{8'}$ is the correct answer to Q$_8$, so that she can then replace it with a different answer (A$_{8''}$). Since the implicit positive statement (A$_{8'}$) and the statement that replaces it (A$_{8''}$) are both answers to the same QUD (Q$_8$), they are parallel in the QUD structure.

Consider finally a CONCESSION relation with Simple Parallelism. An Italian example is (20). The CONCESSION relation is here lexically marked by *anche se* 'even if'.

(20)   Italian, blog interview (Bilingue per gioco)

> Q$_{10}$ *What about your linguistic background?*

> > A$_{10'}$ [Io (per fare un esempio) [parlo fluentemente inglese]$_F$]~,

'As an example, I speak English fluently'

(…)

> > A$_{10''}$ [[sono senz'altro bilingue]$_F$]~

'I am defintely bilingual'

> > A$_{10'''}$ nel senso che [[ho pieno controllo di due codici linguistici]$_F$]~,

'in the sense that I have full control over two linguistic codes'

> > A$_{10''''}$ anche se [[non sono bilingue precoce]$_F$]~.

'even though I am not an early bilingual'

The speaker is arguing that having full master of two languages and therefore being bilingual does not necessarily mean to have acquired both languages early in life; on the contrary, and against what one might expect, someone who speaks fluently two languages may not be an early bilingual. In order to provide an example, the speaker says that she speaks English fluently though she did not acquire it early in life. The contrasting utterances are the last two in the

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[13] The reconstructed linguistic content is struck through in the example, and it is written in English for the sake of simplicity.

example: the first one (*ho pieno controllo di due codici linguistici* 'I have full control over two linguistic codes') triggers the inference contradicted by the second one (*non sono bilingue precoce* 'I am not an early bilingual').[14]

4.2 Contrastive relations with Complex Parallelism

Complex Parallelism is less frequent than Simple Parallelism with all relations except OPPOSE (9 examples out of 64 with SIMILAR, 3 out of 27 with CONCESSION, not attested with CORR). Let us discuss the less common relations first.

An example with SIMILAR is (7), repeated below:

(7) French, CFPP2000 (13$^{\text{ème}}$)

> Q$_1$	Spk1:	euh comment est-c'que euh toi ou tes parents vous êtes arrivés dans l'quartier (…)
		'How did you or your parents arrive in the district (…)?'
> > Q$_{1.1}$		*How did you arrive in the district?*
> > > A$_{1.1}$	Spk2:	alors, donc [[moi]$_{CT}$ j'suis arrivé à Paris [j'étais tout petit]$_F$]~ (…)
		'so, as for myself, I arrived in Paris as a little child'
> > Q$_{1.2}$		*How did your parents arrive in the district?*
> > > A$_{1.2}$		et [[mes parents]$_{CT}$ sont venus à Paris [pour le boulot]$_F$]~
		'and my parents came to Paris for work'

The two utterances are two partial answers to the (here, explicit) superordinate question 'How did you or your parents arrive in the district?'. The presence of the clitic left dislocated strong pronoun *moi* 'me' in A$_{1.1}$ helps to recognize it as one of the two topic alternatives (*moi* vs *mes parents*) (for the relation between clitic left dislocation and CT in French, see ex. Barnes 1985, Lambrecht 1994, Riou & Hemforth 2015; see also Section 4.3). Syntactic identity (*j'suis arrivé à Paris* 'I came to Paris' / *mes parents sont venus à Paris* 'my parents came to Paris'*)* helps to identify the shared content between the two alternative propositions. Note that this example could not be a case of OPPOSE relation, as shown by the fact that the QUD is not a polar question: the

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[14] Notice that in this example, there are four utterances that answer the same QUD Q$_{10}$: the first two are in a SIMILAR relation, the last two are in a CONCESSION relation.

QUD is about the circumstances which brought the speaker and his family to Paris, and not about whether certain specific circumstances did bring (or not) him or his parents to Paris.

CONCESSION too is present with Complex Parallelism. An example is (21), where the same speaker as the one in (7) talks about his apartment.

(21)   French, CFPP2000 (13ème)

A$_{48}$ surtout que pour des immeubles de l'OPAC on a la chance de pas être sur l'périph

‘above all, as social housing, we are lucky that we are not on the beltway’

Q$_{49}$ *Where are buildings of social housing?*

> Q$_{49.1}$ *Where are many of them?*

> > A$_{49.1}$ [parce que [beaucoup d'immeubles (…) des HLM]$_{CT}$ sont quand même [en périphérie]$_F$]~

‘because many buildings of social housing are actually in the suburbs’

> Q$_{49.2}$ *Where is yours?*

> > A$_{49.2}$ et [[nous]$_{CT}$ on est euh quand même [dans l'centre du treizième]$_F$]~

‘and *we* are actually in the center of the 13th district’

The fact that the building where the speaker and his family live is within Paris (*dans le centre du treizième* 'in the center of the 13th district (of Paris)') is unexpected, knowing that most buildings of social housing are in the periphery. The second alternative denies the expectation triggered by the first one. The clitic left dislocation of the strong pronoun *nous* in the second conjunct (*nous, on est…*) identifies the second topic alternative: *nous* means 'the building of social housing where we live', and it contrasts with *beaucoup d'immeubles des HLM* 'many builings of social housing'. The adverb *quand meme* 'actually' marks the CONCESSION relation.

No examples of CORR were found with Complex Parallelism. That can be explained by the fact that what is corrected is generally the value of one variable, not two: either an entity is substituted, for which a predication holds ('Mary won, not Pete'), or the substitution concerns what is predicated of an entity ('Mary did *not* take the bike, she went by train').

Finally, as I said, OPPOSE only occurs with Complex Parallelism. An example is given in (22). The speaker (again, the same speaker of (7) and (21)) is explaining that he did not have a hard time to find an apartment of social housing, because the apartments with a suitable price for him – namely those of an intermediate price – were the most easy to find.

(22)   French, CFPP2000 (13ème)

>> Q$_{42}$	*Is the waiting time long to get an apartment of social housing?*	
>>> Q$_{42.1}$	*What is the waiting time to get really affordable social housing?*	

>>>> A$_{42.1}$ c'est-à-dire que [[les HLM vraiment pas chers là]$_{CT}$ [y a des queues et une attente incroyable]$_F$]~

'That is, for really cheap social housing, there are never-ending lines and an incredibly long waiting time'

>>> Q$_{42.2}$ *What is the waiting time to get intermediate cost social housing?*

>>>> A$_{42.2}$ [[dans la gamme intermédiaire]$_{CT}$ comme ici [on a un petit peu plus de chance euh d'aboutir]$_F$]~

'in the intermediate (price) range (for apartments of social housing), like here, we have a little more chance to succeed'

We consider contrast as OPPOSE here because 'to have more chance to succeed' is interpreted as meaning that the waiting line was not long, contrary to what happens with cheaper apartments. In other words, a predication of opposite polarity is inferred.

In most of the examples of OPPOSE from my dataset, the focus value is represented by the predicate, and the topic value by the entity of which the predication holds. In two cases from an Italian blog, the reverse occurs: the predicate is the CT and the entity of which it predicates about is the focus, as shown in (23):

(23)   Italian, blog interview (Bilingue per gioco)

A$_{41}$ Un rischio c'è,

'There is a risk'

(…)

> Q$_{43}$ *What is this risk ?*

>> Q$_{43.1}$ *Is this risk to focus on what ?*

>>> A$_{43.1}$ [Quello [[di focalizzarsi troppo]$_{CT}$ [sulle lingue]$_F$]~

'to focus too much on languages'

>> Q$_{43.2}$ *Is this risk not to focus on what ?*

>>> A$_{43.2}$ e [[perdere di vista]$_{CT}$ [il bambino]$_F$]~,

'and to lose sight of the child'

This is an excerpt of the *Bilingue per gioco* blog interview. The speaker is saying that teaching a second language to ones's child is risky in one respect, namely that one may focus too much on the goal (the child's learning a second language) and lose sight of the child's needs. *Perdere di vista il bambino* 'to lose sight of the child' can be paraphrased as "not to focus (enough) on the child", namely it can be considered as a proposition predicating the opposite of $A_{43.1}$. Since the predicate 'to focus on' is contained in the sub-QUDs (but with different polarity in each sub-QUD), it is the contrastive topic. Each sub-QUD asks about the entity that holds of the predicate, so 'languages' and 'the child' are the foci.

Finally, the French example below illustrates what Umbach (2005) calls "crossed alternatives": "In each of the conjuncts there has to be a focus in the theme part, i.e. a contrastive topic, and a focus in the rheme part. Complexity arises from the fact that the alternatives need not be parallel, i.e. both relating to either a contrastive topic or a rheme focus. They may also be "crossed", one of them relating to a contrastive topic and the other one to a rheme focus" (Umbach 2005:10).

(24)   French, CFPP2000 ($13^{\text{ème}}$)

Q_5		*What about your grandfather?*
$> Q_6$	Spk1	il vivait avec vous ou enfin avec tes parents?
		'Did he live with you or, I mean, with your parents?'
$>> A_6$	Spk2	non non non non
$>> Q_7$		*Did your whole family come to Paris?*
$>>> Q_{7.1}$		*Where did your grandparents go?*
$>>>> A_{7.1}$		[[mes grands-parents]$_{CT}$ [(…) sont restés dans l'sud]$_F$]~
		'my grandparents (..) stayed in the South'
$>>> Q_{7.2}$		*Who came to Paris?*
$>>>> A_{7.2}$		[c'est [juste mes parents]$_F$ qui sont montés]~
		'it's just my parents who came (to Paris)'

$A_{7.1}$ and $A_{7.2}$ are parallel in the QUD tree and each partially answers Q_7; what is different with respect to previous examples of OPPOSE is that the sub-questions they answer ask for the value of different focus variables: $Q_{7.1}$ asks about the place where a certain member of the family set (the grandparents, which is the fixed topic) went to live; $Q_{7.2}$ asks about which member of the family went to live to a certain place, that is Paris (the fixed topic). The cleft construction in A_{7}"

confirms that $Q_{7.2}$ is formulated correctly, since a clefted constituent in French typically corresponds to the focus.

4.3 Contrastive marking and implicit alternatives

I have argued in Section 3 that the realization as discourse segments of (some of) the alternative propositions evoked by focus or topic is essential to have contrast, which corresponds to a contrastive relation between such segments. We have also seen in Section 4.1 that for many instances of CORR, this requirement must be revised in that what the context provides is not the alternative utterance, but a statement that denies the truth of the alternative utterance.

In other examples from my French and Italian naturalistic data, which I am presenting in this section, contrast is inferred from a specific syntactic construction, and no explicit alternative needs to be present in the discourse.[15] Some examples of this type concern the relation CORR. In Italian, a focus fronting and a cleft construction can both have a corrective function (see Brunetti 2009, De Cesare 2017, Cruschina 2021); in French, only cleft constructions do (see De Cesare 2017, Cruschina 2021). Consider the Italian example in (25).

(25)		Italian, blog interview (Bilingue per gioco)
Q$_{13}$	Spk1	Una definizione del termine "bilingue"?
		'A definition of the term 'bilingual'?'
> Q$_{14}$		*What is the problem with a definition of the term 'bilingual'?*
> > A$_{14'}$	Spk2	[~~Il problema è che~~ [Ce ne sono tante]$_F$]~
		'~~(The problem is that)~~ there are many of them'
> > A$_{14''}$		[[Questo]$_F$ è il problema]~,
		'That is the problem'
~~> > A$_{14'''}$~~		~~[The problem is [to find a definition of 'bilingual']$_F$]~~~

The interviewer asks the interviewee to give a definition of the term 'bilingual'. The interviewee does not answer the question directly, but first comments on the question by saying that (the problem with answering this question is that) there are (too) many definitions of such a term. The speaker provides two answers to Q_{14}, which are in a SIMILAR relation with each other. The second

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[15] According to Bianchi, Bocci, and Cruschina (2015), Cruschina (2021), this inference is a conventional implicature (in the sense of Potts 2005).

utterance, however, is a fronted focus construction, which also corrects the inference that the problem to answer the question is to find a definition of the term (what the question is about). What the speaker wants to say is that, paradoxically, the problem is the opposite, namely that one has to choose among too many existing definitions. An implicit conjunct is therefore reconstructed as in $A_{14'''}$, and interpreted as being in a CORR relation with $A_{14''}$.[16]

The QUD structure in (25) follows Simple Parallelism's requirements. Other examples where contrast is triggered by a linguistic construction follow Complex Parallelism and correspond to the phenomenon discussed by Büring (1997) under the name of "purely implicational" topic, on data from English and German. In Büring's data illustrating this phenomenon, topic alternatives are triggered by a particular accent, but no alternative proposition is explicitly given in the discourse (cf. also Neeleman and Vermeulen 2013). The effect is that an inference is made, which is taken to be a conversational implicature (Grice 1975) by Lambrecht (1994), Büring (2003), and others; the inference is either that the same predicate does *not* hold for the implicit topic (strong implicature), or that the speaker does not know whether it holds or not (weak implicature).[17]

The contrastive marking in my French and Italian data can be fronting of a constituent; the presence of such a fronted constituent makes the utterance not appropriate as an answer to the preceding QUD (cf. Westera 2019). Consider the two examples (26) and (27), one in French and one in Italian.

(26)   French, CFPP2000 (13$^{\text{ème}}$)

Q_{36} Spk1:   pour toi ça a été rapide pas rapide à ton avis ça?
                       'For you was it fast, not fast, in your opinion?'

> A_{36} Spk2:   bah j'pense que par rapport à beaucoup d'gens ça a été un peu rapide
                       'well, I think that with respect to most people that was rather fast'

> Q_{37} *How fast?*

>> A_{37} ça nous a pris deux ans j'pense à peu près
                       'it took us about two years, I think, more or less'

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[16] I do not exclude that the fronted focus may be mirative (instead of corrective): the utterance would deny the expectation that the problem to answer the question is to find a definition of the term 'bilingual'. Since in Italian focus fronting can be used for both mirativity and correction (Cruschina 2021), I leave the issue open here.

[17] Hara (2006), who analyzes how this interpretive effect is triggered by the Japanese particle *wa*, takes it to be a *conventional* implicature.

(27)   Italian, blog interview (Bilingue per gioco)

   Spk2:   E la mamma non madrelingua (…) può utilizzare questi stessi strumenti per far sì che la seconda lingua entri a far parte della vita dei bambini in modo molto ludico e leggero

   'The non native-speaking mother (…) can use the very same instruments to make the second language become part of the children's life in a very playful and light manner'

> Q_{29} Spk1:   Funziona?

   'Does it work?'

>> A_{29} Spk2:   Le mamme, sia madrelingua che non, se ne dicono entusiaste

   'The mothers, both native and non-native speakers, say they are enthusiastic about it'

In both examples, the utterance that triggers the contrasting inference is the one that is supposed to answer an explicit polar question (Q_{36} in (26) and Q_{29} in (27)). However, the speaker does not just answer 'yes' or a 'no', but provides additional information; as a consequence, the utterance is interpreted as answering an implicit sub-question.

Consider (26) first. The additional information provided by A_{36} is represented by a fronted prepositional phrase, *par rapport à beaucoup de gens* 'with respect to many people', which restricts the domain of application of the predicate. It is the presence of such additional expression – which is interpreted as a CT – that makes the hearer infer that there might be an alternative such that, with respect to some other criterion (in other words, with a different CT), the process of finding a flat cannot be considered as fast. For instance, the duration of the search might not be viewed as fast generally speaking, or according to the speaker's expectations, or with respect to other criteria, as suggested in the (struck through) reconstructed segment and its sub-question in (26').[18]

(26') French, CFPP2000 (13ème)

Q_{36} *Was it fast?*

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[18] The fact that different inferences may be triggered makes it plausible that the inference is indeed a cancellable, conversational implicature. Another factor in favor of such an analysis is that A_{37} implies that $Q_{37.2}$ and $A_{37.2}$ are not present, since A_{38} is a continuation of $A_{37.1}$.

> $Q_{36.1}$		*Was it fast, with respect to (what happened to) many people?*
> > $A_{36.1}$	Spk2	bah j'pense que [[par rapport à beaucoup d'gens]$_{CT}$ ça [a été un peu rapide]$_F$]~
		'well, I think that with respect to most people that was rather fast'
> $Q_{36.2}$		*Was it fast, with respect to criterion x? ...*
> > $A_{36.2}$		*[[With respect to criterion x]$_{CT}$, it [was not fast]$_F$]~.*

As the QUD annotation shows, $A_{36.1}$ answers the sub-question $Q_{36.1}$, parallel to $Q_{36.2}$; the latter contains a different restriction for the predicate to hold and is answered by the implicature triggered by $A_{36.1}$.[19] Given such an implicature, the contrastive relation here seems to be an OPPOSE one. A CONCESSION relation however is also plausible, if one accepts the following paraphrase: "Despite the fact that, compared to many people, the search was fast, with respect to criterion x, it was long".

The contrastive effect of a fronted element observed in (26) has already been discussed for French by Prévost (2003), who comments as follows about a similar sentence: "*À Drain, on y est bien* 'At Drain, we feel good' (Internet, touristic site), meaning: At Drain and not elsewhere (or at any event, not as good!)." (Prévost 2003:70).[20] Another means, in French, of evoking the presence of a CT, namely of a secondary open variable (not predicted by the current QUD) is clitic left dislocation, as in (28), from Garassino and Jacob (2018):

(28)   French, Garassino and Jacob (2018: 9)

   a.   Monsieur le Président, (…) il faut rendre honneur à la présidence française, il faut rendre honneur au président Chirac, qui a été au charbon, qui a combattu et qui a vaincu sur sa vision de l'Europe
        'Mr. President (…) we should honor the French Presidency, we should honor President Chirac. He was at the coalface, he fought and conquered for his vision of Europe'

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[19] If no implicature is understood by the hearer, then, following Brunetti, De Kuthy, and Riester (2021), *par rapport à beaucoup de gens* is interpreted as an *IS-peripheral* adjunct, namely an independent discourse segment that answers a sub-QUD of the QUD that is answered by the rest of the sentence.

[20] My translation from French. Original : "*À Drain, on y est bien* (Internet, site touristique), sous-entendu: À Drain et pas ailleurs (ou en tout cas, on n'est pas aussi bien !)."

b. parce que,   lui   il   a   une   vision

because   he   3SG.NOM   have.PRS.3SG   a   vision

'because he does have a vision'

The dislocated *lui* 'he' (*lui il a une vision*) triggers an OPPOSE relation with an implicit discourse segment of the type: "the other politicians do *not* (have a vision)".

   Consider now the Italian example in (27), repeated below as (27'). The speaker answers the question 'Does it [her method to grow bilingual children, *ndr*] work?', which can be interpreted as 'Would you say that the method works?', since the question is addressed to her.

   (27') Italian, blog interview (Bilingue per gioco)

> Q$_{29}$ *Spk1*   Funziona?

                          'Does it work?'

>> Q$_{29.1}$ ~~*What do you say?*~~
>>> A$_{29.1}$ ~~*[[As for myself]$_{CT}$, [I don't say anything]$_F$].*~~
>> Q$_{29.2}$ *What do the mothers say?*
>>> A$_{29.2}$ *Spk2*   [[Le mamme, sia madrelingua che non]$_{CT}$, [se ne dicono entusiaste]$_F$]]~.
                          'The mothers, both native and non-native speakers, say they are enthusiastic about it'

By attributing the affirmative answer to a third person, specifically the main users of her method – the mothers – the speaker uses a rhetorical strategy that allows her to make a positive comment on her own method without sounding immodest. The rhetorical strategy exploits the OPPOSE relation that can be inferred between the speaker's own opinion and the mothers' opinion. The most probable implicature is that the speaker does not provide an opinion of her own on the method (or that her opinion is not important). We can paraphrase what the speaker means as follows: "*I* won't say anything, but the mothers (who have more authority to judge the method than I do, since it is made for them), say that it works".[21]

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[21] The relation cannot be CONCESSION, since neither the paraphrase "Despite the fact that the mothers are enthusiastic about it, I won't give my opinion" nor "Despite the fact that I won't give my opinion, the mothers are enthusiastic about it" seem to correspond to the speaker's intended meaning.

5. Mismatch between Parallelism and contrast

The analysis of naturalistic data that I have conducted on French and Italian interviews was also meant to check whether contrast is always found in a discourse configuration that fits Parallelism requirements. Since SIMILAR is defined as occurring when two segments answer the same QUD, by definition SIMILAR occurs with Parallelism. What about the other contrastive relations? We have seen above that a contrastive relation can hold between an explicit and an implicit utterance, which is inferred from the linguistic form of the explicit one: in such cases, Parallelism is preserved only if the implicit utterance is included in the QUD structure: either another answer is added to the same QUD (cf. the example with CORR in (25)), or a sub-QUD and its answer are added (cf. (26) and (27)). As for CONCESSION, we already noticed in Section 3.1 that it may not satisfy Parallelism's requirements. That is confirmed by naturalistic data, as I am going to show in Section 5.1. In Section 5.2, I will then present two examples of non-concessive contrast that do not follow Parallelism.

5.1 Absence of Parallelism with CONCESSION

In more than half cases of CONCESSION, Parallelism does not apply. Recall that Parallelism requires that two (or more) segments be at the same level in the QUD-tree and answer the same QUD (see exx. (6) and (7)). Typically, such segments are syntactically coordinated (cf. Umbach 2005), which means that syntactic coordination and discourse coordination (in the sense of Asher and Vieu 2005) coincide. CONCESSION, however, may hold between a matrix clause and a subordinate clause. Therefore, neither syntactic nor discourse coordination seem to be necessary for a CONCESSION relation to occur.[22]

Let us consider some examples from the dataset. A case of syntactic and discourse subordination is the Italian example in (29). Following Brunetti, De Kuthy, and Riester (2021), the subordinate clause – which is nested inside the matrix clause but independent at a discourse level – is represented by dividing the matrix clause into two parts ($A_{25}\ldots$ and $\ldots A_{25}$). The same index number and the three dots signal that $A_{25}\ldots$ and $\ldots A_{25}$ form one single discourse segment.[23]

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[22] See Brunetti, De Kuthy, and Riester (2021) for a discussion on the interplay between syntax and discourse.

[23] See Brunetti, De Kuthy, and Riester (2021, Section 4.4) for a discussion on this annotation choice.

(29)   Italian, blog interview (Bilingue per gioco)

La mamma (…) parla la propria lingua ai figli

'The mother (…) speaks her own language to her children'

> > Q_{25} *What do children often do (concerning thire mother's language)?*

> > > A_{25}…   (…) molto spesso [i bambini

'(…) very often the children'

> > > Q_{26} *Despite what?*

> > > > A_{26} pur [[capendola perfettamente]$_F$]~

'though understanding it perfectly'

> > > …A_{25} [non parlano attivamente]$_F$ la sua lingua]~

'very often the children, even if they understand it perfectly, do not proactively speak her language'

The subordinate clause in A_{26} is introduced by the conjunction *pur* 'even if', explicitly marking CONCESSION: the expectation driven from A_{26} is that the children, who perfectly understand the language, also speak it, while this is denied by the following assertion. The verb in A_{26} has a non-finite form (gerundive) and the clause is nested inside the matrix clause. Following Brunetti, De Kuthy, and Riester (2021), I interpret this clause as an IS-peripheral discourse segment,[24] namely as a segment that does not contribute to answer the matrix's QUD, but answers its own QUD, subordinated to the matrix's QUD (see Q_{26}). As a consequence, A_{25} and A_{26} are in a configuration that does not fit the requirements of the Parallelism's principle.

A_{26} is a parenthetical, non-finite, subordinated clause and is therefore easily interpreted as discourse-subordinated with respect to the matrix clause (and not answering the same QUD). However, discourse subordination (absence of Parallelism) can also occur when two segments are coordinated, as in (30).

(30)   French, CFPP2000 (13$^{\text{ème}}$)

>A_{30} et on a pu déménager parce qu'on a eu l'opportunité d'l'OPAC

'and we could move because we had the opportunity of social housing'

> Q_{31} *Why did you need that opportunity?*

> > Q_{32} *You needed because you started to look for what?*

> > > $A_{32'}$ parce que sinon [on avait commencé à chercher [à louer ou à acheter]$_F$]~

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[24] See also footnote 19.

'because we had started to look for a place to rent or to buy'

> > > Q_{33} *What about that search?*

> > > > A_{33} et c'est vrai qu'[[c'était un petit peu hors budget quoi]$_F$]~

‘and it's true that it was a little bit above our budget’

> > > $A_{32''}$ [on avait commencé à lorgner [du côté de la banlieue]$_F$]~

‘we had started to look (for an apartment) in the suburbs’

> > > Q_{34} *What about this search?*

> > > > A_{34} mais [[en y étant pas tout à fait convaincus d'vouloir y aller]$_F$]~

‘but not being totally willing to go there’

This example shows two pairs of segments, both in a CONCESSION relation, which are both syntactically coordinated by a conjunction (*et* ‘and’ between $A_{32'}$ and A_{33}, and *mais* ‘but’ between $A_{32''}$ and A_{34}). The first pair is in a CONCESSION relation because $A_{32'}$ (‘we had started to look for a place to rent or to buy’) triggers the inference that the speaker could afford to rent or buy an apartment, while the second conjunct denies it by saying that the prices were outside the speaker's reach. The second pair is in a CONCESSION relation because $A_{32''}$ (‘we had started to look for apartments in the suburbs’) triggers the inference that the speaker liked the idea of living in the suburbs, while this is denied by the second conjunct. The QUD analysis for each pair is such that the second conjunct is discourse-subordinated to the first (it is at a lower level in the QUD-tree): indeed, A_{33} and A_{34} are clearly side-comments that do not answer the question in Q_{32}. Despite syntactic coordination, Parallelism does not hold.[25]

Consider finally (31). The interviewer is closing her blog interview by asking the interviewee, who is the author of an e-book on bilingualism, why one should buy her book.

(31)   Italian, blog interview (Bilingue per gioco)

Q_{57} Spk1 :   Concludendo, perché comprare *In che lingua giochiamo*?

‘Concluding : why should one buy *In che lingua giochiamo* ?

(…)

> A_{57} Spk2 :   [Perché [abbiamo a disposizione tantissime risorse ,]$_F$]~

‘Because we have plenty of resources at our disposal’

> Q_{58} *Despite that, what happens?*

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[25] Notice, however, that in the second pair, the verb of the second conjunct (A_{34}) takes gerundive mode, and non-finiteness is a typical feature of subordination.

$>>$ A$_{58}$ ma [[nemmeno ce ne rendiamo conto]$_F$]~

                            'but we don't even notice them'

A CONCESSION relation holds between A$_{57}$ and A$_{58}$: since there are plenty of resources (to raise a bilingual child), one would expect that they are visible to everybody; on the contrary, we do not see them, and therefore don't use them. The QUD is explicit and is made by the interviewer. In order for this question to have an appropriate answer, A$_{58}$ must be included in the answer: one should buy the book because it is not easy to realize how many resources there are at our disposal. Note that an answer made of A$_{57}$ alone would not make sense in this context: "We must buy the book because we have many resources". Therefore, A$_{58}$ cannot be an independent answer to the question, but must be part of A$_{57}$, the answer to Q$_{57}$; at the same time, it answers a subordinated QUD, Q$_{58}$. The absence of Parallelism is therefore evident in this example.

5.2 Absence of Parallelism in other contexts

The dataset finally also contains few non-concessive contrasts where a QUD-structure that obeys Parallelism cannot be reconstructed. The reason for the failure to reconstruct Parallelism may just be that the preceding QUD structure does not allow for it. An example is (32), where two crossing contrastive relations are present:

(32)   French, CFPP2000 (7$^{\text{ème}}$)

     $>$ Q$_{16.1}$ *What about this neighborhood, on one side?*

     $>>$ A$_{16.1}$ (…) [[d'un côté]$_{CT}$ j'suis dans un quartier [très calme (…)]$_F$]~

                         '(…) on one side   I'm in a very quiet neighborhood (…)'

     $>$ Q$_{16.2}$ *What about this neighborhood, on the other side?*

     $>>$ A$_{16.2}$ et pourtant [[~~de l'autre coté~~]$_{CT}$ ~~je suis dans un quartier où~~ [on profite

                         de tous les commerces de proximité]$_F$]~

                         'and yet ~~on the other side~~ we benefit of all local shops'

     $>>$ Q$_{17}$ *What about the presence of local shops?*

     $>>>$ Q$_{17.1}$ *Are there local shops in certain (quiet) neighborhoods?*

     $>>>>$ A$_{17.1}$ alors que [[dans certains quartiers]$_{CT}$ [y'en a pas]$_F$]~

                         'while in certain neighborhoods there aren't any'

$A_{16.2}$ is a contrasting alternative of $A_{16.1}$: a CONCESSION relation holds between the two segments, explicitly marked by *pourtant* 'yet': the district is calm, yet it is full of local shops. So far, Parallelism is observed.[26] However, $A_{17.1}$ is, in its turn, in an OPPOSE relation with $A_{16.2}$ (cf. the adversative conjunction *alors que* 'while'): the speaker is saying that in her district they benefit of local shops, while in other districts that is not the case (there are no local shops). The clitic left dislocated prepositional phrase *dans certains quartiers* 'in certain districts' explicitly marks a CT.[27] This demands a QUD structure with a super-question Q_{17} and a sub-question $Q_{17.1}$; however, no parallel sub-question $Q_{17.2}$ follows. The presence of the contrasting pair $A_{16.1}$ and $A_{16.2}$ blocks the possibility for $A_{16.2}$ (which clearly also contrasts with $A_{17.1}$) to answer a parallel sub-question $Q_{17.2}$.

Finally, a couple of examples were found in the data where contrast seems to occur between entities inside propositions rather than between propositions. In such cases, the discourse segments in which the entities are mentioned do not need to be in a Parallelism configuration. Consider (33):

(33)   French, CFPP2000 (13ème)

> Q_7 *What did they do in Paris ?*

>> $A_{7'}$ et puis en fait [ils ont [profité euh d'l'opportunité d'cet appartement]$_F$]~
'and then, in fact, they took the opportunity of this apartment'

(…)

>> $A_{7''}$ et puis après [ils ont [acheté leur propre appartement (…)]$_F$]~
'and then later they bought their own apartment'

>> $A_{7'''}$ et donc [[ont libéré l'appartement de mes grands-parents]$_F$]~
'and so they freed my grandparents' apartment'

>> Q_{11} *What happened in that apartment?*

>>> A_{11} [dans lequel [moi-même je me suis installé]$_F$]~ (…)
'where I moved myself (…)'

The whole chunk of discourse is about an apartment in Paris that the speaker's grandfather bought, where his parents lived, and in which the speaker went living after his parents moved. The use of the reflexive/intensifier *leur propre* 'their own' in $A_{7''}$ indicates that the speaker wants

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to contrast his grandparents' apartment with his parents' apartment. The assertions in which the two apartments are mentioned ($A_{7'}$ and $A_{7''}$) are indeed in a Simple Parallelism configuration, and the VPs are parallel foci; however, contrast seems to concern the two apartments, not the two predicates expressed by the VPs. An even clearer case is A_{11}, where the speaker uses the reflexive/intensifier *moi-même* 'myself'[28] in order to contrast himself with his parents and with his grand-parents, concerning the relationship that they had with the apartment: his grand-parents bought it, his parents went living in it, the speaker went living in it afterwards. Yet, the segment containing *moi-même* is an appositive relative clause that answers a sub-QUD with respect to the QUD of the matrix clause; therefore, a Parallelism configuration does not hold between $A_{7'''}$ and A_{11}.

6 Conclusions

In this paper I have argued that contrast demands that (some or all of) the alternatives evoked by focus or topic be explicitly expressed in the discourse by means of discourse segments; by consequence, the discourse configurations that follow Parallelism in Riester, Brunetti, and De Kuthy's (2018) model, where more than one discourse segment answers the same QUD, are potential loci of contrast. Different constraints between the discourse segments in a Parallelism configuration determine the different contrastive relations that may hold between them. I have shown that such constraints can be partially spelled out in QUD-structure terms. The analysis of naturalistic data from French and Italian presented in this paper, which were annotated for their QUD- and IS-structure and for their contrastive relations, has allowed me to confirm and clarify the relationship between the QUD structure and the various contrastive relations.

The relation called SIMILAR, following Repp (2016), only requires that the discourse segments answer the same QUD, namely that they occur in a configuration that follows Parallelism. Other relations have additional requirements. I've argued that OPPOSE demands that the alternatives make predications of opposite polarity, which is shown by the fact that the QUD they answer is a polar one. Furthermore, OPPOSE is only compatible with Complex Parallelism. CORR(RECTION) demands two alternatives that both answer the same QUD but one is rejected as not true, while the other replaces it. No cases of Complex Parallelism were found with CORR in my data. Indeed, correction with Complex Parallelism would mean that two focus values, holding of two different topics, are both replaced by a different value, which presumably is a rare situation. We have also

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28 For the intensifying function of these reflexives, see e.g. Koenig and Siemund (2005).

seen that CORR generally holds between an explicit and an implicit alternative, the latter corresponding to some general assumption whose truth the speaker explicitly denies. Finally, CONCESSION requires that one alternative triggers an inference that is denied by the other (Webber et al 2019). The two alternatives may or may not answer the same QUD.

I have also discussed cases where a particular syntactic construction, such as fronting, clefting or clitic left dislocation, signals that the utterance is in a contrastive relation (CORR in the case of focus marking, OPPOSE or CONCESSION with topic marking) with an implicit alternative. In such cases, Parallelism is only respected if we assume that the inferred contrasting alternative is part of the QUD structure.

My data have shown that CONCESSION, which is a relation that may hold between a matrix clause and a subordinate clause, may occur in a discourse configuration that does not follow Parallelism. Syntactic subordination is a potential marking for discourse subordination in my data, and the same is true for syntactic coordination: in about two thirds of my examples, syntactic subordination is associated with discourse subordination and syntactic coordination with discourse coordination. However, it is the formulation of the QUD structure that eventually reveals whether the relation between segments in a CONCESSION relation is a coordinating or a subordinating one.

In few examples of my dataset, Parallelism is absent when a non-concessive contrast is present. I have illustrated this by means of two examples: in one, the first segment already forms a contrasting pair with a preceding segment and cannot therefore also be in a Parallelism configuration with the second segment; in the other example, contrast seems to occur among entities, not propositions, without a corresponding parallel structure at the discourse level.

My data have eventually shed some light on the linguistic marking of contrast in French and Italian. Lexical marking helps identifying contrasting relations: both OPPOSE and CONCESSION can be signaled by an adversative conjunction (*ma, mais* 'but'), but CONCESSION also has specific markers such as *pourtant* 'yet' in French, or subordinating conjunctions like *pur, anche se* 'even if' in Italian, or other markers of subordination such as a non-finite verb (French). Simple and Complex Parallelism can also be syntactically marked, and in that case, as discussed above, a contrastive relation holds between an explicit and an implicit discourse segment: CORR with Simple Parallelism, marked by fronting or clefting, and OPPOSE or CONCESSION with Complex Parallelism, marked by fronting or clitic left dislocation.

References

Arregi, Karlos. 2003. Clitic Left Dislocation is Contrastive Topicalization. *University of*

Pennsylvania Working Papers in Linguistics 9(1). 31-44.

Asher, Nicolas & Alex Lascarides. 2003. *Logics of Conversation*. Cambridge: Cambridge University Press.

Asher, Nicholas & Laure Vieu. 2005. Subordinating and coordinating discourse relations. *Lingua* 115. 591–610.

Barnes, Betsy K. 1985. *The Pragmatics of Left Detachment in Spoken Standard French*. Amsterdam: Benjamins.

Bianchi, Valentina, Giuliano Bocci & Silvio Cruschina. 2015. Focus fronting and its implicatures. In Enoch Oladé Aboh, Jeannette C Schaeffer, & Antonia Petronella Sleeman (eds.), *Romance Languages and Linguistic Theory 2013: Selected papers from 'Going Romance*. Amsterdam 2013, 1–20. Amsterdam: Benjamins. https://doi.org/10.1075/rllt.8.01bia

Branca-Rosoff, Sonia, Serge Fleury, Florence Lefeuvre & Mat Pires. 2009. Discours sur la ville. Corpus de Français Parlé Parisien des années 2000 (CFPP2000). Technical report. https://ed268.univ-paris3.fr/CFPP2000/

Brunetti, Lisa. 2009. Discourse Functions of Fronted Foci in Italian and Spanish. In Andreas Dufter et Daniel Jacob (eds.) *Focus and Background in Romance Languages, Studies in Language Companion Series 112*. 43-82. Amsterdam : Benjamins.

Brunetti, Lisa, Kordula De Kuthy & Arndt Riester. 2021. The information-structural status of adjuncts: A QUD-based approach. *Discours* 28. https://doi.org/10.4000/discours.11454

Büring, Daniel. 1997. *The Meaning of Topic and Focus — The 59th Street Bridge Accent*. London: Routledge.

Büring, Daniel. 2003. On d-trees, beans, and b-accents. *Linguistics and Philosophy*, 26(5). 511–545.

Cruschina, Silvio. 2021. The greater the contrast, the greater the potential: On the effects of focus in syntax. *Glossa: a journal of general linguistics* 6(1). https://doi.org/10.5334/gjgl.1100

Cuenca, Maria Josep, Sorina Postolea & Jacqueline Visconti. 2019. Contrastive Markers in Contrast. *Discours*, 25. https://doi.org/10.4000/discours.10326

De Cesare, Anna-Maria. 2017. Cleft constructions. In Elisabeth Stark & Andreas Dufter (eds.), *Manual of Romance Morphosyntax and Syntax [Manuals of Romance Linguistics 17]*. 536–568. Berlin-New York: De Gruyter Mouton. https://doi.org/10.1515/9783110377088-015

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*, August 2019, Florence, Italy. 113–123. Association for Computational Linguistics.

Farkas, Donca F., & Kim B. Bruce 2010. On Reacting to Assertions and Polar Questions. *Journal of Semantics, 27*(1), 81–118.

König, Ekkehard & Peter Siemund. 2005. Intensifiers and reflexives. In Martin Haspelmath, Matthew S. Dryer, David Gil & Bernard Comrie (eds.), *The World Atlas of Language Structures*, 194–197, Oxford University Press, Oxford.

Krifka, Manfred. 2008. Basic notions of Information structure. Acta Linguistica Hungarica. 55(3-4), 243-276. https://10.1556/ALing.55.2008.3-4

Ginzburg, Jonathan. 2012. *The Interactive Stance. Meaning for Conversation.* Oxford: Oxford University Press.

Grice, Herbert Paul. 1975. Logic and conversation. *Syntax and semantics 3: Speech acts.* 41-58. New York: Academic Press.]

Jackendoff, Ray. 1972. *Semantic Interpretation in Generative Grammar*. Cambridge: MIT Press.

Hara, Yurie. 2006. Implicature Unsuspendable: Japanese Contrastive *wa*. In Pascal Denis, Eric McCready, Alexis Palmer & Biran Reese, *Proceedings of the 2004 Texas Linguistics Society Conference, Somerville, MA*, March 5-7, 2004. 35-45, Cascadilla Proceedings Project.

Hamblin, Charles L. 1973. Questions in Montague English. *Foundations of Language* 10. 41–53.

Hobbs, Jerry. 1985. On the coherence and structure of discourse. *Technical Report*. Report No. CSLI-85-37, Center for the Study of Language and Information. 1-36, Stanford University.

Lacheret, Anne, Sylvain Kahane, Paola Pietrandrea (eds.). 2019. *Rhapsodie: a prosodic syntactic treebank of spoken French*. Amsterdam-Philadelphia, Benjamins.

Lambrecht, Knud. 1994. *Information Structure and Sentence Form : Topic, Focus and the Mental Representations of Discourse Referents*. Cambridge : Cambridge University Press.

Mann, William C. & Sandra A. Thompson. 1988. Rhetorical structure theory: Toward a functional theory of text organization. Text 8(2) 243–281.

Molnár, Valeria. 2002. Contrast - from a contrastive perspective'. In Hallelgard, H., Johansson, S., Behrens, B., Fabricius-Hansen, C. (eds.), *Information Structure in a Cross-Linguistic*

Perspective, 147–161. Amsterdam/New York: Rodopi.

Myhill, John & Zhiqun Xing. 1996. Towards an operational definition of discourse contrast. *Studies in Language*, 20: 303–60.

Neeleman, Ad & Reiko Vermeulen, 2013. Chapter 1. The Syntactic Expression of Information Structure. In Ad Neeleman & Reiko Vermeulen (eds.), *The Syntax of Topic, Focus, and Contrast: An Interface-based Approach*, 1-38. Boston : De Gruyter Mouton.

Onea, Edgar. 2016. Potential Questions at the Semantics-Pragmatics Interface. Leiden: Brill.

Repp, Sophie. 2016. Contrast: Dissecting an elusive information-structural notion and its role in grammar. In Caroline Féry & Shinichiro Ishihara (eds.), *Oxford handbook of information structure*. 270-289. Oxford: Oxford University Press.

Riester, Arndt. 2019. Constructing QUD Trees. In Malte Zimmermann, Klaus von Heusinger, & Edgar Onea (eds.) *Questions in Discourse. Vol. 2: Pragmatics*, 163–192, Leiden: Brill.

Riester, Arndt, Brunetti, Lisa & Kordula De Kuthy. 2018. Annotation Guidelines for Questions unde Discussion and Information Structure. In Evangelia Adamou Katharina Haude & Martine Vanhove (eds.) *Information structure in lesser-described languages: Studies in prosody and syntax. Studies in Language Accompanying Series,* Ch. 14, 403-443, Amsterdam: Benjamins.

Riou, Étienne & Barbara Hemforth. 2015. Dislocation clitique de l'objet à gauche en français écrit. *Discours*, 16. https://doi.org/10.4000/discours.9037

Roberts, Craige. [1996] 2012. Information structure: Towards an integrated formal theory of pragmatics. *Semantics and Pragmatics* 5(6): 1-69. http://dx.doi.org/10.3765/sp.5.6

Rooth, M. 1985. Association with focus. PhD dissertation. University of Massachusetts at Amherst.

Rooth, Mats. 1992. A theory of focus interpretation. *Natural Language Semantics* 1(1): 75-116.

Umbach, Carla. 2004. On the Notion of Contrast in Information Structure and Discourse Structure. *Journal of Semantics* 21(2), 155–175.

Umbach, Carla. 2005. Contrast and Information Structure: A focus-based analysis of *but*. *Linguistics,* 43(1), 207-232.

Van Kuppevelt, J. 1995. Discourse Structure, Topicality and Questioning. *Journal of Linguistics* 31: 109–149.

Velleman, Leah & David Beaver. 2016. Question-based models of information structure. In Caroline Féry & Shinichiro Ishihara (eds.), *The Handbook of Information Structure*, 86-107. Oxford : Oxford University Press.

Webber, Bonnie , Prasad, Rashmi, Lee, Alan & Aravind Joshi. 2019. The penn discourse treebank 3.0 annotation manual. *Philadelphia, University of Pennsylvania,* vol. 35, p. 108. https:// catalog.ldc.upenn.edu/docs/LDC2019T05/PDTB3-Annotation-Manual.pdf.

Westera, Matthijs. 2019. Rise-Fall-Rise as a Marker of Secondary QUDs. In Daniel Gutzmann & Katharina Turgay (eds.) *Secondary Content*. Ch. 14, 376–404, Leiden: Brill. https://doi.org/10.1163/9789004393127_015