

Do topic shifts challenge discourse coherence?

Introduction

The analytical tools that the *Question Under Discussion* (QUD) theory (see Roberts 2012; Riester 2019; Onea 2016, etc.) affords us in its approach to discourse and information structure have led to the collection and analysis of fine-grained data regarding a wide range of linguistic phenomena, including discourse coherence of both text and dialogue (see, for instance, a predecessor of the QUD approach, Van Kuppevelt 1995). Under Van Kuppevelt's (1995) view, discourse coherence is driven by its internal, largely hierarchical topic-comment structure, which, in turn, is the result of the contextual induction of explicit and/or implicit topic-forming questions (triggered by linguistic or non-linguistic events that he calls *feeders*). New topic-constituting QUDs realize *topic shifts*, which, following his line of reasoning, can be either *associated* or *non-associated*. While in the former the feeder is said to be part of the preceding discourse, the new feeder would not be thematically related to what has been previously said in the latter, deviating from Roberts's (2012) strict constraint on "reasonable strategies" according to which new questions must always be entailed by their parent question. Thus, inspired by Van Kuppevelt's view and motivated by our ongoing research on discourse structure in autism, the aim of the present abstract is twofold: (a) to enhance our understanding of what a coherent piece of discourse involves, by analyzing different topic shifts found across three texts distinguished by genre and register (spontaneous vs. planned), and (b) to examine how these topic shifts relate to the different QUDs. Ultimately, we aim at obtaining a robust notion of coherence that helps us identify and characterize incoherent spontaneous discourse by typically developing and autistic children of different age ranges.

The hypotheses we set out to test are the following: For a piece of discourse to be coherent, (i) topic shifts (if any) need to be associated, or (ii) non-associated topic shifts need to be explicitly signaled. A non-associated topic shift realized in the absence of explicit discourse markers will be an illegitimate topic shift, and thus, will lead to incoherence.

Methods

In order to test the hypotheses above, relevant fragments of three texts distinguished by genre (narrative, interview and review) have been annotated, that is, some of the fragments where topic shifts can be spotted. The annotation includes a reconstruction of implicit text-structuring QUDs, and we also signal non-at-issue (NAI) material, despite not being our main concern, in case a relation could be established between NAI content and topic shifts.

Results

The three texts analyzed can be characterized as being coherent texts. Even so, we have observed differences across genres with respect to the type of topic shifts realized and their relation to the different speaker's intentions.

To begin with, in the narrative text, like in any other piece of monologic discourse, we can observe how the speaker answers his/her own implicit QUDs as the narrative unfolds. It is worth highlighting that the speaker is constantly shifting topic with no explicit indication, shifting the center of current interest or attention, and making the reader accommodate the speaker's (or writer's) presuppositions (e.g. the use of definite descriptions to refer to unfamiliar referents). In addition, many topic shifts in this narrative text seem to be non-associated, that is, the new feeder is not thematically associated with previous discourse. For example, as seen in the annotation (see appendix (i)), while the first part of the text deals with the tea, the writer suddenly shifts the topic and moves to tell the reader about Susie rubbing the place where the elastic cap from work scrunched all day, turning back to speak about the tea in the next paragraph. Another example of non-associated topic shifts can be seen in example (ii)

in our annotation. This paragraph nicely illustrates how the writer jumps from one topic to another, without establishing an explicit link between the different topics addressed. Specifically, after comparing Susie's dry skin to a factory (which the writer refers to as "the factory", thus assuming that it is part of the Common Ground despite not having been introduced before), the writer makes reference to the tea mentioned at the beginning of the narrative, and, in the absence of discourse markers, he/she realizes a non-associated topic shift: "even if it's a matinee, Mr. Johnson will insist on dinner and Mrs. Simpson will pay". Since no connection to the immediate previous discourse can be established, the only possible implicit QUDs we manage to reconstruct are independent QUDs, belonging to the root node of the tree. Nevertheless, these topic shifts seem legit in this specific genre, and we do not get the impression that we are in front of an incoherent piece of discourse. Rather, these topic shifts give rise to a stylistic effect; the reader can infer that the writer is talking to himself/herself, and hence the lack of explicit indication of change of topic (in the same way that the Common Ground does not have to be considered).

The second piece of text that has been analyzed consists of a dialogue, an interview. This exchange is composed, thus, by explicit QUDs posed by the interviewer Laura Kuenssberg (LK) and the answers the Prime Minister (PM) provides, who, at the same time, answers his/her own implicit topic-forming questions. Topic shifts can also be observed in this case, which are, once again, perceived as legit. Specifically, we have observed associated topic shifts; that is, the question defining the new topic is thematically associated with prior discourse (in this case, with the discourse produced by LK). In our annotated fragment (see appendix (iii)), the PM builds on part of LK's prior discourse, specifically on the explicit question Q_0.1 *how do you think is going?* However, while the anaphoric expression "this" in Q_0.1 makes reference to Q_0 (and A_0), the PM does not address that question and leaves the explicit question Q_0.1 unanswered. Rather, what he/she does is to reconstruct his/her own implicit question (building on Q_0.1), in which "this" refers to the government he/she presides (Q_0.1.1), which suggests there is an underlying intention of avoiding LK's question. In the specific fragment we have annotated (see appendix (iii)), LK accuses the PM of losing votes, breaking the law, etc., while the PM's response does not address those issues but deals with the Brexit instead. Example (iv) in the appendix also illustrates this point. In this case, the interviewer's question is whether the PM is blaming his/her woes on people who are against the Brexit (Q_0.1.2). Once again, the PM provides a generic answer (A_0.1.2.1) and then moves on to reinforce the great situation the country is going through (once again making reference to the positive sides of his/her own government, i.e. addressing the same question as Q_0.1.1). As reflected in the annotation, the QUDs related to unemployment rates, innovation, etc. (Q_1.3.1.1.1-3), are sub-questions of Q_0.1.3 (or Q_0.1.1), hence we can argue that the topic shift the PM realizes is associated to previous discourse, but is no longer connected to the explicit question the interviewer raises (Q_0.1.2). In sum, the PM systematically presupposes implicit QUDs to avoid answering LK's.

Finally, the third text analyzed is a review, an example of monologic discourse. Thus, once again, the speaker is addressing his/her own questions. As can be seen in our annotation (see appendix (v)), this text is composed of some explicit higher super-questions (e.g. Q_0 *How good is the Gran Tourer at the whole MPV thing?*) which are indirectly answered by an intermediate level of implicit sub-questions entailed by Q_0. Each of these answers provides a complete answer to its respective sub-question, and a partial answer to the super-question. Thus, since the information provided in the intermediate level of sub-questions (i.e. Q_0.1, Q_0.1.1, etc.) helps to answer the explicit question Q_0, we argue that no topic shifts are present in this piece of text.

Discussion

The analyzed data seem to favor hypothesis (i), according to which, for a piece of discourse to be coherent, the topic shifts (if any) need to be associated. As Van Kuppevelt (1995: 142) claims, "in the case of an associated topic shift the new feeder is, or is directly provided by, a part of the preceding discourse". However, both the text genre and the register (spontaneous vs. planned speech) seem to determine the valid distance between the new topic and its feeder. As can be seen in the interview, the feeder immediately precedes the utterance in which the topic shift is realized. In contrast, in the cases

in which the new topic and the feeder are separated by more than one node in the discourse tree, the reader/hearer is expected to reconstruct the intermediate implicit sub-questions/sub-topics in order to associate the topic shift to its feeder. This is the case of the narrative text, where the hearer needs to go back to higher nodes in the tree to identify the feeder (e.g. our example (ii) in which the writer makes reference to the tea which was also mentioned at the beginning of the text).

On the other hand, hypothesis (ii) can also be verified on the basis of the three text types analyzed, since implicit non-associated topic shifts have not been observed. The only case in which potential implicit non-associated topic shifts were detected was the narrative text. However, all those could be associated to the *discourse topic* (DT), which is defined by Van Kuppevelt (1995: 137) with respect to the narrative genre as “the set of all topics that are constituted as the result of one and the same feeder”. As we indicated above, the narrative just requires more reconstruction on the part of the hearer/reader to associate what seem to be non-associated topic shifts to that discourse topic. Certainly, the amount of implicit QUD reconstruction and search for topic association required by (this kind of) narrative would not be admitted in spontaneous narrative or plain conversation. We have to assume that coherence (defined here as the requirement that topic shifts be associated if not explicitly indicated) is a general principle that is expected by and from interlocutors. However, just like in literary texts Gricean maxims may be flouted to create a stylistic effect, we consider that the conditions on legit TS may be apparently violated for the same reason (in this case, to make the reader understand that the writer is reproducing the internal monologue of the character).

To wrap up, we argue that the Gricean Cooperative Principle – and with it, the expectation of coherence – applies across all genres. The assumption is that the speaker is being coherent and is making an effort to make his/her discourse structure explicit (e.g. by using discourse markers to signal topic shifts) to ease the comprehension effort of the hearer. However, the coherence rules are dependent on contextual factors like genre and planification, or even the speaker’s intentions. This is precisely what we see in the interview, where topic shifts are strategically employed in order to direct the conversation towards the PM’s (political) interests. In everyday interaction (and in the interview itself), the behavior observed in the written narrative text would lead to incoherent discourse, resulting in communication breakdowns.

As a final reflection, we would like to bring to the fore previous works carried out in autism research, which generally agree on the fact that autistic people’s speech is, in general, more incoherent than that of neurotypical people. However, these studies often fail to clarify the source of that lack of coherence. At the same time, several studies find that autistic individuals tend to shift topic more abruptly than neurotypical speakers (see Bauminger-Zviely et al. 2014) and that they exhibit problems with topic maintenance (see La Valle et al. 2020: 3). The reasons behind this behavior are unclear and could be diverse: a failure to identify certain assertions as feeders, the wish to terminate/stick to a topic guided by their own personal interests, etc. Pending more research on the cognitive underpinnings of this alleged lack of coherence in some autistic discourses / conversations, establishing a straightforward relationship between QUDs and topic shifts seems to point in the right direction in attempting to provide a more precise definition of the notion of *coherence* and to account for what is supposed to be incoherent speech.

References

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Appendix

NARRATIVE

(i)

Text:

Susie lifts the lid of the abandoned teapot and swirls the water. The teabag sloshes against the sides. The tea is cold and bitter, but Susie doesn't mind because her landlady, Mrs Simpson, normally reuses tea bags. Usually, by the time Susie gets home, the tea mostly tastes of chlorine.

As she checks Mrs Simpson's calendar, Susie rubs the place where the elastic cap from work scrunched all day. A play. The skin feels puckered and soft, like white and wrinkly fingertips in the bath. Her mother used to read beside the clawfoot bathtub her father imported from England.

Annotation:

Q_0 (=DT): {How is the way things are at t0?}

Q_0.1: {What does Susie do at t1?}

A_0.1: Susie lifts the lid of the abandoned teapot

Q_0.2: {What does Susie do at t2?}

A_0.2: (and she) swirls the water.

Q_0.3: {What happens at t3?}

A_0.3: The teabag sloshes against the sides.

Q_0.3.1: {How does the tea look like?}

A_0.3.1: The tea is cold and bitter,

Q_0.3.2: {Does Susie mind (that the tea is cold and bitter)?}

A_0.3.2: but Susie doesn't mind

Q_0.3.2.1: {Why doesn't she?}

A_0.3.2.1: because her landlady normally reuses tea bags.

Q_0.3.2.1.1: {Who is her landlady?} [NAI]

A_0.3.2.1.1: Mrs. Simpson / Mrs. Simpson is her landlady

Q_0.3.3: {How does the tea usually taste?}

A_0.3.3: Usually the tea mostly tastes of chlorine.

Q_0.3.3.1: {When?}

A_0.3.3.1: by the time Susie gets home.

Q_0.4: {What happens at t4?}

A_0.4: Susie rubs the place where the elastic cap from work scrunched all day.

Q_0.4.1: {When?} [NAI]

A_0.4.1: As she checks Mrs Simpson's calendar.

Q_0.4.2: {What is it?}

A_0.4.2: A play.

Q_0.4.3: {How does the skin feel?}

A_0.4.3: The skin feels puckered and soft,

Q_0.4.3.1: {Can you elaborate?}

A_0.4.3.1: like white and wrinkly fingertips in the bath.

Q_0.4.3.1.1: {What memories does the bath evoke?}

A_0.4.3.1.1: Her mother used to read beside the clawfoot bathtub her father imported from England.

(ii)

Text:

She scrubs her face pink before each shift. A single flake of dead skin can ruin a microchip. But the factory is also vacuum-dry and she has to moisturize often. She can only afford sunflower oil. For the whole day, she breathes the bitter staleness of cooking oil trapped behind the mask. Her tongue is always wool. In the dust-free factory, her mouth fills with the rat-grey feel of it. She swallows the tea. Even if it's a matinee, Mr Johnson will insist on dinner. Mrs Simpson will pay.

Annotation:

Q_0 (=DT): {How is the way things are at t0?}

Q_0.1: {What does Susie do before each shift?}

A_0.1: She scrubs her face pink before each shift.

Q_0.1.1: {Why does she scrub her face pink?}

A_0.1.1: A single flake of dead skin can ruin a microchip.

Q_0.1.2: {How is the factory?}

A_0.1.2: But the factory is also [NAI] vacuum-dry.

Q_0.1.2.1: {What else is dry?} [NAI]

A_0.1.2.1: Susie's face.

Q_0.1.2.2: {What does Susie have to do with the factory?}

A_0.1.2.2: and she has to moisturize often.

Q_0.1.2.2.1: {What can Susie afford (to moisturize the factory)?}

A_0.1.2.2.1: She can only [NAI] afford sunflower oil.

Q_0.1.2.2.1.1: {What happens with the oil?}

A_0.1.2.2.1.1: she breathes the bitter staleness of cooking oil

Q_0.1.2.2.1.1.1: {Where is the bitter staleness of the cooking oil?}

A_0.1.2.2.1.1.1: trapped behind the mask.

Q_0.1.2.2.1.1.2: {When?} [NAI]

A_0.1.2.2.1.1.2: For the whole day.

Q_0.1.2.2.1.1.3: {How is Susie's tongue?}

A_0.1.2.2.1.1.3: Her tongue is always wool.

Q_0.1.2.2.1.1.4: {What happens to Susie's mouth?}

A_0.1.2.2.1.1.4: her mouth fills with the rat-grey feel of it.

Q_0.1.2.2.1.1.4.1: {Where?} [NAI]

A_0.1.2.2.1.1.4.1: In the dust-free factory.

Q_0.2: {What happens at t5?} (connected to t1-t3)

A_0.2: She swallows the tea.

Q_0.3: {What will Mr Johnson do at t6?} (connected to Q_0.4.2)

A_0.3: Mr Johnson will insist on dinner.

Q_0.3.1: {Regardless of what will Mr Johnson insist on dinner?} [NAI]

A_0.3.1: Even if it's a matinee.

Q_0.3.2: {Who will pay (for the dinner)?}

A_0.3.2: Mrs Simpson will pay.

INTERVIEW

(iii)

Text:

Laura Kuenssberg: Prime Minister, in the last few weeks, you've lost major votes in the Commons, you've chucked some MPs out of your own party, the highest court in the land has found you broke the law and gave the wrong advice to the Queen. How do you think this is going?

Prime Minister: Well, I think that it's going about as well as could be, especially, if not slightly better.

LK: Really?

PM: Yeah. Because look, this was always going to be a very difficult time. 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...

Annotation:

Q_0: {What have you [PM] done in the last few weeks?}

A_0': In the last few weeks, you've lost major votes in the Commons,

A_0'': you've chucked some MPs out of your own party,

A_0''': you broke the law,

A_0''': and gave the wrong advice to the Queen.

Q_i: {What is the source of A_0''' and A_0''''?} [NAI]

A_i: The highest court in the land.

Q_0.1: How do you think this [=Q_0] is going?

Q_0.1.1: {How do you think this [=government] is going?}

A_0.1.1: Well, I think that it's going about as well as could be, especially, if not slightly better.

Q_0.1.1.1: Really?

A_0.1.1.1: Yeah.

Q_0.1.1.1.1: {Why do you say so?}

A_0.1.1.1.1: Because look, this was always going to be a very difficult time.

Q_0.1.1.1.1.1: {What situation have you got?}

A_0.1.1.1.1.1: 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.

Q_0.1.1.1.1.2: {Does anyone think this was not the right way to go?}

A_0.1.1.1.1.2: And, yes, there are many people in all sorts of positions,

Q_0.1.1.1.1.2.1: {what do [these people] think?}

A_0.1.1.1.1.2.1: who don't think that was the right way to go.

Q_0.1.1.1.1.3: {What are you tasked with?}

A_0.1.1.1.1.3: And I am tasked with getting it over the line,

Q_0.1.1.1.1.3.1: {What do you refer to?}

A_0.1.1.1.1.3.1: getting Brexit done by October 31.

Q_0.1.1.1.1.4: {What did we always know?}

A_0.1.1.1.1.4: And I think we always knew that things would get choppy, but...

Q_0.1.1.1.1.4.1: {When?}

A_0.1.1.1.1.4.1: as we came up to that deadline.

(iv)

Text:

LK: You are blaming all of your woes on people who are trying to stop Brexit?

PM: No, I think it's just the predicament, is just the it's just the situation, that we're in as a country. And I think that things are actually much much better than they, than the political situation, might lead you to believe. Unemployment is at record lows. Foreign direct investment is at record highs. We're seeing this country at the cutting edge of innovation in everything from battery technology to bio science, we are doing fantastically well in so many ways. And if only we could all come together, get Brexit over the line, I think that fevers would cool, tempers would come down. And it would be a great thing.

Annotation:

Q_0.1.2: You are blaming all of your woes on people who are trying to stop Brexit?

Q_0.1.2.1: {What do you think is the cause?}

A_0.1.2.1': No, I think it's just the predicament,

A_0.1.2.1'': is just the it's just the situation

Q_0.1.2.1.1: {What situation?}

A_0.1.2.1.1: that we're in as a country.

Q_0.1.3: {How do you think things are?} (=Q_0.1.1)

A_0.1.3: And I think that things are actually much better

Q_0.1.3.1: {Much better than what?}

A_0.1.3.1: than they, than the political situation might lead you to believe.

Q_0.1.3.1.1: {Why do you say so?}

Q_0.1.3.1.1.1: {How's unemployment?}

A_0.1.3.1.1.1: Unemployment is at record lows.

Q_0.1.3.1.1.2: {How's foreign direct investment?}

A_0.1.3.1.1.2: Foreign direct investment is at record highs.

Q_0.1.3.1.1.3: {What can you say regarding innovation?}

A_0.1.3.1.1.3: we're seeing this country at the cutting edge of innovation in everything from battery technology to bio science.

Q_0.1.3.1.1.4: {How are you doing in general?}

A_0.1.3.1.1.4: we are doing fantastically well in so many things.

Q_0.2: {What do you think would happen?}

Q_0.2.1: {Under what circumstances?} [NAI]

A_0.2.1: And if only we could all come together,

Q_0.2.1.1: {What do you refer to?} [NAI]

A_0.2.1.1: get Brexit over the line,

A_0.2': I think that fevers would cool,

A_0.2'': tempers would come down.

Q_0.2.2: {Is it a good thing?}

A_0.2.2: And it would be a great thing.

REVIEW

(v)

Text:

How good is the Gran Tourer at the whole MPV thing?

The middle row of seats isn't divided into three separate sliding chairs as in some MPVs, but the lower bench does split into two individually sliding sections, and the backrests into three fold-down segments. Three Isofix child seats can sit side by side in the middle row, with a fourth in the front passenger seat. On the back of the front seats there are fold-down plastic picnic tables, which seemed A) worryingly fragile and B) ideal bongo drums for kids to serenade the driver with. They're removable, and can be replaced with tablet holders as an option so bongos can be swapped for an iPad broadcasting Peppa Pig instead if preferred.

Annotation:

Q_0: How good is the Gran Tourer at the whole MPV thing?

Q_0.1: {Is the Gran Tourer different from other MPVs with respect to the middle row?}

Q_0.1.1: {Is the middle row of seats divided into three separate sliding chairs?}

A_0.1.1: The middle row of seats isn't divided into three separate sliding chairs as in some MPVs,

Q_0.1.2: {How do which parts of the middle row of the Gran Tourer split?}

Q_0.1.2.1: {How does the lower bench split?}

A_0.1.2.1: but the lower bench does split into two individually sliding sections,

Q_0.1.2.2: {How do the backrests split?}

A_0.1.2.2: and the backrests into three fold-down segments.

Q_0.1.3: {How many Isofix child seats can sit side by side in the middle row?}

A_0.1.3: Three Isofix child seats can sit side by side in the middle row, with a fourth in the front passenger seat.

Q_0.1.4: {What is there on the back of the front seats?}

A_0.1.4: On the back of the front seats there are fold-down plastic picnic tables

Q_0.1.4.1: {How are the fold-down plastic picnic tables?} [NAI]

A_0.1.4.1': which seemed worryingly fragile

A_0.1.4.1'': and ideal bongo drums for kids to serenade the driver with.

A_0.1.4.1''': They are removable,

Q_0.1.4.2: {What can they be replaced with?}

A_0.1.4.2: and can be replaced with tablet holders as an option

Q_0.1.4.2.1: {What for?}

A_0.1.4.2.1: so bongos can be swapped for an iPad broadcasting Peppa Pig instead

Q_0.1.4.2.1.1: {Under what circumstances?} [NAI]

A_0.1.4.2.1.1: if preferred.