

# Aboutness topic, discourse topic and the structure of discourse

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The paper addresses the relation between several dimensions along which discourse has been assumed to be structured – topical structure, hierarchical structure, QUD-structure and thematic structure – and points at previously undescribed mismatches between those.

**BACKGROUND ASSUMPTIONS:** As discourse progresses, the *aboutness topic* of a sentence (Reinhart, 1981; Roberts, 2011; Krifka, 2007) may remain aboutness topic of subsequent sentences in discourse, or the aboutness topic may change (Givón, 1983). This relation between the aboutness topics of subsequent sentences in discourse, which I call the **topical structure of discourse**, constitutes one dimension along which discourse may be structured. Discourse may also be structured along a hierarchy of (explicit or implicit) *questions under discussion* (QUDs) which individual sentences and sequences of sentences in discourse can be seen to answer (von Steutterheim, 1994; van Kuppevelt, 1995; Roberts, 1996). According to (Roberts, 1996), achieving the goal of all discourse, which is the attempt to answer the global QUD "What is the way things are?", involves developing sub-goals addressed in terms of answering sub-QUDs. The resulting discourse has a hierarchical **QUD-structure** where each sentence addresses its own, local QUD, and sequences of sentences may answer a joint global QUD. A third dimension is what I call the **thematic structure** of discourse: a sequence of sentences may exhibit certain thematic continuity in terms of a common *discourse topic* (van Dijk, 1976; Asher, 1993; van Kuppevelt, 1995). Finally, discourse may be structured into a hierarchy of discourse units (DUs), where a superordinate sentence/DU may dominate one or several subordinated sentences/DUs. This **hierarchical structure** of discourse is governed by two types of discourse relations between sentences/DUs, *coordinating and subordinating discourse relations*

(Asher and Vieu, 2005).<sup>1</sup> The relation between these structures has been discussed before, but I am not aware of a model that takes all these dimensions into consideration. In (van Kuppevelt, 1995; Roberts, 2011), QUD-structure corresponds to thematic structure, since the global QUD of a DU corresponds to the discourse topic of that DU. (Frey, 2005) shows that thematic continuity should be distinguished from topical continuity. Finally, it has been commonly assumed that the QUD-analysis of discourse structure is compatible with the analysis in terms of discourse relations, since the latter can be characterized in terms of implicit questions that relate a sentence to preceding sentences in discourse cf. e.g. (Kehler, 2012).

**CLAIMS:** I. Thematic structure corresponds to QUD-structure, but there is a mismatch between thematic/QUD-structure and hierarchical structure; II. Topical and thematic structure do not coincide, but thematic structure is sensitive to topical structure, in a way hierarchical structure isn't.

**EVIDENCE I:** The model of (van Kuppevelt, 1995) which I employ assumes that topicality in terms of a hierarchy of topic-comment structure is a basic organizing principle of discourse structure. A question-based notion of topic-comment structure is used for both individual sentences and larger DUs. A question Q determines a (discourse) topic T defined as a set of possible values (objects, places, times, reasons) of the "topic term" of the question. One of these values is selected by answer A. The topic term corresponds to *background* in the focus-background distinction (cf. e.g. (Krifka, 2007)), rather than to aboutness topic, and represents a (contextually given or evoked) indeterminacy that needs further specification. The comment C is provided by A. If

<sup>1</sup>(Grosz and Sidner, 1986) propose a type of hierarchy governed by *intentions* that is assumed in (van Kuppevelt, 1995) to be related to the QUD-structure and in (Asher and Vieu, 2005) to the subordination/coordination distinction.

the speaker assumes A to be satisfactory for addressee, T is closed off. If not, i.e. if A contains indeterminacies, it triggers a process of subquestioning. Two types of subquestions are distinguished: *quantitative subquestions* asking for additional comment values in case A is incomplete, and *qualitative subquestions*, which either ask (i) for specification of an insufficiently specific value in A and are thus "goal-satisfying" or (ii) for "goal-subservient" support (justification, motivation, evidence) of a value in A. Subquestions constitute continuations of the topic constituted by the main question. The model does not consider the hierarchical structure, but it suggests that qualitative subquestions involve elaborations/explanations and thus correspond to these subordinating discourse relations, i.e. when a sentence/DU is elaborating/explaining another sentence/DU, the discourse topic of the superordinate sentence/DU is continued.

This however does not mean that the two structures coincide, and there are cases showing that QUD-structure and hierarchical structure do not fully match. Consider (1) where  $S_2$ - $S_4$  elaborate on  $S_1$ . The main QUD of the discourse can be analyzed as (i) *What happened with TC then?* or (ii) *Whom did TC start working for then?* As for option (i), topic  $T_1$  (possible values of "topic term") consists of (the set of) things (events) that happened to TC. Answer  $A_1$  specifies working for FFC as one such thing. The possible indeterminacies and subquestions  $A_1$  may trigger involve further values (*What else happened to TC?*; quantitative), elaborations on the value given (*How/Where/When was working for FCC?*; qualitative) or support for the value (*Why did TC work for FFC?*, qualitative). The subquestion that the actual sentence  $S_2$  answers is *How did TC find FFC?*. This is however not an immediate subtopic of  $T_1$  but a subtopic of the subtopic *How was working for FFC?*: the indeterminacy involved in  $A_1$  may be specified by either characterizing the event as a whole (*It was nice/ terrible*) or by characterizing the person involved (*He was nice/terrible*). The actual discourse implements the latter strategy: by specifying how FCC was like,  $S_2$  answers *How was working for FFC?*. This subsubtopic represents an additional level of thematic structure of (1) that is missing in its hierarchical structure: whereas  $S_2$ , being an elaboration of  $S_1$ , is embedded only one level deep in

terms of hierarchical structure, it is embedded two levels deep in terms of thematic structure, hence under  $T_1$ , thematic/QUD-structure and hierarchical structure of (1) do not match. (The situation is different in case the main topic is (ii) above:  $T_1$  is "people TC worked for", and the indeterminacy is fixed by the immediate (qualitative) subquestion *How was FFC like?*, hence thematic/QUD-structure matches hierarchical structure.)

EVIDENCE II: Van Kuppevelt's model does not consider topical structure. (Roberts, 2011) suggests that since the aboutness topic of a sentence is part of the (local) QUD the sentence answers, the QUD reflects the aboutness topic. However, this relation between QUD and aboutness topic is sometimes ambiguous. Thus the aboutness topic of  $S_1$  in (2) may be *Hans* or *the concerts*, but in both cases, the QUD may be *How many concerts is Hans giving?*. The relation between thematic and topical structure should be more carefully explored since aboutness topic seems sometimes to play a role in the subquestioning process and thus in determining the thematic structure of discourse: Depending on the combination of aboutness topic and main QUD, the sub-topics that a sentence gives rise to may be different. Thus if the aboutness topic of  $S_1$  in (2) is *Hans* and the QUD *What is Hans doing this week?*,  $T_1$  is "things that Hans is doing", and the topic  $T_2$  of the elaborating  $S_2$  should be "properties of things Hans is doing". If the aboutness topic is *the concerts*, and the QUD *How many concerts is Hans giving?*,  $T_1$  should be "number of concerts Hans is giving", and the indeterminacy that  $S_2$  attempts to resolve is different as it is related to further properties of Hans' concerts. Topical structure does not seem to play the same role at the hierarchical level as at the thematic level (this being further evidence for the different nature of the two), as suggested by comparing the subordinated structures in (2) and (3). In (3), the discourse referent in the explanation  $S_2$  is not aboutness topic, as shown by the topic test, whereas in (2), the elaborating  $S_2$  introduces new aboutness topic. I.e., forming a subunit does not seem to depend on whether the aboutness topic is continued or not. The contrast between (2) and (3) does not seem to hinge on the type of subordinating relation, as the opposite configuration is also possible, at least in the case of elaboration, cf. (4). ACKNOWLEDGMENTS: Research reported in the paper is funded by SFB 732, Stuttgart University.

## Examples

- (1) [Then **Tom Cruise** went to work for F.F. Coppola. [...]]<sub>S<sub>1</sub></sub> [**Coppola** he found to be "just like one of the guys."]<sub>S<sub>2</sub></sub> [And **he** totally trusted me."]<sub>S<sub>3</sub></sub> [**He** let me go anywhere I wanted to go with the character"]<sub>S<sub>4</sub></sub> (from (Roberts, 2011))
- (2) [**Hans** will give two concerts this week]<sub>S<sub>1</sub></sub>. [**The first one** will be on Monday in Bochum.]<sub>S<sub>2</sub></sub> [**The second one** will be on Tuesday in Hamburg.]<sub>S<sub>3</sub></sub> (from (Frey, 2005))
- (3) [**The meeting** is postponed.]<sub>S<sub>1</sub></sub> [The director is ill.]<sub>S<sub>2</sub></sub>  
*The meeting is postponed. #About the director, he is ill.*
- (4) [**Hans** will give two concerts this week]<sub>S<sub>1</sub></sub>. [**He** is playing on Monday in Bochum and on Tuesday in Hamburg.]<sub>S<sub>2</sub></sub>

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