Presuppositional Interpretation of Causal and Additive *although*

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That discourse connectives can convey more than just their assertional meaning is not a new observation: For example, Halliday [1] defines the *concession* relation, expressed in English by such discourse connectives as "although" and "however", as conveying "if P then, contrary to expectation, Q". Implicit in this is an *expectation* that the construction appeals to but does not explicitly convey. Lagerwerf [3] was the first to treat such expectations, which he associated with defeasible rules, as being *presuppositions* of the relevant discourse connectives. More recently, Webber and her colleagues [7] have shown that also a part of the semantics of other discourse connectives can be most simply explained in terms of the notion of *anaphoric presupposition* first proposed by van der Sandt [6].

We address the negative polarity discourse connective "although" in two of its uses discussed in [3] — *causal*, signaling the discourse relation of *denial of expectation*, e.g., (1), (6), and *additive*, signaling the discourse relation of *concession*, e.g., (3), (8). We show that what "although" is taken to presuppose is affected by *information structure.*

(1) Although Marcel is making us DINNER, we'll go for a DRINK.
(2) If what Marcel is doing is making us dinner, then normally we will not go for a drink.
(3) (Shall we go for a drink?) Although Marcel is making us DINNER, the Barcelona cafe has a HAPPY HOUR.
(4) i. If what Marcel is doing is making us dinner, then normally we do not go for a drink.
ii. If the Barcelona cafe has a happy hour, then normally we go for a drink.

(1) illustrates the use of "although" in *denial of expectation.* (2) is a paraphrase of the most specific possible presupposed expectation, formulated as a defeasible rule following Lagerwerf. (1) denies the potential conclusion reached on the basis of the expectation in (2). One issue we discuss in the paper concerns the possibility of various levels of abstraction in deriving or resolving the presupposed expectation, compare (2) and (5i,ii):

(5) i. If what anyone relevant is doing is making us dinner, then normally we will not go for a drink.
ii. If what anyone relevant is doing is preparing something for us, then normally we will not go away.

(3) illustrates the use of "although" in *concession.* This use requires a contextually available *tertium comparationis* `tc` as part of the interpretation. One of the related clauses presents an argument in favor of, and the other an argument against, the `tc`. The question in brackets in (3) provides "going for a drink" as the `tc`. We complement Lagerwerf's account by the following systematic analysis of concession: we treat the `tc` as being anaphorically presupposed, and we propose the two expectations paraphrased in (4i,ii), formulated as defeasible rules, to be presupposed in the same way as the expectation in denial of expectation is.

When interpreting sentences like (1) or (3), it is important to take intonation into account (CAPITALS in all examples denote words carrying a particular type of pitch accent, belonging to what Steedman calls the *Rheme-tune* in [5]); it turns out that different tunes give rise to different expectations: compare (2) vs. (7) and (4i) vs. (9i):

(6) Although MARCEL is making us dinner, we'll go for a DRINK.
(7) If the one who makes us dinner is Marcel, then normally we do not go for a drink.
(8) (Shall we go for a drink?) Although MARCEL is making us dinner, the Barcelona cafe has a HAPPY HOUR.
(9) i. If the one who is making us dinner is Marcel, then normally we do not go for a drink.
ii. the same as in (4ii)

The different intonation patterns encountered in (1) vs. (6) and (3) vs. (8) reflect differences in *information structure* (IS). Although it is widely recognized that there is an intimate relation between IS and what a sentence presupposes, to our knowledge we are the first to argue that IS be taken into account in the process of (i) *deriving* and (ii) *resolving* the presuppositions of discourse connectives, and to present such an IS-sensitive account of the presuppositions of the discourse connectives "although" and "otherwise" in some of their uses [2].

The present paper provides a detailed IS-sensitive analysis of the presuppositions underlying "although" in causal and additive use. The analysis draws from both English and Czech, as two languages which differ significantly in how they convey IS: While English exploits by and large its plastic intonation, Czech exploits free word order. Our approach builds on the formal account of IS for English developed by Steedman [5], and incorporates ideas about IS from the Prague school, as advanced by Sgall and his colleagues [4]. The work constitutes a part of a larger enterprise aimed at understanding how discourse structure, signaled in part by discourse connectives, is related to IS in discourse.

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