The meaning of although: *a Relevance Theoretic account**

CORINNE ITEN

Abstract

The meaning of concessive connectives like *although* is notoriously difficult to capture, mainly because these connectives do not contribute to the truth conditions of utterances containing them. In this paper, a Relevance Theoretic account of the meaning of *although* is given. The connective is analysed as encoding procedural meaning, constraining the inferential side of utterance interpretation. The procedure encoded by *although* leads the hearer to recover certain contextual assumptions, which in turn give rise to contextual effects. In this way, the use of *although* reduces the processing effort involved in utterance interpretation.

1 Introduction

The question this paper will attempt to answer is simple enough, namely what is the meaning of *although*? However, the answer is not likely to be as simple as the question. The meaning of *although* seems elusive, difficult to capture. People's intuitions about the effect the use of *although* has, seem to be reasonably clear, but when it comes to giving a theoretically sound account of the word's precise meaning, things become much more difficult. The following quote from Frege's 'On Sense and Reference' illustrates this point:

> Subsidiary clauses beginning with '*although*' also express complete thoughts.

> This conjunction actually has no sense and does not change the sense of the clause but only illuminates it in peculiar fashion (similarly in the case of '*but*', '*yet*'). We could indeed replace the concessive clause without harm to the truth of the whole by another of the same truth value; but the light in which the clause is placed by the conjunction might then easily appear unsuitable, as if a song with a sad subject were to be sung in a lively fashion.
>
> (Frege in Geach and Black 1970: 73-4)

At first, it might seem strange that *although* should not have sense, since it clearly means something. However, we should remind ourselves that Fregean sense is a far cry from the ordinary language meaning of *sense*. For Frege, sense is that which determines reference. Clearly, *although* does not have reference and, therefore, it cannot have Fregean sense either. What is more, *although* does not change the sense of its host clause. To put it differently, the presence of *although* has no effect on the determination of the reference of its host clause. The reference of a clause is a truth-value, and , as will be shown below, *although* plays no part in the determination of the truth-value of utterances containing it. In other words, what Frege is saying is that *although* does not contribute to truth conditions[1]. This is something almost all theorists who have dealt with *although* agree on.

In this paper, it is my aim to give an account of the meaning of *although* which does not diverge in the basic intuitive points from what Frege has to say. However, I shall attempt to go into more detail. A first section will look at some examples of how *although* can be used. The second part of this paper will be devoted to a Relevance Theoretic account of the meaning of *although*: section 3 introduces some notions central to Relevance Theory. This is followed by a discussion of the explicit content of *although* sentences. Finally, I shall proceed to give an account of what is encoded by *although*.

2 The data

2.1 General observations

(1)   Q although P.
(2)   Although P, Q.

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[1] Constraints on the length of this paper prevent me from saying more about Frege and his notions of sense and tone. However, more will be said in my thesis.

Sentences containing *although* either take the form in (1) or that in (2). For the time being, the discussion will be limited to (1). However, in a later section the differences between the two will be investigated. At this point, one might well be asking oneself what P and Q stand for. The standard answer to this question is that they stand for propositions. In fact, the general consensus seems to be that the propositional content of both (1) and (2) is simply (3).

(3)   P & Q

However, there are two considerations which might cast doubt on this assumption. Firstly, *although* does not always connect two assertions; the Q clause can be in the imperative or interrogative mood as well as in the indicative. Secondly, *although* is a subordinating conjunction and it is not immediately clear that a co-ordinate structure like the one in (3) can capture the propositional content of (1) and (2), which involve subordination. The explicit content of utterances of sentences of the form in (1) and (2) will be discussed below. For the moment, it will be assumed that P and Q stand for the propositional content of the clauses connected by *although*.

In the following, it will be shown that (1) can have a range of different interpretations. Taking my inspiration from König (1986), I shall distinguish two main types of interpretations of *although*: CONCESSIVE and ADVERSATIVE. Furthermore, Sweetser (1990)'s distinction between CONTENT, EPISTEMIC and SPEECH-ACT uses of *although*, will be touched upon and made use of to a certain degree. For the sake of convenience (and because they have to be called something) the next two sub-sections are entitled 'concessive *although*' and 'adversative *although*'. It should, however, be made clear from the beginning that there is no claim that *although* is ambiguous.

2.2 Concessive *although*

(4)   Peter went out although it was raining.

(4) is the standard example of the standard case of concessive conjunction. In pre-theoretic terms, there seems to be a direct incompatibility between the two clauses connected by *although*. In more theoretical terms, König (1985, 1986, 1988, 1989), Winter & Rimon (1994) and Sidiropoulou (1992), at least in spirit, all seem to agree that a sentence of the form 'Q although P', as exemplified by (4), carries an implicature roughly

like (5)[2].

(5)   Normally, if P then not Q.

In other words, if Mary utters (4), she is implicating the following: normally, if it is raining Peter does not go out. I believe that this captures quite accurately what *although* does in these cases.

   Sweetser (1990: 78-79) would call (4) a REAL-WORLD or CONTENT use of *although*, analogous to (6), which is an example of a real-world or content use of *because* (Sweetser 1990: 77-78).

(6)   Peter got wet because it was raining.

It is easy to see how (6) is a real-world use of *because*; the state of affairs of it raining caused another state of affairs, namely that of Peter getting wet. Unfortunately, the case of *although* is not as straightforward, since there is no such thing as real-world concessivity. Two states of affairs either co-exist or they do not. It takes a human mind to judge that it is remarkable that two states of affairs hold at the same time, when the existence of one would normally prevent the other from coming about. Concessivity, in other words, is in the eye of the beholder. It seems, therefore, doubtful whether there is actually a real-world use of *although*. In fact, Sweetser (1990: 103-104) herself speculates that there probably is no real-world use of *but*, because there is no real-world relation of contrast. It seems to me that, by the same token, it is quite likely that there is no real-world use of *although*, at least not in the same way in which there is a real-world use of *because*. As a matter of fact, the way in which Sweetser elaborates on the role of *although* in sentences like (4) seems to support this. Her gloss for (4) would be something like 'Peter's going out occurred in spite of there being rain, which might naturally have led to his not going out'. In other words, the real-world relation does not hold between the states of affairs described in the two clauses but between the state of affairs described by the subordinate clause and the negation of the main clause. Another way of looking at this is to say that, for examples like (4), the 'if…then' in (5), the implicature carried by sentences like (1), is strengthened to a causal connection[3]. Thus, a concessive content reading of *although* in (1) will give

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[2] Note that their views differ when it comes to the status of this implicature, i.e. whether it is conventional or conversational, and that their accounts are set within three very different frameworks.

[3] Many theorists have perceived a close connection between causality and concessivity. König (1989), for example, claims that there is a relation of duality between the two. In Iten (1998) I have argued against this

rise to the implicature in (7).

(7)   Normally, P causes not Q.

 (8) seems to carry an implicature very much like (5), except that the order of the clauses is reversed. However, it is an example of what Sweetser (1990: 78-79) calls an EPISTEMIC use of *although*. Her gloss for (8) would be something like 'the fact that it was raining is true in spite of the fact that Peter went out, which might reasonably have led me to conclude that it wasn't raining'. In other words, the 'if…then' in (5) is taken to express an epistemic connection. On this reading, (1) will give rise to an implicature like (9).

(8)   It was raining, although Peter went out.
(9)   Normally, from P the speaker would conclude that not Q.

Thus, what Mary seems to be implicating by her utterance of (8) is that, normally, from the fact that Peter went out, she would conclude that it was not raining. It is interesting to note that, in effect, (5) can be read either as (7) or as (9)[4] and none of the accounts by König, Winter & Rimon or Sidiropoulou distinguish between real-world and epistemic uses of *although*.
 Finally, there is the "speech-act" use of *although*. (10) is an example of this. Sweetser (1990: 79)'s gloss for (10) would be 'I ask you if it is raining in spite of the fact that I'll

(10) Is it raining, although I'll have to go out no matter what.

Unfortunately, König, Winter & Rimon and Sidiropoulou all disregard examples of this sort. However, it seems clear that (1) on a speech-act reading could be said to carry an implicature of the general form in (11).

(11) Normally, if P then the speaker wouldn't be asking whether (/saying that/requesting that) Q.

In the particular case of (10) this means that Mary will be implicating that, normally, if she

position.

[4] Obviously, a little more generosity is required, if one is to allow (5) to be read as (9), but I believe it can be done.

has to go out no matter what, she would not ask whether it is raining. Obviously, what has just been given is a mere sketch of the effects concessive *although* has on utterance interpretation. A full analysis of *although* will be given in section 5.2 below.

2.3 Adversative *although*

(12) It's raining although Peter is wearing a green shirt.

(12) is an example of the second, adversative, interpretation of *although*. Taken out of context, this example sounds rather strange. In fact, Winter & Rimon (1994) consider examples like (12) unacceptable. For them, an adversative interpretation can only result if the connective is *but* rather than *although*. Thus, (13) would be the acceptable and, admittedly, probably more easily interpretable, counterpart of (12).

(13) Peter is wearing a green shirt, but it's raining.

Actually, I believe that both (12) and (13) are acceptable but that they differ slightly in the way in which they are processed[5].

   Let us return to (12). I mentioned above that this is hard to interpret out of context. Let me provide a context now. Imagine the following scenario: On 19 December 1997 Mary makes some predictions about a certain day, say 19 January, 1998, i.e. she predicts that it will be raining and that Peter will be wearing a red shirt. Let us say that John witnesses these predictions and, on 19 January 1998, he points out to Mary that Peter is in fact wearing a green shirt and Mary was, therefore, wrong. In reply, Mary might very well utter (12) and thus implicate that she was still right. Unlike in the case of concessive *although*, here, there is no direct incompatibility between the two clauses. Rather the incompatibility is between an implication of the first clause and an implication of the second clause.

   To go back to the more formal 'Q although P', at least König and Winter & Rimon agree that, in the adversative case, what a speaker is implicating with an utterance of (1) is something like (14)[6].

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[5] Much more needs to be said about the difference between *but* and *although*. This issue, which I intend to pursue in future work, lies outside the scope of the present paper.

[6] As mentioned above, this is not quite accurate, since Winter & Rimon do not accept examples like (12). However, what I am saying here is true of their interpretation of examples like (13), which contain *but* rather

(14) If P then not R. If Q then R. Q carries more weight than P.

In more detail, this is how this works for (12): if it is raining on 19 January 1998 (= Q) Mary is right (= R), if Peter is wearing a green shirt (= P), Mary is wrong (= not R), Q carries more weight, therefore Mary was still right.

   Looking at the implicature 'Q although P' carries on this interpretation it should be clear why it is somewhat futile to talk about content, epistemic and speech-act uses of *although* here. The relationship between P and Q in this case is not a direct one. P and Q are related to each other via R. Of course, R could be a belief or conclusion, or a speech act. However, R is not part of the actual utterance. In fact, more or less any utterance of the form 'Q although P' can have any kind of R.

   To sum up the last two sub-sections, 'Q although P' has two basic interpretations. On the concessive interpretation it carries the implicature 'normally if P then ¬Q'. On the adversative interpretation the implicature is 'if P then ¬R, if Q then R and Q carries more weight than P (therefore R)'. It may now be clear that, looked at it this way, the concessive interpretation is simply a special case of the adversative interpretation. The adversative implicature where R = Q comes out precisely as the concessive implicature: if P then ¬Q, if Q then Q and Q carries more weight than P, in the sense that ¬Q which follows from P is weaker than Q, a fact which follows directly from the fact that Q is part of the truth conditions of 'Q although P'.

   So far I have merely provided a collection of data to show how *although* can be used and to describe roughly what effect the presence of *although* seems to have on the interpretation of an utterance containing it. One central question that I believe will have to be answered now is this: what does *although* encode? To put it slightly differently, how do the implicatures described above come about and what is their status? Given that there is an adversative and a concessive interpretation of *although*, it will also be important to consider the question whether *although* is ambiguous or whether it is semantically univocal and the different interpretations are arrived at pragmatically. A second, related, question is: what is explicitly communicated by an utterance of a sentence of the form 'Q although P'? Finally, the question as to whether there is a difference between 'Q although P' and 'Although P, Q' should be answered.

   In the following sections, I shall attempt to answer the above questions from a Relevance Theoretic point of view. A section on some of the notions central to Relevance Theory will be followed by a section on the explicitly communicated content of utterances of the

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than *although*.

form 'Q although P'. The final section will be devoted to the investigation of what the word *although* encodes and how its different interpretations are arrived at. This will include a sub-section on the difference between 'Q although P' and 'Although P, Q'.

3 Relevance

3.1 The communicative principle of relevance

On Sperber & Wilson (1986/1995)'s view, utterance interpretation involves decoding and inference. Decoding leaves the hearer with an incomplete (i.e. not fully propositional) conceptual representation. In order to arrive at a fully propositional representation, the hearer has to inferentially enrich the incomplete representation. This inference is basically a process of hypothesis formation and confirmation. Relevance is the criterion for testing the hypotheses. Other things being equal, the hearer will choose an optimally relevant interpretation. According to Sperber & Wilson (1995: 270) an utterance is optimally relevant iff (a) it achieves sufficient contextual effects to be worth the hearer's processing effort and (b) it is the most relevant one the speaker could have produced given her abilities and preferences.

Let me start with the effects side of things. It seems painfully obvious that hearers do not process information provided by an utterance in a vacuum but rather against a background of a set of assumptions which they already have, and not just any set of assumptions, but one the speaker intends them to access. This background of assumptions is the context in which the utterance will be interpreted. Any effects will be achieved by combining the new information provided by an utterance with the hearer's existing assumptions. There are three basic ways in which information provided by an utterance can combine with the context. Firstly, it may combine with existing assumptions to yield a contextual implication. Secondly, new information can strengthen an existing assumption of the hearer's. Finally, new information can contradict and eliminate one (or, indeed, more) of the hearer's existing assumptions. So much for the effects an utterance can achieve.

There is not quite so much that can be said about the effort side of the story. The point is that understanding any utterance involves processing effort on the part of the hearer. In order for an utterance to have any effects at all the hearer must first decode the linguistic expressions, then recover the proposition expressed by that utterance and access the intended contextual assumptions. The longer and more complex an utterance, the more processing effort there will be involved in decoding it. The less accessible the assumptions

needed to interpret an utterance, the more processing effort will be involved in recovering the proposition expressed and the intended contextual effects.

The communicative principle of relevance states that every utterance communicates a presumption of its own optimal relevance. To put this slightly differently, every utterance comes with a guarantee of optimal relevance. The speaker has to make sure that her utterance will be worth the hearer's attention, otherwise the hearer will not bother to listen to her. Thus, the hearer can follow a path of least effort, that is, he is licensed to test interpretations in their order of accessibility. In cases of successful communication the hearer will have reached the intended interpretation as soon as his expectation of relevance is satisfied.

3.2 Concepts and procedures

In the last sub-section it was said that, on the Relevance Theoretic view, utterance interpretation involves decoding, which leads to an incomplete representation, and inference, the result of which is a set of fully propositional representations. In other words, utterance interpretation requires two basic tools: representation and computation. It should, therefore, not come as a surprise that Blakemore (1987, 1989) and Wilson & Sperber (1993) differentiate two basic types of encoded meaning. The first type is conceptual meaning, which is associated with representation. The second type is procedural meaning, which is associated with computation.

It is probably fair to say that most words encode concepts, that is, metaphorically speaking, they contribute building blocks to conceptual representations. However, some words encode procedures, i.e. they give instructions as to how conceptual representations are to be manipulated. To put it slightly differently, conceptual information provides the basic input to hypothesis formation, while procedural information constrains and guides this process and reduces processing effort. In line with Blakemore (1987, 1989) on *but* and a range of other connectives, I shall argue that *although* encodes procedural meaning.

The cognitive difference between concepts and procedures would seem to be reasonably clear and, I believe, the case for making such a distinction in a framework like Relevance Theory is very strong. However, determining whether meaning encoded by a given linguistic expression is conceptual or procedural (or, indeed, both) is a rather difficult task. Building on Wilson & Sperber (1993), Rouchota (1998) presents criteria for distinguishing expressions encoding procedural meaning from those that encode concepts, which come from three different areas: cognition, truth-evaluability and compositionality.

Let me start with cognition. There are two pieces of cognitive evidence which seem to

point to a fundamental difference between two types of meaning. Firstly, if one tries to bring to consciousness the meaning of words like *tree*, *freedom* or even *because* I think one manages quite well. However, attempts to bring to consciousness the meaning of *although* or *but* seem to have little chance of success. Secondly, and probably consequently, words like *although* and *but* and, maybe more obviously, *well* as used in (15), are notoriously hard for foreign learners of English to grasp.

(15) Well, Peter should be here any minute now.

This difference should not be very surprising if we remind ourselves of the fact that concepts are mental representations and can, therefore, by definition be brought to consciousness or *represented*. Procedures, on the other hand, are computations performed on these representations and there is no reason why we should be able to bring these computations to consciousness[7]. I believe that the very fact that it is so incredibly hard to pinpoint the meaning of *although* provides evidence in favour of treating it as encoding procedural meaning. Surely, if *although* encoded a concept it would be reasonably easy to say what this concept is. Theorists like Frege would not have to take recourse to notions like "colouring" or "illumination" to account for the meaning of *although*.

   The argument pertaining to truth-evaluability follows from the considerations mentioned above. If procedures are computations they are not truth-evaluable. Truth or falsity is a property of (complete) conceptual representations. Computations can only be successful or unsuccessful, appropriate or inappropriate. Unfortunately, it is quite difficult to test specific linguistic items for truth-evaluability, because the end result of linguistic processing is always a conceptual representation. However, (16) should show that the contribution *although* makes to the meaning of an utterance is not truth-evaluable and its meaning, therefore, not conceptual. This becomes especially clear if we compare this with (17) where the contribution *sadly* makes to the utterance clearly is truth-evaluable.

(16) A: Peter went out although it was raining.
      B: *That's not true, he always goes out in the rain.

(17) A: Sadly, my mother-in-law died.
      B: That's not true, you're not sad about her death.

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[7] Note that what can (at least in some cases) be brought to consciousness are representations of computations, but not the actual computations themselves.

One might object that (16) merely shows that *although* does not contribute to truth conditions. However, let me point out that *sadly* in (17) does not contribute to the truth conditions of A's utterance either. (18) should make it clear that A's utterance in (17) is true iff A's mother-in-law died. Clearly, a speaker uttering (18) is saying that A's inheriting £1000 depends only on whether her mother-in-law dies and not on whether A (or anyone else) is sad about her mother-in-law's death.

(18) If, sadly, A's mother-in-law died, she will inherit £1000.

This also shows that the fact that a given linguistic item does not contribute to the truth conditions of a particular utterance does not mean that this item does not encode a concept. In fact, as (19) shows, *sadly* can contribute its encoded meaning to the truth-conditional content of an utterance containing it and surely it has to be conceptual in order to do that.

(19) Mary was smiling sadly.

What is more, it seems convincing that even in (17) *sadly* is part of the truth conditions not of the proposition expressed by the utterance, but of a higher-level representation[8]. Therefore, it seems fair enough to say that, if an item never contributes to the truth conditions of the utterance containing it, this is a good indication of the fact that that item is likely to encode procedural meaning. At the same time, I would like to make it clear that the only rock solid conclusion that can be drawn is that, if something encodes a procedure, that procedure is never part of truth conditions[9]. Clearly, what *although* encodes is never part of the truth conditions of an utterance containing it. I, therefore, believe that this criterion, too, points in the direction of *although* encoding a procedure rather than a concept.

   The third type of criterion, again, follows directly from the general theoretical considerations above. It is probably a universally recognised fact that individual concepts combine in a predictable manner to form larger conceptual representations. In other words, concepts are compositional. It seems fairly obvious that procedures cannot be

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[8] More will be said about this in section 4.3

[9] N.B. This only applies to the actual procedure itself. The output of a procedure can very well be truth-conditional. Procedural meaning can contribute to truth conditions by constraining an inferential task involved in deriving a propositional form. Reference assignment is an example of this. However, the procedure itself cannot be part of the truth-conditional content of an utterance.

compositional in the same way as concepts. Unfortunately, the only piece of evidence I can offer with regard to *although* in this respect is that *although* can only ever link two clauses. It cannot combine with any other connectives or adverbs. (20), where *mainly* modifies *because*, which is likely to encode a concept, is perfectly grammatical. (21), on the other hand, where *mainly* should modify *although*, is ungrammatical. The same goes for (22), where *partly* modifies *because* with a perfectly acceptable result and (23), where the same cannot be said of an attempt to use *partly* to modify *although*.

(20) Peter went to the party mainly because he wanted to see Susan.
(21) *Susan went to the party mainly although she didn't want to see Peter.

(22) Peter went to the party partly because he wanted to see Susan and partly because he had nothing better to do.
(23) *Susan went to the party partly although she didn't want to see Peter and partly although she had a lot of work to do.

Similarly, (24), where the *because* clause is negated, is grammatical, while (25), where the *although* clause should be negated, is not. It is interesting to note that, where the negation is clearly metalinguistic (or echoic), *although* can be negated, as in (26)[10].

(24) Peter didn't go to the party because he wanted to see Susan but because he had nothing better to do.
(25) *Susan didn't go to the party although she didn't want to see Peter but although she had a lot of work to do.
(26) Susan didn't go to the party although she had a lot of work to do, but because of it.

Clearly, there is no syntactic reason for these differences in acceptability between (20) and (21), (22) and (23), and (24) and (25): *because* and *although* are both subordinating conjunctions. It seems, therefore, likely that this difference is due to the fact that the two conjunctions encode different types of meaning.

   To sum up this section, all the available evidence points in the direction of *although* encoding a procedure rather than a concept. In section 5, I shall suggest a procedure which is likely to be what *although* encodes and this procedure will be tested on the data discussed in section 2. Before that, however, something ought to be said about the explicit

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[10] For a discussion of metalinguistic negation see Horn (1985). For a Relevance Theoretic reanalysis see Carston (1996).

content of utterances of the form 'Q although P' or 'Although P, Q'.

4 The explicit content of 'Q although P'

4.1 Explicatures and implicatures

Apart from the distinction between conceptual and procedural encoding, as discussed in section 3.2 above, there is another fundamental distinction in Relevance Theory: the distinction between explicitly communicated assumptions, explicatures, and implicatures, assumptions that are communicated implicitly.

   According to Sperber & Wilson (1986/1995: 182) the explicatures of an utterance are those assumptions communicated by it that are a development of the logical form it encodes. In other words, explicatures are assumptions which are recovered via a combination of decoding and inference. Assumptions can be more or less explicit: the greater the role of decoding in recovering an assumption, the more explicit it is and vice versa. Implicatures, on the other hand, are derived purely inferentially. This difference between explicitly and implicitly communicated assumptions is illustrated in (27)-(29) below.

(27)   A: Shall we go for a walk?
         B: It's raining.

The explicatures of B's utterance in (27) are given in (28). These include not only the proposition expressed, (28a), but also what Wilson & Sperber (1993: 5-6) call higher-level explicatures, embeddings of the proposition expressed under higher-level descriptions, such as speech-act descriptions, as in (28b), and propositional attitude descriptions, as in (28c), for example. It should be obvious that all the assumptions in (28) are indeed developments of the logical form of B's utterance in (27).

(28)   a.   It's raining in place p_1 at time t_1.
         b.   B says that it's raining in place p_1 at time t_1.
   `   c.   B believes that it's raining in place p_1 at time t_1.

(29)   a.   If it's raining B doesn't want to go for a walk.
         b.   B doesn't want to go for a walk.

In (29) some possible implicatures of B's utterance are given. (29a) is an implicated premise, (29b) is an implicated conclusion[11]. There can be little doubt that the assumptions in (29) are recovered via inferential processes alone. No more will be said about implicatures here. However, there are a few more points to be made about explicatures.

4.2 Speech-acts

It might seem from what was said in the preceding paragraph that the proposition expressed by an utterance is always also one of its explicatures. However, this is not so. In some cases of non-literal meaning, like irony, for example, and speech-acts other than assertions the proposition expressed is not communicated and it is, therefore, not an explicature of the utterance. Since there is going to be some discussion of speech-act uses of *although* below, it would seem useful to at least sketch how Relevance Theory accounts for those speech-acts communicated by non-declarative utterances.

   Sperber & Wilson (1986/1995: 224-231) argue that propositional forms can be used to represent in two different ways: descriptively and interpretively. A propositional form represents a state of affairs descriptively if it is true of that state of affairs. If a propositional form is used to represent another representation (e.g. a thought) it is used interpretively. A propositional form is an interpretation of another representation if it resembles that representation, for example because it shares certain logical properties with it or because it has similar contextual implications. On this view, every propositional form of an utterance is an interpretation of a thought of the speaker's. This thought in turn can be entertained as a description of an actual or a desirable state of affairs. Alternatively, it can be entertained as an interpretation of an actual representation or of a desirable representation. Sperber & Wilson (1986/1995: 243-254), Wilson & Sperber (1988[a], 1988[b]) and Clark (1991) use the descriptive/interpretive distinction to account for speech-acts.

   They analyse imperatives as procedurally encoding the information that the propositional content of the utterance is a representation of a desirable (and potential) state of affairs.

(30) Don't forget your umbrella.

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[11] For a more detailed account of this distinction see Sperber & Wilson (1986/1995: 194-195) and Carston (1998: 127-128).

In other words, the propositional form of (30), something along the lines of *the hearer doesn't forget his umbrella,* is an interpretation of a thought which is a description of a desirable state of affairs. To put this more simply, by uttering (30), the speaker is communicating that a state of affairs where the hearer does not forget his umbrella is desirable. Note that there is an indeterminacy here, as to who this state of affairs is desirable to.   The hearer will have to determine this pragmatically, guided by considerations of optimal relevance. In the present case, it seems fair to assume that that state of affairs is taken to be desirable to the hearer. In other words, (31) will be a higher-level explicature of (30). Given certain salient contextual assumptions, like for example the assumption that the speaker and the hearer are friends, the speech-act here will be taken to be one of giving advice.

(31) It is desirable to the hearer that the hearer doesn't forget his umbrella.

   Interrogatives, on this view, are taken to encode that the propositional content of the utterance is a representation of a desirable (i.e. relevant) thought[12].   In other words, interrogatives are different from imperatives in that they encode interpretive use. Thus, the propositional form of (32), something like *it is raining*, is a representation of a thought of the speaker's which is, in turn, an interpretation of a relevant thought. Put more simply, by uttering (32), the speaker is communicating that a thought which resembles *it is raining* (either *it is raining* or *it isn't raining*, presumably) is relevant.   Again, there is an indeterminacy as to who the represented thought is perceived to be relevant to[13]. In this case, the speaker is most likely to be communicating that the thought is relevant to herself. Thus, (33) will be a higher-level explicature of (32).

(32) Is it raining?
(33) *It is raining/it isn't raining* is relevant to the speaker.

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[12] For simplicity's sake I am using a yes/no question as an example here. For an account of wh-questions see e.g. Wilson & Sperber (1988[a]: 96).

[13] As a matter of fact, in the case of questions there is a second indeterminacy, the indeterminacy regarding how closely the representation resembles the relevant thought.

4.3 How many logical forms does an utterance encode?

As Carston (1998: 123-125) points out, there seems to be a problem with the definition of explicatures as developments of the logical form when it comes to utterances, for example, of the form 'Q because P', like the one in (6). As (36) shows, a sentence adverbial like *sadly* can modify the subordinate clause P. In Relevance Theory (e.g. Ifantidou 1994: 152-154), these adverbials are treated as contributing to the explicatures of utterances containing them. Thus, (35) is a higher-level explicature of (34). Clearly, one would want to say that (35) is also a higher-level explicature of (36). Therefore, one would also have to say that *it was raining* is an explicature of (6). However, *it was raining* is not a development of *Peter got wet because it was raining*.

(6)   Peter got wet because it was raining.
(34)   Sadly, it was raining.
(35)   It is sad that it was raining.
(36)   Peter got wet because, sadly, it was raining.

This might make one think that the definition of explicature has to be changed to accommodate these cases. However, Carston (1998: 124) proposes a different solution, namely that the assumption that every utterance encodes one and only one logical form should be rejected. Thus, she suggests that an utterance like (6) has the logical forms in (37).

(37) a. Peter got wet.
     b. It was raining.
     c. Peter got wet because it was raining.

Each of the logical forms in (37) can then have its own set of explicatures. In this way, it is easy to see how (35) can be one of the higher-level explicatures of one of the logical forms encoded by (36).

   This account also seems very appealing when it comes to speech-act uses of connectives like *because*.

(38) Is it raining, because I don't want to get wet.

If (38) was taken to encode one and only one logical form it would be extremely difficult

to explain how one of its clauses can be a question and the other an assertion[14]. However, if one assumes that (38) encodes several different logical forms, it is easy to see how this fact can be accounted for.

4.4 The proposition(s) expressed

As mentioned above, the general consensus is that utterances of sentences of the forms in (1) and (2) express the proposition in (3).

(1)   Q although P.
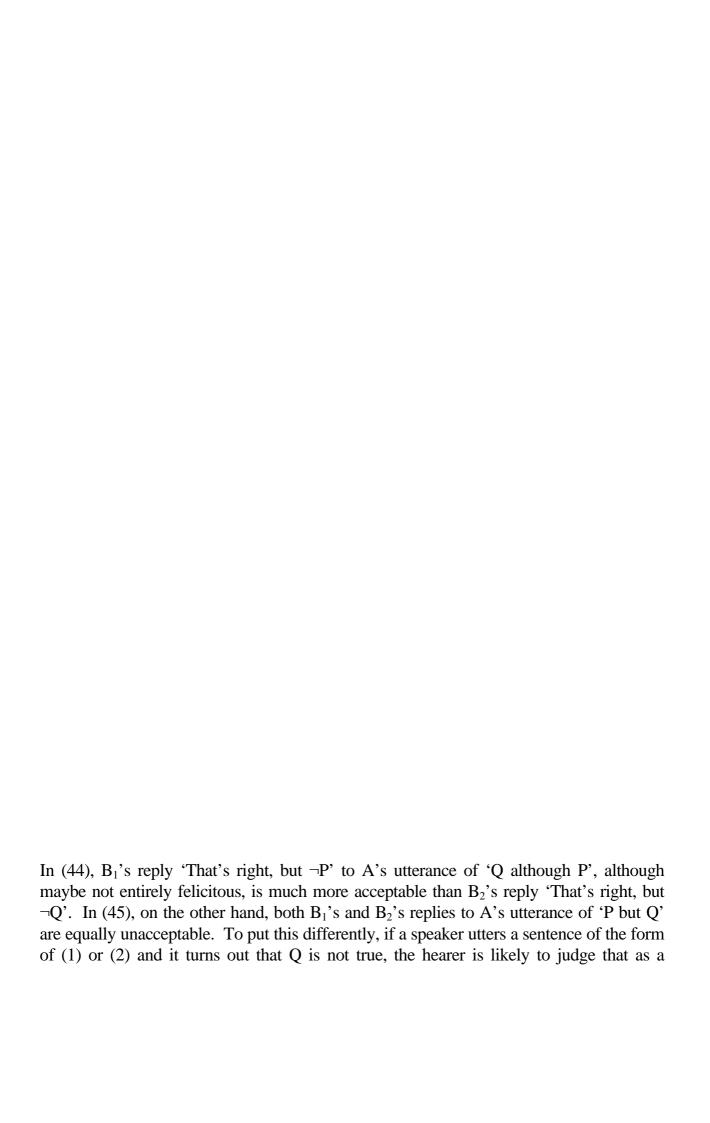(2)   Although P, Q.
(3)   P & Q

Indeed, if one embeds a sentence of the form in (1) under the scope of a logical operator, such as *if...then*, it becomes clear that its truth or falsity depends on the truth or falsity of P and Q alone. (39) is an embedding of (4). Clearly, a speaker uttering (39) is communicating that Peter's getting wet depends solely on whether the rain and Peter's going out occurred at the same time and not on whether those two states of affairs are in any way incompatible with each other.

(4)   Peter went out although it was raining.
(39)   If Peter went out although it was raining he'll have got wet.

In other words, the TRUTH CONDITIONS of (1) and (2) indeed seem to be captured by (3). However, this is missing an important point. The structure of (3) is one of co-ordination. By contrast, (1) and (2) involve subordination. It seems highly doubtful whether (3), a case of co-ordination, can accurately capture the PROPOSITION EXPRESSED by utterances of sentences involving subordination.

   Because of this and in the light of what was said in section 4.3, I would like to suggest that the propositional content of sentences like (1) and (2) is something like (40), i.e. that these sentences encode two logical forms, which have to be enriched to yield two

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[14] Note that one might want to account for examples like (38) by saying that the *because* clause is parenthetical. Following Ifantidou (1994: 171-177) one could then say that (38) involves, in fact, two utterances. However, there is some doubt about whether this is the right way to go, since the subordinate clause in (38) behaves like a parenthetical on some tests, but not on others. I am hoping to pursue this matter in a different paper.

In (44), B_1's reply 'That's right, but ¬P' to A's utterance of 'Q although P', although maybe not entirely felicitous, is much more acceptable than B_2's reply 'That's right, but ¬Q'. In (45), on the other hand, both B_1's and B_2's replies to A's utterance of 'P but Q' are equally unacceptable. To put this differently, if a speaker utters a sentence of the form of (1) or (2) and it turns out that Q is not true, the hearer is likely to judge that as a

B₃: *That's right, but [he didn't put it away.]

The obvious difference between these connectives and *although* is that both *because* and *after* contribute to the truth conditions of the utterances containing them. Therefore, there is a third, minor, "assertion" that can be cancelled. This "assertion" expresses a causal connection between the clauses in the case of *because* and a temporal relation in the case of *after*. Since not only *although* but also *because* and *after* behave in this way, it would seem reasonable to assume that the fact that the speaker is taken to attach greater "importance" to the propositional content of the main clause (Q) than to that of the subordinate clause is something which is intrinsic to subordinate constructions. This observation seems to lend support to the idea that sentences like (1) and (2) encode two logical forms for the following reason. If Q and P are each propositions expressed in their own right it is relatively easy to see how one could account for the fact that one of them is given more weight. If, on the other hand, 'P & Q' is taken to be the single proposition expressed by utterances of (1) or (2), it is much harder to see how one could capture the

fact that one half of the proposition expressed is more important than the other. The question now is how this difference in "weight" or "importance" between the content of the main clause and that of the subordinate clause can be captured. Unfortunately, all I can do at this stage is point in the direction of a possible account.

Intuitively, subordination seems to do exactly the opposite of focal stress; where focal stress seems to highlight or foreground conceptual information, subordination seems to "lowlight" or background it. Thus it might be possible to account for the effect subordination has on utterance interpretation along the lines of the accounts Sperber & Wilson (1986/1995: 202-217) and Breheny (1996) give of focus. However, at this stage, this is all mere speculation and much more work will have to be done before a satisfactory account of the effect of subordination on meaning can be given. For the time being, it simply seems important to note that the fact that the *although* clause is a subordinate clause does seem to play an important role in the interpretation of utterances of sentences of the form in (1) or (2).

5 The meaning of *although*

5.1 The procedure encoded by *although*

Building on the accounts by König (1985, 1986, 1988, 1989), Winter & Rimon (1994) and Sidiropoulou (1992) touched upon in section 2, but giving them a Relevance Theoretic twist à la Blakemore (1987, 1989), I would like to suggest that *although* encodes the procedure in (48).

(48) What follows (i.e. P) contradicts, but does not eliminate[15], X. X is an aspect of the interpretation of Q.

There are a few points that need clarification here. First of all, what is meant by 'an aspect of the interpretation of Q'? This is relatively straightforward to answer. X can be the proposition expressed by Q, one of its higher-level explicatures, or an implicature of Q. The general prediction is that processing effort will increase, the further the intended X is removed from the proposition expressed by Q. The next, very important, question is: how does the hearer know which X the speaker intended? The answer to this question is that

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[15] It is conceivable that this clause will become unnecessary once the effects of subordination are understood a little better.

the search for optimal relevance will guide him in his choice. How this works in detail will be shown below. Finally, something should be said about what it means for P to contradict but not eliminate X. This is basically taken to mean that P leads to the conclusion ¬X, but that the evidence for X, i.e. Q, is stronger than that for ¬X. In other words, the hearer is likely to recover a contextual assumption (which is an implicated premise) along the lines of (49).

(49) In general, ¬X follows from P.

Obviously, I shall have to show that the procedure in (48) can account for all possible uses of *although*. Let me, therefore, go through the examples I have given so far, one by one, to see if my account is descriptively adequate.

5.2 Concessive *although*

   Let us first look at (4) again.

(4)   Peter went out although it was raining.

Here, P is *it was raining*, Q is *Peter went out*. As outlined above, I believe that the propositional content of an utterance of (4) is that in (40).

(40) a. Q
       b. P

Now, if I am right, *although* instructs the hearer that P contradicts but does not eliminate X, where X is an aspect of the interpretation of Q. It seems obvious that, unless otherwise indicated, the most accessible aspect of the interpretation of Q will be Q. Therefore, it is reasonable to assume that this is ,in fact, the first hypothesis the hearer will test. Thus, the hearer will take *although* in (4) to instruct him that P contradicts but does not eliminate Q. In the case of (4), this instruction will lead the hearer to recover a contextual assumption, or implicated premise, like (50a). The truth-conditional content of (4) is given in (50b) and (c). Together with the contextual assumption in (50a), this will yield a contextual implication, which is an implicated conclusion, along the lines of (50d). Thus the overall interpretation of an utterance of (4) is likely to be something like the following: there is a general rule that the rain keeps Peter from going out, but the particular time the speaker is

talking about is an exception in that it was raining and Peter did go out at that time.

(50) a. In general, it follows from the fact that it is raining that Peter is not going out.
　　 b. Peter went out at t_1.
　　 c. It was raining at t_1.
　　 d. It is remarkable that Peter went out, given that it was raining.

　 Now, let us reconsider (8).

(8)　 It was raining, although Peter went out.

(8), to state the obvious, is simply (4) with reversed clauses. What is more, I would not be surprised if, to someone just quickly reading (4), the sentence seemed a little odd, a little hard to process. In fact, my own spontaneous first reaction to it was that it sounded as if the speaker was implicating that Peter could somehow influence the weather[16]. This can be explained if we look at the effect the procedure encoded by *although* has on the interpretation of (8). *Although*, again, instructs the hearer that P contradicts, but does not eliminate, X. Again, the most accessible candidate for X is Q. Here, P is *Peter went out* and Q is *it was raining*. *Although* instructs the hearer that the assumption that Peter went out contradicts, but does not eliminate, the assumption that it was raining. In other words, the hearer will recover the contextual assumption in (51a) along with the propositional content of (8), which is given in (51b) and (c). This will, again, give rise to an implicature, in this case something like (51d).

(51) a. In general, it follows from the fact that Peter is going out that it is not raining.
　　 b. It was raining at t_1.
　　 c. Peter went out at t_1.
　　 d. It is remarkable that it was raining, given that Peter went out.
(50) a. In general, it follows from the fact that it is raining that Peter is not going out.

It seems intuitively convincing that the 'rule' in (51a) is not as generally acceptable as the one in (50a), which is an implicature of (4). All it takes to accept (50a) as valid is common sense. After all, the rain does keep people from going out. (51a), on the other hand, will only be acceptable to people who know Peter's typical behaviour or are at least prepared to

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[16] I am happy to say that I am not the only person to think this. When I presented this sentence to a friend, her first reaction was very much like my own.

believe that Peter habitually does not go out when there is rain. In other words, for most people, adding (50a) to their beliefs will require very little effort. In fact, most people will already hold a belief very much like (50a) and the strengthening of this belief will be one of the effects of an utterance of (4). For people who know Peter and already hold a belief like (51a), an utterance of (8) will have effects parallel to those of an utterance of (4) and it will not be any harder to process. For people like you and me, who do not know Peter and for whom (51a) is not easily accessible, more effort will be involved in adapting our beliefs to accommodate (51a). However, we will be rewarded with extra effects. Not only will we be adding the implicature in (51a) to our beliefs, this addition will also affect some of our old beliefs and add more new ones. It might, for example, contradict and eliminate my assumption that Peter would be a good person to ask to go for a walk on a rainy Sunday, or it might yield the contextual implication that it would be a waste of money to buy an umbrella for Peter, since he would hardly ever use it. In addition, of course, there will be the contextual effects yielded by the information that, on this occasion, Peter did go out in the rain. Hopefully, this has shown that my account of the meaning of *although* can explain the difference in "acceptability" or, maybe more accurately, ease of processing between (4) and (8).

So far, the X which P contradicts but does not eliminate has always been the proposition expressed by Q. In (10), which is an example of a speech-act use of *although*, matters are slightly different.

(10) Is it raining, although I'll have to go out no matter what.

Here, the most accessible candidate for X will not be the proposition expressed by Q but one of its higher-level explicatures. This is for the simple reason that word order and (if uttered) also intonation clearly mark the first clause in (10) as a question. As mentioned in section 4.2, Sperber & Wilson (1986/1995: 252) and Wilson & Sperber (1988[a]: 95) analyse interrogatives as representations of desirable (i.e. relevant) thoughts. Therefore, the hearer will take *although* in (10) to instruct him that P (*the speaker will have to go out no matter what*) contradicts, but does not eliminate, the assumption that the thought represented by Q (*it is raining*) is relevant. In other words, the hearer will take the speaker to convey with her utterance of (10) the proposition expressed by P in (52b), the higher-level explicature of Q in (52c), the contextual assumption in (52a) and the implicature in (52d).

(52) a.   In general, it follows from the fact that the speaker has to go out no matter what that it is not relevant to the speaker if it is raining.

  b. The speaker has to go out no matter what.

  c. It is relevant to the speaker if it is raining.[17]

  d. It is remarkable that it is relevant to the speaker if it is raining, given that she has to go out no matter what.

5.3 Adversative *although*

(12) It's raining although Peter is wearing a green shirt.

 As mentioned above, looked at in isolation (12) is extremely difficult, if not impossible, to process. I believe that my account of the meaning of *although* can explain this. Just to repeat this, *although* instructs the hearer that P contradicts, but does not eliminate X, where X is an aspect of the interpretation of Q. Again, generally, the most readily accessible candidate for X will be Q, '¬Q follows from P' will be an easily accessible contextual assumption. I believe that this is exactly the assumption one is led to access if one tries to interpret (12) out of context. In other words, a reader of (12) is highly likely to access the assumption in (53).

(53) From the fact that Peter is wearing a green shirt it follows that it is not raining.

It seems obvious that in most situations (53) would not be found relevant and one would have to abandon that assumption in favour of an assumption that makes sense and could, therefore, achieve cognitive effects. In other words, a different X will have to be accessed. However, if one is confronted with (12) in isolation, it is extremely difficult to see what this X could be that would give one a more plausible assumption. In short, the reader is likely to give up on processing (12)[18].

 However, let me remind you of the scenario I set up in section 2 for the interpretation of an utterance of (12). Mary predicted that it would be raining and that Peter would be wearing a red shirt on a particular day. John witnessed these predictions and, on the day Mary made her predictions about, he points out to her that she was wrong because Peter is wearing a green shirt. Mary's reply to this is an utterance of (12). The whole exchange might look something like (54).

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[17] This is shorthand for "*It is raining* is a representation of a thought relevant to the speaker".

[18] In fact, it is possible that this is the reason why Winter & Rimon (1994) do not find sentences like (12) acceptable at all.

(54) J: Mary, you were wrong. Peter is wearing a green shirt.
     M: Oh, no. It's raining, although Peter is wearing a green shirt.

In this context, I believe, John will not have any difficulty in accessing the right (i.e. intended) X. This X here will be something like 'Mary is right', clearly one of the implicatures of Q. The hearer will take *although* to instruct him that P (*Peter is wearing a green shirt*) contradicts but does not eliminate the assumption that Mary is right. Thus, John is highly likely to recover an implicature like (55) from Mary's utterance of (12) in (54) (in fact, given his previous utterance, this is a contextual assumption).

(55) From the fact that Peter is wearing a green shirt it follows that Mary is not right.

To give the complete picture, (12) uttered in the above scenario will express the propositions in (56a) and (b) and it will get the hearer to recover an implicature like (55), which together with the propositional content of the utterance might lead the hearer to conclude that Mary is wrong. However, *although* instructs the hearer that the implicature in (56c) is contradicted but not eliminated.

(56) a. Peter is wearing a green shirt at t_1.
     b. It is raining at t_1.
     c. Mary is right.

5.4 The difference between 'Although P, Q' and 'Q although P'

(1)   Q although P.
(2)   Although P, Q.

So far, all the examples discussed were of the form in (1) and it was assumed that they would be absolutely synonymous with utterances of the form in (2). Indeed, in those cases where *although* is used concessively, or, in terms of my own account, where P contradicts Q (or one of its higher-level explicatures) there seems to be no difference at all between (1) and (2). It seems to make very little difference whether a speaker utters (4) or (57).

(4)   Peter went out although it was raining.
(57) Although it was raining, Peter went out.

However, when it comes to cases where P contradicts an implicature of Q, or, in König's terms, where *although* is used adversatively, there can be a marked difference in acceptability between utterances of the form in (1) and those of that in (2).

(58) Although the film sounds really interesting, the cinema will be packed.
(59) ?The cinema will be packed although the film sounds really interesting.

(58) and (59) both have only an adversative reading and they both connect exactly the same P and Q. However, in my opinion (58) is much easier to process than (59) and it is, therefore, much more likely to be judged acceptable. This can be explained if we look at how (58) and (59) are processed. In both cases *although* instructs the hearer that P contradicts, but does not eliminate, X, where X is an aspect of the interpretation of Q. In other words, ¬X follows from P. The obvious difference between (58) and (59) is that in the former the hearer is given this instruction before he has processed Q and in the latter he is only given it after having processed Q.

   Thus, in (58), after processing the first clause, the hearer knows that what he has just processed (P) contradicts, but does not eliminate, X, where X is an aspect of the interpretation of Q. However, he has not yet processed Q and he has no idea what any aspect of its interpretation will look like. What he does know is what P looks like and, therefore, what sort of assumption it may contradict, the negation of what sort of assumption could follow from P. In more concrete terms, it is very likely that a hearer confronted with the first clause of an utterance of (58), *the film sounds really interesting* (P) will access an assumption which is a reasonable conclusion from P, like, for example, *the speaker wants to see the film* or *the speaker wants to go to the cinema that evening*, etc. Now, if the negation of one of these assumptions also happens to be an aspect of the interpretation of Q the hearer will need to look no further for the intended X and he will supply a contextual assumption like the one in (60) quite easily. Together with the truth-conditional content of (58), as given in (61a) and (b) and the implicature of Q, (62), which is only contradicted but not eliminated by P, this forms a likely interpretation of an utterance of (58).

(60) From the fact that the film sounds really interesting it follows that the speaker wants to go to the cinema.
(61) a.   The cinema will be packed.
      b.   The film sounds really interesting.
(62) The speaker doesn't want to go to the cinema.

This shows that for cases like (58), an aspect of the interpretation of Q other than the proposition expressed (or a higher-level explicature) may well be the most easily accessible candidate for X in the context. In the case of (59), on the other hand, this is highly unlikely.

While interpreting an utterance of a sentence like (59), after processing the first clause (Q), the hearer, again, will be instructed that what follows (P) contradicts, but does not eliminate, X, where X is an aspect of the interpretation of Q. In the case of (59) and other sentences of the form 'Q although P', the hearer will just have processed Q and he will, therefore, have a fair idea as to what aspects of Q's interpretation are available. In this case, the proposition expressed by Q will, indeed, be the most easily accessible aspect of the interpretation of Q. It should, therefore, not be surprising that the hearer will first test the assumption in (63), where X = Q.

(63) From the fact that the film sounds really interesting it follows that the cinema won't be packed.

Clearly, it is not likely that the hearer will find (63) relevant and he will have to abandon this hypothesis. It is still possible that he will, in the end, hit upon a likely contextual assumption but only after having gone through a lot of processing effort, which the speaker could have spared him by uttering (58) or (64).

(64) The film sounds really interesting but the cinema will be packed.

6 Conclusion

In this paper a Relevance Theoretic account of the meaning of *although* has been given. It was argued that *although* encodes a procedure which guides the hearer towards the intended interpretation of the utterance containing *although*. In other words, the speaker saves the hearer processing effort by using *although* which gives easy access to a contextual assumption and thus reduces the effort involved in deriving the intended contextual effects. Hopefully, it has been shown that this procedure can account for all possible uses of *although* and for differences in acceptability between different examples, due to differences in the processing effort involved in accessing the intended interpretations.

There are, of course, many questions left, which I hope to answer in my future research. Probably the most important one of these has only been touched upon very briefly in this

paper, namely the question as to what exactly is the role of subordination in the interpretation of utterances of 'Q although P' and, indeed, other subordinate constructions. This raises a second, related, question, which is what exactly the difference is between the co-ordinating conjunction *but* and the subordinating conjunction *although*.

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