*Sentential Adverbs and Relevance**

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Abstract

In this paper I will look at four classes of sentential adverbials which have been treated as non-truth-conditional by many semanticists. I shall show that by the standard test, two of these classes are clearly truth-conditional, and two are clearly non-truth-conditional. These facts, which are not predicted by standard semantic treatments, present a challenge on both descriptive and explanatory levels. I shall show how they can be described within the relevance-theoretic framework, and suggest some lines on which an adequate explanation might be found.

1 Introduction

In this paper, I will be concerned with four types of sentential adverbial: illocutionary, attitudinal, evidential and hearsay adverbials. All are standardly treated in non-truth-conditional terms, as contributing not to the proposition expressed by the utterance, its truth-conditional content, but to indicating the type of speech act performed. I shall survey some standard speech-act analyses, and then raise an obvious question: are these adverbials really non-truth-conditional, as speech-act theorists have claimed? I shall show that by the standard tests for truth-conditionality, these classes of adverbial behave quite differently from each other: some are clearly truth-conditional, whereas others are not. This raises two further questions: how can these facts be described, and how can they be explained? Using the framework of relevance theory (Sperber & Wilson 1986; Wilson & Sperber 1990; Wilson 1992), I shall sketch the lines on which answers to these questions might be found.

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2 Types of sentential adverbial

Illocutionary adverbials are those, like *frankly, confidentially, honestly, seriously*, that are understood as modifying an implicit illocutionary verb (see Bach and Harnish 1979). Examples are given in (1a-c), which would be understood as communicating (2a-c):

(1) a *Frankly*, I'm bored.
b Mary has, *confidentially*, failed the exam.
c *Seriously*, your argument is fallacious.
(2) a I tell you frankly that I'm bored.
b I inform you confidentially that Mary has failed the exam.
c I tell you seriously that your argument is fallacious.

Attitudinal adverbials are those, like *unfortunately, happily, sadly, luckily*, which do not name a speech act but indicate the speaker's attitude to the statement she makes (see Urmson 1963; Strawson 1973). Examples are given in (3a-c), which would be understood as communicating (4a-c), not (5a-c):

(3) a *Unfortunately*, Mary has missed the deadline.
b *Sadly*, Paul's car was stolen.
c *Happily*, Bill was in time for the interview.
(4) a It is unfortunate that Mary has missed the deadline.
b It is sad that Paul's car was stolen.
c It is happily true that Bill was in time for the interview.
(5) a *I tell you unfortunately that Mary has missed the deadline.
b *I tell you sadly that Paul's car was stolen.
c *I tell you happily that Bill was in time for the interview.

Evidential adverbials are those that indicate the source or the strength of the speaker's evidence (see Urmson 1963; Palmer 1986; Chafe 1986). This class includes adverbials such as *evidently, obviously, clearly*. Examples are given in (6a-c), which would be understood as communicating (7a-c):

(6) a *Evidently*, Bill has cheated in the exams.
b *Obviously*, the ball was over the line.
c *Clearly*, you are responsible for the damage.
(7) a It is evident (evidently true) that Bill has cheated in the exams.
b It is obvious (obviously true) that the ball was over the line.
c It is clear (clearly true) that you are responsible for the damage.

Hearsay adverbials, such as *allegedly* and *reportedly*, are often treated as a type of evidential (Palmer 1986; Chafe 1986), because they indicate that the source of knowledge is not the speaker herself but someone else. They are typically used to report actual speech. Examples are given in (8a-b), which would be understood as communicating (9a-b):

(8) a *Allegedly*, the cook has poisoned the soup.
b *Reportedly*, the ball was over the line.
(9) a It is alleged that the cook has poisoned the soup.
b It is reported that the ball was over the line.

These four classes of adverbial are interesting because they have traditionally been treated as providing evidence for a speech-act semantics and against a truth-conditional account of at least some lexical items. In the next section, I shall consider some speech-act accounts.

3 Speech-act accounts of sentential adverbials

Speech-act theorists assigned particular importance to linguistic devices that enable the speaker to make the force of her utterance explicit. Austin's theory of illocutionary acts relies heavily on the idea that an illocutionary act can be performed only if there is a conventional means of performing it - a 'formula' or 'indicator' whose only function is to indicate the performance of the act. Performative verbs are the *par excellence* illocutionary force markers simply because they explicitly name the act to be performed (Austin 1962). Parenthetical constructions have been also treated as indicators, signalling the force of the utterance to which they are attached (Austin 1946; Urmson 1963; Strawson 1971).

All such indicators have been traditionally treated as non-truth-conditional, i.e. as not contributing to the truth conditions of the *utterance* in which they occur, to the proposition expressed by the utterance. Speech-act theorists repeatedly assert that their function is not to describe but to indicate the illocutionary force of the utterance: a request for information, an order, a promise, a warning, an assertion, a guess.

Certain types of sentence adverbials seem to fit naturally into this framework. Although speech-act theorists have not dealt extensively with adverbials, the following should give an idea of how the speech-act approach would go.

The salient features of the speech-act approach to adverbials are

(a) illocutionary, attitudinal, evidential and hearsay adverbials are standardly treated as non-truth-conditional and
(b) non-truth-conditional expressions have been treated by speech-act theorists as *indicating* a speech act or propositional attitude rather than *describing* a state of affairs.

These claims are linked because, as we have seen, the crucial feature of an indicator, in this framework, is that it does not contribute to the proposition expressed, i.e. to the truth conditions of the utterance.

Illocutionary adverbials will be the first to be discussed, being the most promising candidates for speech-act analysis. According to the speech act view the adverbials *frankly, confidentially, seriously* in (1a-c)

(1) a *Frankly*, I'm bored.
b Mary has, *confidentially*, failed the exam.
c *Seriously*, your argument is fallacious.

do not modify anything in the proposition that follows them, they make no contribution to the truth conditions of these utterances; they do not *describe* anything, but merely *indicate* what type of speech-act is being performed (Bach and Harnish 1979).

This analysis treats *frankly* in (1a) as indicating that the speech act performed is one of saying frankly/telling the hearer frankly/admitting frankly/informing the hearer frankly that the speaker is bored.

One advantage of this analysis is that it provides an explanation for the ambiguity of utterances like (10):

(10) *Seriously*, is she coming?

Seriously can have two possible interpretations: (a) the speaker is asking a serious question or (b) the speaker is asking for a serious answer.

(10') a I ask you seriously to tell me whether she is coming.
b I ask you to tell me seriously whether she is coming.
(Bach and Harnish 1979: 221)

This is perhaps the strongest argument for the speech-act analysis of illocutionary adverbials (Wilson 1991).

Similarly, the speech-act account treats attitudinal adverbials as *indicating* the propositional attitude the speaker intends to convey. It is Urmson who provides us with the most extensive speech-act account of these adverbials (1963: 227-29), in the course of a discussion of parenthetical verbs (ibid. 220-40). He refers to adverbs such as *luckily, happily, unfortunately*, as being "loosely attached to sentences as are parenthetical verbs" (p. 228), and notes that their position in the sentence can vary "as in the case of parenthetical verbs". These adverbs, he claims, modify the whole statement to which they are attached *"by giving a warning how they are to be understood"* (emphasis added). Thus, attitudinal adverbials are considered as non-truth-conditional indicators, semantically external to the proposition expressed by the utterances that carry them (see also Strawson 1973: 57-8).

Evidential adverbials are treated by speech-act theorists as indicators of the kind or amount of evidence the speaker has for what she is saying. Evidential adverbials such as *certainly, probably, possibly, definitely, undoubtedly* are considered as indicators of the extent to which the speaker's statement is reliable (Urmson 1963: 228; Chafe 1986: 264) or the speaker's degree of commitment (Palmer 1986: 64) or as an alternative device to the explicit performative for making clear the force of utterances (Austin 1962: 74-7). Thus, they are also to be analyzed as non-truth-conditional indicators, semantically external to the proposition expressed.

Similar analyses have been proposed for the hearsay adverbials *apparently, allegedly, reportedly*. Since these are usually treated as a type of evidential, speech-act theorists analyze them as indicating a diminished speaker commitment (Palmer 1986; Chafe 1986).

There are a few points to be emphasized in these accounts. Firstly, speech-act theorists have indiscriminately treated the different types of sentence adverbials as being consistently non-truth-conditional. Secondly, they do not commit themselves on whether they contribute to the explicit or the implicit aspect of communication or on whether they encode conceptual or procedural information. In a framework which makes use of such distinctions - the framework of relevance theory, for example - it would be instructive to consider on which side of them these adverbials fall.

4 Testing for truth-conditionality

There is a standard test for distinguishing truth-conditional from non-truth-conditional meaning, which I am going to apply to the four classes of adverbial illustrated above. Its core mechanism consists in embedding the

sentence which includes the adverbial into a conditional and seeing if it falls within the scope of the 'if'. If it does, the adverbial is truth-conditional, if it does not, it is non-truth-conditional.

The way the test works and the results it yields are best illustrated by using it to prove that *but* is non-truth-conditional (Wilson 1992). Consider *but* in (11):

(11) Mary is here *but* Sue isn't.

The question is whether the suggestion of contrast carried by *but* is truth-conditional or not. In other words, are the truth conditions of (11) correctly given in (12a-b) or (13a-c)?

(12) a Mary is here.
b Sue isn't here.

(13) a Mary is here.
b Sue isn't here.
c There is a contrast between the fact that Mary is here and the fact that Sue isn't.

It is easier to answer this question when we embed (11) into a conditional, as in (14):

(14) If Mary is here but Sue isn't, we can't vote.

The question now is: under what circumstances is the speaker of (14) claiming that we can't vote? Is she saying that we can't vote if (12a-b) are true, or is she saying that we can't vote if (13a-c) are true? In other words, does (13c) contribute to the truth conditions of (14), or does it remain outside the scope of the 'if...then' connective?

It should be clear that (13c) does not contribute to the truth conditions of the utterance in (11). Thus, *but* is non-truth-conditional.

Let us examine how the test applies to each group of adverbials in turn. The attitudinal adverbials *unfortunately* and *sadly* will be the first to be tested, since they are, along with hearsay adverbials, the clearest cases. Consider (3a-b):

(3) a *Unfortunately*, Mary has missed the deadline.
b *Sadly*, Paul's car was stolen.

Intuitively, the adverbials in (3) do not make any contribution to the proposition expressed, hence to the truth conditions of the utterances in question. (3a) would be true if and only if Mary missed the deadline, (3b) would be true if and only if Paul's car was stolen. However, it will be interesting to see if our intuitions are confirmed by the test illustrated above.

Regarding (3a), the issue is whether its truth conditions are (15) or (16):

(15) Mary has missed the deadline.
(16) It is unfortunate that Mary has missed the deadline.

To apply the test, we embed (3a) into a conditional. Note that since (3a) sounds odd when embedded as it stands, the synonymous (17) will be used.[1]

(17) Mary has unfortunately missed the deadline.
(18) If Mary has unfortunately missed the deadline, she can reapply in May.

The question is: under what circumstances is the speaker of (18) claiming that Mary should reapply in May? Is she saying that Mary should reapply in May if (15) is true, or is she saying that Mary should reapply in May if (16) is true? Clearly, she is saying the former, not the latter. Hence, (16) does not contribute to the truth conditions of the utterance, and the attitudinal adverbial *unfortunately* is non-truth-conditional.

Exactly parallel arguments apply to *sadly* in (3b). Regarding (3b), the issue is whether its truth conditions are (19) or (20):

(19) Paul's car was stolen.
(20) It is sad that Paul's car was stolen.

Since (3b) again sounds odd when embedded as it stands, the synonymous (21) will be used.

(21) Paul's car was sadly stolen.
(22) If Paul's car was sadly stolen, he will start using the underground.

The question is: under what circumstances is the speaker of (22) claiming that Paul will start using the underground? Is she saying that Paul will start using the underground if (19) is true, or is she saying that Paul will start using the

[1]For arguments that these constructions are synonymous, see Greenbaum 1969: 94-5 and Jackendoff 1972: 56-7, 72.

underground if (20) is true? Again, it is clear that (20) does not contribute to the truth conditions of the utterance, and hence the non-truth-conditional status of attitudinal adverbials is confirmed. Notice that these results are exactly as the speech-act theorists predict.

I will next examine the hearsay adverbials *allegedly* and *reportedly*. These also yield uncontroversial results, but results which go in quite the opposite direction from those obtained with attitudinal adverbials. Consider again (7a-b):

(7) a *Allegedly*, the cook has poisoned the soup.
b *Reportedly*, the ball was over the line.

In the case of (7a), the question is whether its truth conditions are (23) or (24):

(23) The cook has poisoned the soup.
(24) It is alleged that the cook has poisoned the soup.

To test (7a) we embed the synonymous (25)

(25) The cook has allegedly poisoned the soup.

into a conditional, as in (26):

(26) If the cook has allegedly poisoned the soup, the police should make an inquiry.

The question is: under what circumstances is the speaker of (26) claiming that the police should make an inquiry into the case? Is she saying that the police ought to make an inquiry if (23) is true, or is she saying that the police ought to make an inquiry if (24) is true?

Interestingly, in this case the results obtained are quite different. (24) does contribute to the truth conditions of the utterance. Hence, the hearsay adverbial *allegedly* is truth-conditional, contrary to what is claimed on the speech-act account.

Similarly, in the case of (7b), we want to know whether its truth conditions are those in (27) or in (28):

(27) The ball was over the line.
(28) It is reported that the ball was over the line.

Assuming that (7b) is synonymous with (29),

(29) The ball was reportedly over the line.

we embed (29) into a conditional as in (30):

(30) If the ball was reportedly over the line, the matter should be investigated further.

Under what circumstances is the speaker of (30) claiming that the matter should be investigated further? Is she saying that the matter should be investigated further if (27) is true, or is she saying that the matter should be investigated further if (28) is true? It is clear again that (28) contributes to the truth conditions of the utterance. Hence, the truth-conditional status of hearsay adverbials is confirmed.

Note that the testing of hearsay adverbials yields results that go exactly against the speech-act predictions. Thus, we have one clear argument against the speech-act approach, and one clear problem: why do these two types of adverbial behave differently?

Turning to illocutionary and evidential adverbials, a number of problems arise applying the tests.

(a) First, when we embed illocutionary adverbials under 'if', they often seem to take not the embedded clause but the whole utterance in their scope. For example, (31) would be understood as communicating (32a) rather than (32b):

(31) If Mary, frankly, is as qualified as you say she is, we should give her the post.

(32) a I tell you frankly that if Mary is as qualified as you say she is, we should give her the post.

b If I tell you frankly that Mary is as qualified as you say she is, we should give her the post.

These adverbials can not be interpreted as taking merely the embedded antecedent in their scope. A similar point applies to disjunctions. Just as (31) would be understood as communicating (32a), so (33) would be understood as communicating (34a) rather than (34b):

(33) Either Mary, frankly, isn't as qualified as you say she is, or she is inefficient.

(34) a I tell you frankly that either Mary isn't as qualified as you say she is, or she is inefficient.

b Either I tell you frankly that Mary isn't as qualified as you say she is, or she is inefficient.

(b) Second, when we embed at least some illocutionary adverbials, they often seem to take only the embedded VP in their scope. For example, (35) can be understood as communicating (36):

(35) If John is frankly annoyed, we should drop the subject.

(36) If John is honestly/openly showing his annoyance, we should drop the subject.

Notice, moreover, that this interpretation is possible even without embedding. (37) can be understood as communicating (38):

(37) John is frankly annoyed.

(38) John is honestly/openly showing his annoyance.

However, this is not the interpretation we are interested in. We are looking for an interpretation on which 'frankly' modifies an implicit illocutionary verb, i.e. an interpretation of (35) which would be equivalent not to (36) but to (39):

(39) If I tell you frankly that John is annoyed. . .

The question is whether both these possibilities of interpretation can be eliminated in order to show that these adverbials are truth-conditional in the sense we are interested in.

The second problem seems to arise with evidentials too. Here, the possible confusion is over cases where the evidential can be understood as a manner adverbial modifying the embedded VP. For example, (40) can be understood as communicating (41a) or (41b):

(40) The cook obviously poisoned the soup.

(41) a The cook poisoned the soup in an obvious way.

b It is obvious that the cook poisoned the soup.

There are also cases parallel to (35) and (36) above, i.e. where (42) is understood as communicating (43):

(42) If John is evidently annoyed, we should drop the subject.
(43) If John is showing his annoyance in an evident way, we should drop the subject.

The issue is whether there is a way of dealing with points (a) and (b) for both illocutionary and evidential adverbials.

On point (a), notice that the 'if...then' and the 'either...or' are, as it were, non-factive connectives: they do not commit the speaker to the truth of the propositions embedded under them. With factive connectives such as *although*, *since* and *because*, which commit the speaker to the truth of the propositions embedded under them, the scope facts are quite different. Thus (44a) is equivalent to (44b) and (45a) is equivalent to (45b):

(44) a Mary shouldn't get the post, because she frankly isn't qualified enough.
b Mary shouldn't get the post, because (I tell you frankly that) she isn't qualified enough.
(45) a Mary might get the post, although she frankly isn't qualified enough.
b Mary might get the post, although (I tell you frankly that) she isn't qualified enough.

Here, I have put the embedded illocutionary clause in parentheses, to indicate that we have not yet decided whether, in this position, it is fully truth-conditional or not. On the most natural interpretation, neither the adverbial alone, nor the full illocutionary clause, would contribute to the truth conditions of the utterance. This suggests, then, that we should be able to avoid problem (a) by constructing test sentences based on factive rather than non-factive connectives.

On point (b), the manner-adverbial interpretation can be eliminated in the case of evidentials on the basis of the following syntactic/semantic types of argument. (i) Manner adverbs must be semantically compatible with the verbal construction they modify (Hartvigson 1969: 172). The manner adverb *clearly*, for example, requires a verb that denotes 'actions' which can be performed in a more or less clear way or manner. Thus manner adverbial *clearly* would cooccur with a verb like *see*, *explain*, *come* (for sound) but not a verb like *die*. The evidential *clearly*, however, can modify any verbal

construction. (ii) In American English, manner adverbs do not occur before aspect or modals (Jackendoff 1972: 75). Hence the unacceptability of manner-adverbial interpretations of (A):

(A) *The driver clearly has died.
*The cook obviously has poisoned the soup.
*The cook clearly is poisoning the soup.
*The cook clearly will poison the soup.

Compare with the same utterances interpreted as evidentials, which are perfectly acceptable in American English:

(B) The driver, clearly, has died.
The cook, obviously, has poisoned the soup.
The cook, clearly, is poisoning the soup.
The cook, evidently, will poison the soup.

Some of these examples sound strange in British English, but the same point can be made with the negative counterparts of (A). Thus, in British English *The driver clearly hasn't died* etc. can only have an evidential interpretation.

Let us, then, use the following examples, which have only an evidential interpretation, to test for truth-conditionality of evidentials:

(46) a The driver has *clearly* died.
b The cook *obviously* won't poison the soup.

The issue is whether the truth conditions of (46a) are (47) or (48).

(47) The driver has died.
(48) It is clear that the driver has died.

To sharpen our intuitions, we embed (46a) into a conditional, as in (49):

(49) If the driver has clearly died, you need not hurry for an ambulance.

The question is: under what circumstances is the speaker of (49) claiming that they should not hurry for an ambulance? Is she saying that they should not hurry for an ambulance if (47) is true, or is she saying that they should not hurry for an ambulance if (48) is true? In other words, is (48) contributing to the truth conditions of the utterance as a whole or does it remain outside the

scope of the conditional? Here, (48) does seem to contribute to the truth conditions of the utterance. This suggests that the evidential adverbial *clearly* is truth-conditional.

The results are even sharper for (46b). We need, again, to decide whether its truth conditions are (50) or (51):

(50) The cook won't poison the soup.
(51) It is obvious that the cook won't poison the soup.

To sharpen our intuitions we embed (46b) into a conditional, as in (52):

(52) If the cook obviously won't poison the soup, we can eat the meal without worrying.

The question is: under what circumstances is the speaker of (52) claiming that they can eat the meal without worrying? Is she saying that they needn't worry if (50) is true, or is she saying that they needn't worry if (51) is true? Clearly, (51) does contribute to the truth conditions of (46b). Hence the truth conditional status of evidential adverbials is confirmed.

With illocutionary adverbials, the manner-adverbial interpretation can be eliminated by choosing VPs that do not take human subjects, as in (53):

(53) John's book has frankly sold very little.

or by using *confidentially* or some other adverbial instead,[2] as in (54):

(54) Mary has, confidentially, failed the exam.

Let us examine how the test applies to *frankly* first. We want to know whether the truth conditions of (53) are (55) or (56):

(55) John's book has sold very little.
(56) I tell you frankly that John's book has sold very little.

To sharpen our intuitions, we embed (53) into a conditional, as in (57):

(57) If John's book has frankly sold very little, you shouldn't be surprised.

[2]Both ways of eliminating the 'frankly' examples in (b) have been suggested to me by Deirdre Wilson.

The question is: under what circumstances is the speaker of (57) claiming that the hearer shouldn't be surprised? Is she saying that he shouldn't be surprised if (55) is true, i.e. if the book has sold little, or is she saying that he shouldn't be surprised if (56) is true, i.e. if the speaker tells him frankly that the book has sold very little? Clearly, the former interpretation is correct. Hence, (56) does not contribute to the truth conditions of the utterance as a whole, and the illocutionary adverbial *frankly* is non-truth-conditional.

Similar arguments apply to (54). When testing (54), the question is whether its truth conditions are (58) or (59):

(58) Mary has failed the exam.
(59) I inform you confidentially that Mary has failed the exam.

To sharpen our intuitions, we embed (54) into a conditional, as in (60):

(60) If Mary has, confidentially, failed the exam, you mustn't be upset.

The question is: under what circumstances is the speaker of (60) claiming that the hearer mustn't be upset? Is she saying that he mustn't be upset if (58) is true, or is she saying that he mustn't be upset if (59) is true? Clearly, the former interpretation is correct. Hence, (59) does not contribute to the truth conditions of the utterance as a whole, and the non-truth-conditional status of illocutionary adverbials is confirmed.

In this section, I have tried to show that illocutionary, attitudinal, evidential and hearsay adverbials behave very differently from each other, both semantically and pragmatically, and present a variety of descriptive problems that are entirely unexpected on the standard speech-act account. Hence, we need a new descriptive and explanatory framework in which to analyze them. In the next section, I shall start to analyze them in the framework of relevance theory.

5 Relevance theory and non-truth-conditional semantics: possibilities for description

Relevance theory provides a rich enough framework for describing the facts about sentence adverbials that have been presented above. The basic assumptions I shall develop are the following:

(1) Sentence adverbials encode elements of *conceptual representations*, which may be true or false in their own right, even if they do not contribute to the truth conditions of the utterances in which they occur.
(2) Sentence adverbials contribute to the *explicatures* of an utterance, rather than its implicatures.
(3) Where they do not contribute to the proposition expressed, they contribute to what Wilson and Sperber (1990) call *higher-level explicatures* of the utterance, where higher-level explicatures by definition do not contribute to the truth conditions of the utterances, though they may be true or false in their own right.

The claim that these non-truth-conditional adverbials encode elements of conceptual representations will allow us to deal with some obvious similarities between them and their truth-conditional counterparts. Before presenting the data, I will first introduce the distinction between conceptual and procedural meaning drawn by Wilson and Sperber (1990).

The idea behind this distinction is that expressions in a language may encode two basic kinds of information. Some undoubtedly encode *concepts*, constituents of conceptual representations. The word 'boy', for example, encodes the concept BOY, the word 'play' encodes the concept PLAY (Wilson 1991), and so on.

However, within the framework of relevance theory, not all word meaning is analyzed in conceptual terms (Blakemore 1987; Wilson and Sperber 1990; Wilson 1991). It is claimed that expressions in a language may encode information about *computations* rather than representations: that is, about how utterances containing these expressions should be processed. On this approach, the meaning of a word or other linguistic construction is *procedural* if it constrains the inferential phase of comprehension by indicating the type of inference process that the hearer is expected to go through (Wilson and Sperber 1990).

Diane Blakemore, in her book *Semantic constraints on Relevance* (1987), has convincingly analyzed certain discourse or pragmatic connectives in procedural terms. Expressions such as 'after all', 'so', 'but', 'however' are not seen as encoding concepts, or as contributing to the truth conditions of utterances, but as indicating to the hearer what type of inference process he is in. The question is, are all non-truth-conditional expressions to be analyzed in procedural terms? I shall argue, following Wilson and Sperber 1990, that they are not.

Let us note first that evidential and hearsay adverbials must be treated as encoding concepts because, as we have seen, they are truth-conditional. The

assumption is that most ordinary nouns, verbs, adverbs and adjectives which contribute to truth conditions do so by encoding concepts (Wilson 1992). However, the more interesting question is: do the non-truth-conditional adverbials, i.e. the illocutionary and the attitudinal adverbials, also encode concepts? The best hypothesis seems to be that they do.

Note first that the information conveyed by non-truth-conditional adverbials can be denied by the hearer: a speaker who uses the illocutionary adverbials in (61-63) and the attitudinal adverbials in (64-65) can lay herself open to charges of untruthfulness.

(61) a Peter: *Frankly*, this party is boring.
b Mary: You're not being frank. I've just seen you dancing with the blonde beauty in blue.
(62) a Bill: *Confidentially*, Peter broke up with Jane.
b Ann: That's not true. You're not being confidential, you've told everybody in the College.
(63) a Peter: *Honestly*, I don't care.
b Mary: You're not being honest! I know you have sent her another Valentine card this year.
(64) a Peter: *Unfortunately*, John lost his job.
b Mary: It's not unfortunate! He got a fellowship in Oxford instead!
(65) a Peter: *Sadly*, she missed the deadline.
b Mary: That's not true, no-one's sad about it!

This can be explained on the assumption that the adverbials in (61-65) encode elements of conceptual representations which can be true or false in their own right, though not contributing to the truth conditions of the utterance in which they occur.

More importantly, illocutionary and attitudinal adverbials have synonymous manner-adverbial counterparts which are clearly truth conditional, and should therefore, on standard assumptions, be treated as encoding concepts (Wilson and Sperber 1990). Thus, consider (66) and (67):

(66) Peter spoke *frankly*.
(67) It's *unfortunately* true that John lost his job.

The manner adverbials *frankly* and *unfortunately* make a contribution to the truth conditions of the utterances in (66) and in (67): (66) is true if and only if Peter spoke frankly and (67) is true if and only if it is unfortunate that John

lost his job. By the above arguments, the two adverbials must be treated as encoding concepts.

But the only difference between these truth-conditional manner adverbials and their non-truth-conditional illocutionary and attitudinal counterparts is that the truth-conditional adverbials modify *explicit* illocutionary and attitudinal predicates, whereas the non-truth-conditional ones must be seen as modifying *implicit* illocutionary and attitudinal predicates. Thus, compare (68) and (69)

(68) *Frankly*, this party is boring.
(69) I'm telling you *frankly* that this party is boring.

and (70) and (71):

(70) *Unfortunately*, John lost his job.
(71) It is *unfortunately* true that John lost his job.

The sense of *frankly* in (68) and (69) and of *unfortunately* in (70) and (71) seems to be the same: the only difference being that in (69) and (71) the adverbs contribute to the truth conditions of the utterances whereas in (68) and (70) they do not. The simplest way to account for these facts is to assume that the two adverbs encode the same concepts in both cases, but that in (69) and (71) these concepts contribute to the proposition expressed by the utterance, and hence to its truth conditions, whereas in (68) and (70) they do not. I shall consider the reasons for this, and the best way of describing this conceptual but non-truth-conditional information, below.

A further argument for the view that illocutionary and attitudinal adverbials encode concepts is based on *compositionality* (Wilson and Sperber 1990; Wilson 1992). These adverbials can have a quite complex syntactic and semantic structure. Consider (72a-c):

(72) a *Quite frankly*, he is a fool.
b *In strictest confidence*, he is a fool.
c *Very sadly and regrettably*, your fête will be rained off.

These more complex adverbials are easily analyzable on the assumption that they encode concepts in the same way as regular, truth conditional expressions, with the sole exception that the concepts they encode do not contribute to the truth conditions of utterances in which they occur.

I shall now argue (following Wilson and Sperber 1990) that there is a second important difference between Blakemore's pragmatic connectives and the non-truth-conditional adverbials we are dealing with here. Blakemore analyses her connectives as constraints on *implicatures*, i.e. as communicating to the implicit aspect of communication. Illocutionary and attitudinal adverbials, by contrast, appear to contribute to what Sperber and Wilson (1986), Wilson (1991, 1992) call the *explicatures* of an utterance: i.e. to the explicit aspect of communication.

Sperber and Wilson define *explicatures* as explicitly communicated assumptions. More technically, "an assumption communicated by an utterance *U* is *explicit* if and only if it is a development of a logical form encoded by *U*" (1986: 182), where 'development' involves (a) reference assignment and other enrichment processes needed to obtain the proposition expressed by the utterance, and (b) the optional embedding of this proposition under a higher-level illocutionary or attitudinal clause. That is, according to Wilson and Sperber (1990), Wilson (1992), the explicatures of an utterance will typically include:

(a) the proposition expressed by the utterance
(b) higher-level descriptions obtained by optionally embedding this proposition under a speech-act verb or a propositional-attitude verb.

To illustrate, the explicatures of the utterance in (73) might include the propositions in (74):

(73) Mary (frankly): I lied.
(74) a *Mary lied.*
b Mary is saying that she lied.
c Mary is saying frankly that she lied.
d Mary is telling Peter that she lied.
e Mary believes that she lied.
f Mary is admitting that she lied.

Mary's utterance in (73) is true if and only if Mary lied, i.e. if and only if the explicature in (74a) is true. It is in other words, only the explicature in (74a) that contributes to the truth conditions of Mary's utterance. The remaining explicatures (74b-f) may be true or false in their own right but make no contribution to the truth conditions of Mary's utterance (Wilson and Sperber 1990; Wilson 1992).

In more technical terms, the most deeply embedded explicature of (73) is the *proposition expressed* by (73) and (74b-f) are *higher-level explicatures* of (73). The truth conditions of (73) will depend solely on (74a), the proposition expressed, whereas the higher-level explicatures (74b-f) will be explicitly communicated, but make no contribution to the truth conditions of (73) (Wilson and Sperber 1990; Wilson 1992).

Having distinguished the propositional form of an utterance from its higher-level explicatures, let us see in more detail how the latter are obtained. Higher-level explicatures, like logical forms and fully propositional forms, are conceptual representations recovered by a combination of decoding and inference (Wilson and Sperber 1990: 102). To obtain (74a) the hearer must not only decode the semantic representation of the utterance but make an inference about the intended referent of 'I'; to obtain the remaining explicatures (74b-f) he must make additional inferences about Mary's attitude to the proposition she is expressing, and the type of speech act she is intending to perform (Wilson 1991). On this approach, higher-level explicatures are conceptual representations, which can entail and contradict each other and represent determinate states of affairs. Although they are true or false in their own right, they do not contribute to the truth conditions of the utterances in which they occur (ibid.: 105). Within this framework, then, both the fact that illocutionary and attitudinal adverbials encode concepts, and the fact that they are nonetheless non-truth-conditional, can be described.

Evidential and hearsay adverbials, as we have seen, encode concepts too, and these concepts appear to contribute to the truth conditions of utterances in the regular way. Thus, consider (75a-b):

(75) a *Evidently*, Bill has cheated in the exams.
b *Allegedly*, Bill has cheated in the exams.

According to the tests described above, (75a) and (75b) communicate the explicatures in (76) and (77) respectively, but these constitute the truth conditions of (75a) and (75b):

(76) *It is evident that Bill has cheated in the exams.*
(77) *It is alleged that Bill has cheated in the exams.*

Within this framework, these facts can be described by saying that the evidential (*evidently*) and hearsay (*allegedly*) adverbials in (75a) and (75b) contribute to the proposition expressed; in other words, (76) and (77) function as the truth-conditional content of the utterance rather than as higher-level

explicatures. A description, of course, is not an explanation. The four classes of adverbial we have been considering are syntactically very similar: why is it that two appear to contribute to the truth conditions of utterances, and two do not? Here I shall not attempt a full explanation, but merely indicate the lines along which I think an explanation might be sought.

6 Relevance theory and sentence adverbials: possibilities for explanation

The questions that have been raised in this paper are:

(a) are all the adverbials we have been discussing really non-truth-conditional?
(b) if so, how do we establish this? If not, what tests for truth-conditionality can we use?
(c) for non-truth-conditional adverbials, why are they non-truth-conditional?
(d) do they encode conceptual or procedural information?
(e) do they contribute to the implicit or the explicit aspect of communication?
(f) if there is a difference between truth-conditional and non-truth-conditional adverbials, how can this difference be explained?

It has been shown by the standard test for truth-conditionality that evidential and hearsay adverbials are clearly truth-conditional, whereas attitudinal and illocutionary adverbials are non-truth-conditional. The distinction between proposition expressed and higher-level explicatures makes it possible to describe the facts in a natural way: truth-conditional adverbials contribute to the proposition expressed whereas the non-truth-conditional ones contribute to higher-level explicatures. It has been also shown that all these adverbials, whether truth-conditional or non-truth-conditional, encode conceptual information and contribute to the explicit aspect of communication.

However, it still remains to provide an explanation for these facts, i.e. answer questions (c) and (f) above. I suggest that an answer to question (c) might be sought along the following lines. The comma intonation separating off sentential adverbials and their position in the sentence (initial, mid or final) seems to suggest that they can be treated along with parentheticals. In the literature, parenthetical constructions have been discussed under the heading of appositive relatives (eg. 'Mary bought a car, and it is an expensive one') (Emonds 1979) or nonrestrictive relative clauses (NRR) (eg. 'I talked to Mary, who is nice') (Fabb 1990).

Fabb (ibid.) convincingly argues that a NRR has no syntactic relation (modification, specification, theta-assignment, etc.) to its antecedent/host. He shows that although the NRR is next to an N'', it is neither c-commanded by anything inside the N'', nor c-commanded by the N'' itself. The only way in which an NRR links to any part of the sentence that contains it is through its relative pronoun. Even this relationship, however, holds at a level of discourse structure rather than in the syntax. If the non-truth-conditional adverbials are parentheticals in this sense, then it seems quite reasonable to expect them not to be fully integrated at the semantic level either.

Emonds (1979) and McCawley (1982) seem to agree that the NRR and the sentence are distinct syntactic phrase markers. Haegeman (1988) also proposes that NRRs are not part of the syntactic representation, i.e. not included in the phrase marker, but interpreted along with the surrounding sentence only at a level of discourse structure.

The claim that the NRR is not syntactically part of the same sentence as its antecedent N'' but is located linearly in the sentence at a discourse level might be taken to suggest that there is not one single utterance involved, with a single set of truth conditions (Wilson 1992). Instead, there might be two separate syntactic and discourse units or two separate utterances involved, each with their own truth conditions, which might make different contributions to overall relevance. And one might speculate that intuitions about the truth conditions of the utterance as a whole will be intuitions about the sub-part of it which makes the major contribution to overall relevance.

It remains to answer question (f). Here I would suggest that considerations of relevance are again involved. The non-truth-conditional adverbials are those whose associated sub-utterance is systematically *not* the one which makes the major contribution to overall relevance. Thus, in *Frankly, John left*, the main relevance of the utterance will derive from the fact that John left, and not from the fact that this information has been given frankly. By contrast, in *Allegedly, John left*, there will be a large class of cases in which the overall relevance of the utterance derives not from the fact that John left, but from the fact that it has been alleged that he did. This is not, of course, a full explanation, but it does suggest a possible direction in which such an explanation might be sought.

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