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DENIAL AND CONTRAST:
A RELEVANCE THEORETIC ANALYSIS OF *BUT*

0. INTRODUCTION

It is generally assumed that *but* has part of its meaning in common with *and* so that an utterance like (1) is true if and only if both conjuncts are true:

(1)   Tom has come but he has brought his dog.

However, it is also recognised that utterances with *but* have contrastive connotations often lacking in utterances with *and*. Compare, for example, (1) with (2).

(2)   Tom has come and he has brought his dog.

This has been taken to suggest that *but* means 'and + something else'. However, attempts to distinguish *but* from *and* by writing a semantics for the 'something else' have generally met with serious difficulties. In the first place, the suggestion of contrast conveyed by an utterance with *but* is not a condition on its truth. Thus the speaker of (1) would not be taken to have spoken falsely if the events described did not contrast. This means that unlike the 'and' component, the 'something else' component falls outside the scope of truth conditional semantics.[1]

  Second, many writers have found it necessary to distinguish between two uses of *but*: the so-called 'denial of expectation' use illustrated in (3) and the so-called 'contrast' use illustrated in (4):

(3)   John is a Republican but he's honest. (G. Lakoff, 1971)
(4)   Susan is tall but Mary is short.

R. Lakoff (1971) presented this distinction as a distinction between two meanings of *but*, a proposal which would seem to find support in the fact that in some languages (for example, German, Spanish and Hebrew) *but* may be translated by either of two words. Indeed, as Anscombre and Ducrot (1977) and Horn (1985) have argued, although the distinction is not realized lexically in languages like French and English, it gives rise to the same differences in distribution that distinguish *aber* and *sondern* in German and *pero* and *sino* in Spanish.[2] Nevertheless, it seems that these two 'meanings' are closely related, and, according some authors, for

example, Dascal and Katriel (1977), have attempted to formulate a single general rule from which the rules for the contrastive and denial uses can be derived as special cases.

As Dascal and Katriel emphasize, an analysis of *but* must make reference to the context. In R. Lakoff's account the context only plays a role in the interpretation of 'denial of expectation' *but*. Hence her term "semantic contrast" to describe the other *but*. However, as we shall see, it is not legitimate to distinguish the two *buts* on these grounds, for the meaning of *but* interacts with the context in both uses. *But* is not unique in this respect. The same point can be made about a number of other expressions which have proved resistant to analysis within truth conditional semantics. One might conclude from the existence of such phenomena, as for example G. Lakoff (1970, 1971) and R. Lakoff (1971) have done, that a distinction between semantics and pragmatics cannot be maintained, at least as a distinction between linguistic meaning and contextually determined meaning. In this paper I will take the fact that the meaning of *but* interacts with the context not as evidence for the conflation of linguistic meaning and pragmatically determined meaning, but rather as evidence that the pragmatic interpretation of utterances may be constrained by linguistic means. As I have argued elsewhere (Brockway, 1981; Blakemore, 1987), the existence of linguistically specified structures that constrain the contexts in which utterances containing them can occur can only be explained given a coherent and psychologically grounded account of the role of the context in interpretation. And as Sperber and Wilson (1986) have shown, such an account is only possible given a principled distinction between linguistic and non-linguistic (or contextual) knowledge.

The fundamental idea in Sperber and Wilson's framework (outlined in Section I) is that hearers interpret utterances on the assumption that they can recover information that is relevant to them, and that the role of the context is to supply assumptions that are brought to bear in the assessment of relevance. This means that expressions that constrain the hearer's choice of context must be analysed as linguistic (or semantic) constraints on relevance. There is a wide range of expressions and constructions which can be analysed in these terms. Here, however, I am primarily concerned with those expressions which are sometimes described as *discourse connectives* – for example, *therefore*, *after all*, and *moreover*. In Section II I shall show that the role of these expressions in discourse can be explained in terms of the way in which the interpretation of one utterance contributes to the relevance of the next. According to this analysis, the connections expressed by these words

must be distinguished from the connections expressed by conjoined utterances.

As we shall see in Section III, it is a relatively straightforward matter to accommodate the denial of expectation use of *but* in this framework. While this analysis captures the non-truth-conditional 'something else' component of the meaning of *but*, it is difficult to reconcile with the view that *but* forms a conjunction. It is also difficult to reconcile with the view that there is a single meaning for *but*. For, as we shall see in Section IV, it seems that in its contrast use *but* must be seen as part of a conjoined utterance. However, this is not to say that this use of *but* should not be analysed as a semantic constraint on relevance. Indeed, it seems that in both uses the constraint imposed by *but* must be analysed in terms of denial. Whereas the denial of expectation interpretation results from the use of *but* as a constraint on the relevance of the proposition it introduces – that is, as a discourse connective, the contrastive interpretation results from its use as a constraint on the relevance of the conjunction of the two propositions it connects.

I. SEMANTIC CONSTRAINTS ON RELEVANCE

In developing his notion of *conversational implicature* Grice (1975, 1978) drew attention to a fact that has been of fundamental importance in the development of modern pragmatics: there are aspects of utterance interpretation that cannot be explained in terms of decoding messages according to a set of linguistic rules but which involve taking the meaning of the words uttered together with contextual information and working out what the speaker meant on the basis of the assumption that the utterance conforms to very general principles of communication. This is not to say, however, that pragmatics should be identified with the study of implicature. As Wilson and Sperber (1981) have shown, the role of inference and general communicative principles extends beyond the interpretatión of implicatures to the determination of the propositional (or truth conditional) content of utterances. Nor is it to say that linguistic form cannot affect the implicit content of utterances. As Grice himself pointed out, there are expressions which do not contribute to the truth conditions of the utterances that contain them but which affect what is implicated. Thus for example, according to Grice's analysis, the use of *therefore* in (5) indicates that his being brave is a consequence of his being an Englishman, but that the utterance would not be false should the consequence in question fail to hold.

(5)   He is an Englishman; he is, therefore, brave.

Karttunen (1974) and Karttunen and Peters (1979) link this notion of
conventional (or linguistically determined) implicature to the class of
phenomena Stalnaker (1974) called pragmatic presupposition. Stal-
naker's idea was that there are certain linguistic expressions whose
function is to impose constraints on the context in which utterances
containing them could occur. Thus Karttunen claims a word like *too* is a
"rhetorical device" whose presence or absence does not have any
bearing on what proposition the utterance containing it expresses, but
rather relates the sentence "to a particular kind of conversational con-
text" (1974, p. 12). However, without an adequate account of the
selection and role of the context in utterance interpretation it is hard to
see why there should be such arbitrary links between linguistic form and
pragmatic interpretation. In this section I shall outline an approach to
pragmatics whose account of the selection and role of context in
utterance interpretation provides a psychological explanation for the role
of words such as *therefore*, *too*, and, of course, *but*.

   Sperber and Wilson (1986) have argued that an account of utterance
interpretation must be based on a general cognitive theory of information
processing. The basic idea underlying their theory is that in processing
information people generally aim to bring about the greatest improve-
ment to their overall representation of the world for the least cost in
processing. That is, they try to balance costs and rewards. Obviously, not
every addition of information counts as an improvement. A hearer's
representation of the world will not necessarily be improved by the
addition of information that it already contains. Nor will it be improved
by the presentation of information that is unrelated to any of the
information it already contains. The hearer's aim is to integrate new
information with old, or in other words, to recover information that is
relevant to her. Notice, too, that a hearer is not simply interested in
gaining more information about the world: she is also interested in
obtaining better evidence for her existing beliefs and assumptions. The
point is, that in every case her search for relevance leads her to process
new information in a context of existing assumptions.

   In this theory computing the effect of a newly presented proposition
crucially involves inference. That is, the role of contextual assumptions is
to combine with the content of an utterance as premises in an argument.
There is no space here to outline the nature of the inferential abilities
that Sperber and Wilson believe to be involved in utterance inter-
pretation. However, it is important to recognise that in this theory

propositions are treated not just as logical objects but as psychological representations, and that inferences are psychological computations performed over those representations. Their basic claim is that assumptions about the world come with varying degrees of strength, and that logical computations assign strength to conclusions on the basis of the strength of the premises used in deriving them. Clearly, any new assumption derived as a conclusion (or contextual implication) from a newly presented proposition in a context of existing assumptions will count as an improvement. However, in this framework a proposition whose presentation enables a hearer to derive an assumption which she has already represented may be relevant in virtue of strengthening the hearer's conviction that it is true: having two independent pieces of evidence for an assumption will lead a hearer to assign it a degree of strength that is greater than she would have assigned it on the basis of each piece of evidence individually.

More interestingly from the point of view of the present paper, in this framework a proposition whose presentation leads the hearer to derive a conclusion which is inconsistent with an assumption that she already holds may be relevant by virtue of leading her to abandon it. Suppose, for example, that I have some reason to believe that Tom speaks Russian – perhaps I saw him once carrying some books with Russian titles from the library. On the basis of this assumption I introduce him to my Russian friend who begins to converse with him in Russian. However, Tom's reaction of complete incomprehension indicates that he does not speak Russian at all. Given that I cannot hold both assumptions I must abandon one of them, and given that Tom's behaviour gives me stronger evidence for thinking that he doesn't speak Russian than for thinking he does I will abandon the latter assumption in favour of the former. In other words, when it is possible to compare the relative strength of two contradictory assumptions it is possible to resolve the contradiction by abandoning the one for which there is less support.

Notice that although in principle a newly presented proposition may have a direct effect on the hearer's existing representation of the world in virtue of being logically inconsistent with an existing assumption, in many cases the impact of a new item of information can only be assessed in the context of certain other assumptions. Indeed, it would probably be fair to say that the cases of contextual modification that are of most concern to a theory of pragmatics are those in which the hearer combines the proposition presented with a subset of her contextual assumptions. Since the impact of an utterance may depend on the context, the hearer must have some principle by which she chooses the particular contextual

assumptions she brings to bear. For logically speaking, any of her beliefs and assumptions may be brought to bear on the interpretation of an utterance, which means that logically speaking, her interpretation isn't constrained at all. Since successful communication does occur and hearers often interpret utterances in the way they are expected to, the hearer's choice of context must be one that can be exploited and manipulated by the speaker.

According to Sperber and Wilson, what the speaker manipulates is the hearer's search for relevance. A hearer will only pay attention to a phenomenon if she thinks it is going to be worth her while. This means that there is no point in your attracting my attention, for example, by speaking to me, unless you believe that your have information that is relevant to me and hence worth processing. So if you deliberately attract my attention, and if I recognise that you are deliberately attracting my attention, then I will expect that I can recover some contextual effect from your utterance. However, as I have said, the hearer is not just interested in obtaining some reward: her aim to recover the greatest contextual effect for the available processing effort. This means that it is in her interest that the information presented to her is the most relevant information available to the communicator. But of course the communicator will have her own aims, and these may lead her to give the hearer information whose impact is less than any other information he could have given. The point is that to be worth the hearer's attention it must have some impact.

Intuitively, it is clear that the greater the impact a proposition has on the hearer's representation of the world the greater its relevance. On the other hand, accessing contextual assumptions and using them to derive contextual effects involves a cost, and the cost of deriving contextual effects in a small, easily accessible context will be less than the cost of obtaining them in a larger, less accessible context. This means that it is in the interests of a hearer who in searching for relevance that the speaker should produce an utterance whose interpretation calls for less processing effort than any other utterance that she could have made. But equally, given that the speaker wishes to communicate with the hearer, it is in her interests to make her utterance as easily understood as possible. This means that the hearer is entitled to interpret every utterance on the assumption that the speaker has tried to give her adequate contextual effects for the minimum necessary processing, or in other words, that the speaker has aimed at optimal relevance. Sperber and Wilson call the principle which gives rise to this assumption the *Principle of Relevance*.

Now, in some cases the speaker will have only very general grounds for

thinking that her utterance is consistent with this principle. That is, she will not have any specific expectations as to the contextual assumptions that the hearer will bring to bear. For example, if you ask me the time, I will assume that my answer will be relevant to you even though I may have no idea of the conclusions you will draw from it. In other cases the speaker may have good grounds for thinking that the hearer already has a particular set of contextual assumptions immediately accessible. Obviously, a speaker who has no interest in the particular conclusions that the hearer draws from her utterance or who has grounds for thinking that the conclusions she wants drawn will be recovered in any case will not need to restrict the hearer's choice of contextual assumptions in any way. However, a speaker who has a specific interpretation in mind may direct the hearer towards that interpretation by making a certain set of contextual assumptions immediately accessible thus ensuring their selection under the Principle of Relevance. For example, in the dialogue in (6) speaker B may expect A to conclude from her reply that Tom is rich:

(6)   A: Is Tom very rich?
       B: ALL lawyers are rich.

Indeed, it is difficult to see how A could recover anything but this interpretation. In order to maintain her assumption that B was aiming at optimal relevance A will have to assume that she is expected to supply the information that Tom is a lawyer and derive the conclusion that he is rich. In other words, she is able to supply this information not because it is already highly accessible to her, but because B's utterance has made it accessible. In answering indirectly B has constrained A's choice of context and directed her towards a particular interpretation.

Examples of this kind show how speakers may exploit the hearer's aim of maximizing relevance in order to make their intentions about the implicit content of their utterances manifest. My claim is that there is also a range of linguistic devices – including, for example, the expressions *therefore*, and *too*, as well as certain syntactic structures (for example, clefting) and prosodic devices – which the speaker may use to constrain the hearer's interpretation. These devices do not contribute to the propositional (or truth conditional) content of the utterances that contain them: their sole function is to guide the interpretation process by specifying certain properties of context and contextual effects. Since these expressions do not map onto constituents of propositional representations they cannot be part of what has been called logical form.[3] On the other hand, given the hearer's aim of minimizing processing costs, the existence of structures and expressions that affect pragmatic

computations can be explained in both cognitive and communicative terms.

II. DISCOURSE CONNECTIONS

The picture of discourse that emerges from the relevance based framework I have just outlined is one in which the interpretation of an utterance (that is, its propositional content and its contextual effects) contributes towards the context for interpreting subsequent utterances. That is, as discourse proceeds the hearer is provided with a gradually changing background against which new information is processed. As we have seen, interpreting an utterance involves more than identifying the proposition it expresses. It also involves working out the consequences of adding it to the hearer's existing assumptions, or, in other words, working out its relevance. In this framework, then, the context can be viewed from either of two perspectives. On the one hand, it may be regarded as the set of assumptions that are used in establishing the relevance of a new item of information, while on the other, it may be seen as the set of assumptions that is modified or affected by the presentation of a new item of information. A new item of information may affect a context by virtue of adding to it. However, it may also have a contextual effect by virtue of providing evidence for an existing assumption or alternatively evidence against an existing assumption. This means that in a coherent discourse two utterances may be connected either in virtue of the fact that the interpretation of the first may include propositions that are used in establishing the relevance of the second, or in virtue of the fact that a proposition conveyed by one is affected by the interpretation of the other. In either case we may say that the relevance of one is *dependent* on the interpretation of the other.

To illustrate, let us consider the sequence in (7):

(7)   A: Susan's not coming today.
        B: Tom's in town.

Although A's utterance provides the hearer with an immediately accessible context for the interpretation of B's, it is not clear exactly where the relevance of B's remark lies. For instance, it could be relevant as an explanation for the fact that Susan isn't coming in; it could be construed as evidence for A's claim; it could be a specification of the implications (and hence relevance) of A's remark; utterance; it could be intended as an attempt to dismiss A's remark as irrelevant, or, to take the

case that will concern us most, it could be relevant as something that contrasts with the fact that Susan isn't coming. In real conversation, however, the connection between the two remarks would not be left unspecified, and B would have made her intentions clear either through intonation or though the use of such 'discourse connectives' as *you see, after all, so, however,* and *anyway.* Thus the responses in (8a–e) each suggest a different interpretation:

(8)(a)   You see, Tom's in town.
   (b)   After all, Tom's in town.
   (c)   So Tom's in town.
   (d)   Anyway, Tom's in town.
   (e)   However, Tom's in town.

That is, each of these expressions indicates how the relevance of B's remark lies in the way it modifies or affects the interpretation of the previous remark, and thus contributes to the overall coherence of the discourse.

Given the role of inference in the assessment of contextual effects, it is not surprising that some of these connections can be described in inferential terms. Thus for example, *you see* and *after all* introduce a premise used in the deduction of the proposition expressed by (7A), while *so* introduces a conclusion which is derived from (7A).[4] Notice that in order to be able to establish the prescribed connection the hearer must supply further contextual assumptions. Thus for example, the fact that Tom is in town is evidence for A's claim that Susan isn't coming only given the contextual assumption in (9):

(9)   If Tom is in town, then Susan won't be coming.

It is in this way that these expressions constrain the hearer's context: in each case she must supply the contextual assumptions that allow her to establish the prescribed connection.

Although I have illustrated the use of these expressions in an example involving two speakers, it is clear that they could have been used to connect two remarks made by a single speaker. Even then, however, the result is two connected remarks rather than a single conjoined utterance. As I have shown, these expressions indicate how the relevance of one proposition is dependent on the interpretation of another. Thus for example, to say that the proposition in (7B) is relevant as an explanation is to say that it is relevant as an answer to a question raised by the presentation of the proposition in (7A). Similarly, a speaker who continues with the utterance in (8b) does so only because she has already

presented a proposition which requires justification. And a speaker who
continues with (8c) does so only because she believes that the hearer has
been presented with a proposition whose contextual effects need spelling
out. To say that the relevance of a proposition depends on the inter-
pretation of another is to say that each is consistent with the Principle of
Relevance individually. In contrast, a speaker who presents a conjoined
proposition, say, of the form *P and Q*, must have grounds for thinking
that it has relevance over and above the relevance of its conjucts taken
individually. This is not to say that each conjunct may not have its own
individual relevance. The point is that a hearer of a conjoined utterance
receives no guarantee that each of the conjuncts is relevant. She can only
assume that it is the conjoined proposition that is consistent with the
Principle of Relevance.[5]

If this is right, then it follows that the connections conveyed by *you
see*, *after all* and *so* could never be conveyed in a conjoined utterance.
And indeed, it does seem that while the suggestions conveyed by *you see*
and *after all* could have been conveyed implicitly in a sequence like the
one in (7), they cannot be conveyed by the conjoined utterance in (9);

(9)   Susan's not coming today and Tom's in town.

Moreover, neither expression can be used in a conjoined utterance to
express a connection between the two conjuncts. Thus the second
conjunct of (10) cannot be construed as evidence for the first:[6]

(10)   Susan's not coming and after all Tom's in town.

When we come to the connection expressed by *so*, however, things are
not so straightforward. For although the second proposition of the con-
joined utterance in (9) could never be construed as a specification of the
relevance (i.e., contextual effects) of the first, the two conjuncts of a
conjoined utterance may be connected as premise and conclusion,
whether explicitly, as in (11), or implicitly, as in (12):

(11)   Conjoined utteranced convey suggestions of temporal
         sequence and so *and* is not truth-functional.
(12)   If conjoined utterance convey suggestions of temporal
         sequence and *and* is non-truth-functional, then you will have
         to revise your theory.

In these examples the inferential connection serves a justificatory pur-
pose. That is, the first proposition is presented as proof or evidence for
the second. The conclusion will, of course, have its own relevance.
However, the fact that premise and conclusion are conjoined indicates
that the speaker has grounds for thinking that their conjunction has

relevance over and above their individual relevance, or, in other words, that the entire argument is consistent with the Principle of Relevance.

It will have been noticed that in this discussion I have ignored the roles played by *anyway* and *however*. In the case of *however* the discussion is simply postponed, for it is interchangeable with *but* in the use which concerns us in the following section. The analysis of *anyway*, on the other hand, is beyond the scope of the present paper. For unlike *however* and *but*, it does not express an inferential connection, but rather specifies the property of the set of contextual assumptions which must be combined with the proposition it introduces for the derivation of contextual effects.

III. *BUT*: 'DENIAL OF EXPECTATION'

In Section I we saw that the fact that an inference system can be used to test for inconsistencies in the propositions submitted to it means that it can play a role in the hearer's decision to abandon an existing assumption. It is not always the case that a speaker who presents a proposition which is inconsistent with one of the hearer's existing assumptions intends precisely that effect. Nor is it the case that a hearer who is presented with such a proposition (either intentionally or unintentionally) will actually abandon her existing assumption. The point is that in a situation where a hearer has immediate access to an assumption P any utterance U which conveys not-P will be taken as evidence of the speaker's belief that the evidence for not-P is stronger than that which the hearer has for P and hence that P should be abandoned. In such a situation we shall say that the proposition expressed by U is relevant as a denial.

In some cases an utterance is relevant as a denial in virtue of the fact that its explicit propositional content is inconsistent with the explicit propositional content of the previous utterance. In other cases an utterance will be a denial in virtue of its implicit content. Let us call B's response in (13) a *direct denial* and C's response an *indirect denial*:

(13)   A: Ben isn't at work today
         B: Yes he is
         C: I just saw him in his office

Neither B nor C need give any linguistic indication as to the way in which she expects her utterance to be interpreted. Given that she has grounds for thinking that the hearer has immediate access to the proposition expressed by A's utterance she has grounds for thinking that this

will be the most immediately accessible, and hence most relevant, interpretation. Still, even in this type of situation a speaker (particularly a speaker of an indirect denial) may preface her utterance with *but* (although interestingly, not with any of the other contrastive particles like *however* and *nevertheless*).

The situation is rather different when a speaker denies (either explicitly or implicitly) a proposition which although it is not part of the propositional content of the utterance just made, is understood to be part of its interpretation. Compare, for example, the example in (3) (repeated below) with the sequence in (14):

(3)   John is a Republican, but he's honest.
(14)   John is a Republican. He's honest.

The use of *but* in (3) indicates that the hearer is expected to have derived the proposition in (15) from the proposition in the first clause:

(15)   John is not honest.

In other words, *but* indicates that the proposition it introduces is relevant as a denial of an 'expectation' created by the utterance of the first clause. There are a number of ways in which a hearer may establish the relevance of the second proposition of (14) in a context made accessible by the first – it may, for example, be construed as evidence for the first proposition, or as an explanation for it. However, it will not be construed as a denial. This suggests that if it hadn't been for the use of *but* in (3) the hearer might never have accessed the contextual assumption(s) necessary for the derivation of (15). That is, in indicating how the proposition it introduces is relevant the speaker's use of *but* constrains the interpretation of the preceding proposition.

As Dascal and Katriel (1977) point out, this use of *but* is not restricted to cases in which it introduces what we have called a direct denial. In their example, given here in (16), the proposition introduced by *but* is understood to imply a proposition that is inconsistent with a proposition that the hearer is expected to have derived from the first clause:

(16)   [A and B are discussing the economic situation and decide
        that they should consult an expert.]
        A: John is an economist.
        B: He is not an economist, but he is a businessman.

On the basis of the first clause and the contextual assumption in (17a) the hearer will derive (17b). Although (17b) is not inconsistent with the proposition expressed by the *but*-clause it is inconsistent with the one in

(18b) which the hearer is expected to have derived on the basis of the contextual assumption in (18a):

(17)(a) If John is not an economist, then we shouldn't consult him.
   (b) We shouldn't consult him.
(18)(a) If John is a businessman, then we should consult him.
   (b) We should consult him.

According to this analysis, a speaker uses *but* to constrain the relevance of the proposition it introduces, or, in other words, to indicate how that proposition is consistent with the Principle of Relevance. The relevance of the proposition introduced by *but* is dependent on the interpretation of the preceding clause in that the speaker only continues with the *but*-clause because she has grounds for thinking that the presentation of the first proposition has yielded a contextual implication that she wishes to deny. That is, the connection is not between the constituents of a conjoined proposition that is consistent with the Principle of Relevance, but between the pragmatic interpretation of one proposition and the pragmatic interpretation of another. It is not surprising, then, that a speaker may use *but* to respond to another speaker's utterance, or as Anscombre and Ducrot put it, that *but* may be used to connect two distinct illocutionary acts. Thus for example, in the dialogue in (19) (adapted from Dascal and Katriel's example) C will not be understood to be continuing with or taking over B's utterance, but rather to be producing an utterance that is relevant as a counter-objection to B's objection.

(19)   A: Lets ask John.
        B: John is not an economist.
        C: But he is a businessman.

It is also not surprising that the connection expressed by *but* in utterances like (3) is asymmetric. The suggestion conveyed in (3) is not the one conveyed in (20):

(20)   He is honest, but he's a Republican.

There is, perhaps, a sense in which the speaker has said the same thing. In a standard truth conditional analysis these two utterances would be said to have the same truth conditions. However, from the point of view of their pragmatic interpretation the difference is crucial. Denying that someone is a Republican is a very different matter from denying that they are dishonest. More generally, assessing the relevance of a pro-

position P in the context of a proposition Q is a very different matter from assessing the relevance of Q in the context of P.

The analysis of *but* as a conjunction (that is, as 'and' + something else) is based on the assumption that an utterance with *but* has the same truth conditions as the corresponding utterance with *and*. However, from the point of view of the theory of utterance interpretation underlying our analysis it is not clear that a speaker who produces an utterance with *but* has said something (that is, one thing) that can be evaluated for truth. One does not normally specify the truth conditions for such sequences as the one in (14). Given that in a coherent discourse the two propositions expressed in this sequence will be interpreted as being connected in much the same way as the ones in (3) – that is, in virtue of the way each is processed for relevance – it is difficult to see why sequences with *but* should be treated differently.

IV. BUT: CONTRAST

The conclusion, then, seems to be that *but* does not form a conjoined proposition, but is a purely non-truth-functional constraint on relevance. However, it seems that the observations that led to this conclusion do not apply to all uses of *but*. Thus for example, whereas the suggestion conveyed by *but* in (3) cannot be conveyed implicitly by the 'full-stop' sequence in (14), the suggestion conveyed by *but* in (4) (repeated below) does seem to be conveyed by the corresponding sequence in (21):

   (4)   Susan is tall but Mary is short.
   (21)   Susan is tall. Mary is short.

Perhaps more significantly still, it appears that unlike the suggestion conveyed by denial of expectation *but*, the one conveyed by contrast *but* can be conveyed implicitly in a conjoined utterance. Compare (22) with (23):

   (22)   John is a Republican and he is honest.[7]
   (23)   Susan is tall and Mary is short.

Given the arguments of Section II, this suggests that in its contrast use *but* does form a conjoined proposition. This conclusion seems to find additional support in the fact that in this use *but* can be embedded in the scope of logical operator like *if . . . . then*. Consider, for example, the conditional in (24):

   (24)   If Susan is coming but Anne is not, then I shall cancel the
            lecture.

Notice that as it is used here *but* could not be construed in its denial of expectation sense. Notice too that the suggestion of contrast does not itself contribute to the truth conditions of (24). The point is simply that the antecedent of (24) must be a conjoined proposition and hence that in its contrast use *but* does have 'and' as part of its meaning.[8]

In this section I hope to show that while utterances like (21) and (22) may indeed be interpreted as conveying a suggestion of contrast, they are not always interpreted in the same way as the corresponding utterances with *but*. As we shall see, the meaning of *but* must always be analysed in terms of an asymmetric connection. In some contexts this will be a connection that holds between the conjuncts of a conjoined proposition and *but* will be understood in its so-called contrastive sense. In other contexts it will be a connection between two distinct discourse segments and *but* will be understood in its denial of expectation sense.

It might be thought that in all the contrastive examples – that is (4), (21), (22), the contrast is evident from the semantic properties of the words used: *tall* and *short* are the opposite extremes of a continuous scale. That is, they are gradable antonyms. However, not all examples of contrast involve antonymy. In (25) the predicates merely represent different values on a continuous scale:

(25)   Susan is tall. Anne is of average height.

And in some cases, for example, (26), the predicates contrast simply in virtue of representing properties understood as being part of a system of mutual incompatibles:

(26)   The onions are firied. The cabbage is steamed.

Indeed, in many cases there does not seem to be any semantic incompatibility at all. It is possible for someone to own a Porsche and a mini, and liking skiing does not rule out playing chess. Nevertheless (27) and (28) may be understood to convey a contrast.

(27)   ʿMary likes skiing. Anne plays chess.
(28)   His father owns a mini. Mine has a Porsche.

It may be recalled that it was cases such as these that led R. Lakoff (1971) to stretch the notion of antonymy so that, for example, we could say that *skiing* and *chess* share one semantic feature, say [outdoor], and share it in the sense that one is marked + for it and the other −. However, if the hearer of, say, (27) does interpret B's utterance as conveying a contrast between Mary's liking for outdoor activities and Anne's preference for indoor ones, then it is because of her knowledge of the world

rather than because of her knowledge of the meaning of the words uttered. We surely do not want the existence of indoor skiing and outdoor chess games to be a logical impossibility. Moreover, it is not clear from the linguistic properties of this utterance that this is the contrast that the hearer is expected to recover. The speaker might have been trying to convey a contrast between Mary's non-intellectual personality and Anne's intellectural personality, or between Mary's fitness and Anne's lack of it, etc.

In fact, it is possible that the speaker may not have had any particular contrast in mind. Speakers do not always have specific expectations as to the way that their utterances will be interpreted. In many cases the hearer is free to recover any of a range of contextual effects. The main point, however, is that in a case like (27) it is likely that the main relevance of the utterance does not lie just in the identification of the activities that Mary and Anne like, but more in fact that these activities are different. That is, the hearer is expected to recover two parallel sets of contextual implications each member of which predicates a property that is incompatible with the property in the corresponding implication in the other set. Thus for example, the relevance of (27) may be understood to lie in the fact that it licenses the derivation of any of the pairs of implications in (29):

(29)   Mary is fit.   Anne is not fit.
        Mary likes outdoor   Anne likes indoor activities.
        activities.
        Mary likes non-intellectual   Anne likes intellectual
        pursuits.   pursuits.

Obviously, the same point applies to the all the examples just given in (25–28).

Now, there are linguistic clues that the speaker may use to indicate that the hearer is expected to process her utterance in a context which enables her to derive such pairs of implications. Most notably, perhaps, we have the parallel intonation patterns illustrated in (30):

(30)(a) Susan is ˇtall.   Mary is ŝhort.
    (b) Mary likes ˇskiing. Anne plays čhess.

It will be recognised that the use of so-called contrast *but* is often associated with this sort of intonation pattern. The question is whether *but* is used, along with the intonation, simply to constrain the hearer's choice of context so that she can recover two sets of contrasting implications.

If *but* did play this role, then we could reconcile it with the use exemplified in (3) by saying that *but* instructs the hearer to process the utterance that contains it in a context which enables her to establish an incompatability. In the extreme case (the denial case) the incompatibility is between propositions – it is a logical consistency – with the result that the hearer abandons one in favour of the other. In the contrast case the incompatibility is simply between predicates, and the hearer is simply expected to interpret each of the propositions presented as predicating a property (or set of properties) which cannot be true of anything with the property (or set of properties) understood to be predicted by the other. In other words, she is simply expected to interpret each proposition in, for example, (27) as drawing attention to the respect or the respects in which Anne and Mary are different from each other.

However, this is not the whole story. If *but* were used simply in the way I have just outlined, then it ought to be possible to use it in any utterance where the speaker is understood to be drawing attention to the difference between two things, and there are at least two such cases where the use of *but* is impossible. Notice first that so far all of our examples of contrast have involved only one speaker. However, it is possible for the second speaker of a dialogue to produce an utterance which is understood to convey a contrast with the state of affairs described by the first. Suppose you and I have just met and we are telling each other about our backgrounds. As is usual in such conversations, we discover some similarities – you like jazz, so do I, etc. – and some differences – your parents vote Labour, mine Tory. Whereas in this situation it would be quite appropriate for me to respond to your utterance in (31) with the one in (32a), the one in (32b) would be odd:

(31)   You: My parents vote Labour.
(32)(a) Me: Mine vote Tory.
    (b) Me: But mine vote Tory.

The problem is not that *but* cannot be used to introduce a new utterance. There are situations in which the utterance of (32b) would be perfectly acceptable. The problem is that all these situations are ones in which I would be understood to be denying an assumption derived from your utterance, a fact which might be taken to suggest that my example simply provides further evidence for the dichotomy between the two *buts*. However, if there is a contrast *but*, then it is difficult to see why (32b) cannot be understood in the same way as (32a).

The second problem becomes evident once it is recognised that our examples of contrast are restricted to cases in which the speaker is

drawing attention to the difference or differences between just two
things. It is also possible for a speaker to draw attention to the respects in
which several things are different from each other. Consider, for example
(33) and (34):

(33)   Susan is tall, Mary is short, and Anne is of average height.
(34)   Mary votes Labour, Susan votes SDP, Anne votes Tory, and
         Jane votes for the Communist Party.

Notice that in this case it doesn't much matter which order the conjuncts
are presented. Reverse any of the conjuncts of (34) and you still recover
the interpretation in which Mary, Susan, Anne and Jane are all different
from each other in respect of who they vote for. However, it is possible
to have what appears to be a conjunction in which one conjunct
contrasts with all the rest taken together. For instance, in (35) the fact
that Jane doesn't bother voting will be understood to contrast with the
fact that Mary, Susan and Anne do. In this case the order of conjuncts
does matter. This interpretation is not possible for (36).

(35)   Mary votes Labour, Susan SDP, Anne Tory, and Jane doesn't
         bother.
(36)   Mary votes Labour, Susan SDP, Jane doesn't bother, and
         Anne votes Tory.

The fact that it is only in this sort of case that we might substitute *but*
is related to the well-known (but, as far as I know, unexplained) obser-
vation that whereas *and* can conjoin any number of propositions, *but* can
only be used to connect two. Thus the only sort of interpretation
available for (37) is one in which the first three conjuncts taken together
contrast with the *but*-conjunct:

(37)   Mary votes Labour, Susan votes SDP, Anne votes Tory, but
         Jane votes for the Communist Party.

For example in a situation in which we are discussing whether Mary,
Susan, Anne and Jane will fit into the American political system it will be
taken to convey a contrast between being politically acceptable in the
United States and being politically unacceptable. Similarly, (38) is ac-
ceptable only in a context in which it is relevant to know that tallness and
shortness taken together contrast with having average height:

(38)   Susan is tall and Mary is short but Anne is of average height.

So for example, it could be taken to suggest that while Susan and Mary
are of extreme heights, Anne is not.[9]

What this seems to suggest is that when *but* means contrast it can only
be used to draw attention to a binary opposition. However, if *but* can be
used to draw attention to the fact that two things are different from each
other, why can't it be used to indicate that several things are different
from each other?

Let us look at (34) and (37) more closely. As I have suggested, the
point of (34) may be regarded as lying not just in the identity of who each
person votes for, but more in the fact that who they vote for is different.
Notice, however, that it is no more relevant to know that Jane is differ-
ent from each of the others than it is to know that, say, Anne is different
from each of the others. (34) is simply a list – a list of differences. In
other words, its relevance lies in the fact that it yields four parallel sets of
contrasting implications. Hence the possibility of reversing the order of
the conjuncts without change of acceptability of interpretation.

In contrast, the point of (37) seems to lie more in the fact that Jane
votes for the Communist Party, for it is the fact that she votes for the
Communist Party that makes her different from all the others. The
hearer's task is to establish the respect in which she is different or, in
other words, to ascertain what property Jane does not have that all the
others have. Thus in the context described above the hearer will take the
speaker to be drawing attention to Jane's unacceptability against the
others' unacceptability. In another context the hearer might recover a
different interpretation. For example, suppose that I am handing out
different coloured rosettes to people according to their political pref-
erence. In keeping with British custom I give Labour voters red, the
Tory voters blue and the SDP voters orange. In this situation your
utterance of (37) will be understood to suggest that whereas I have
rosettes for Mary, Susan and Anne, I have no appropriate rosette for
Jane.

Notice that in this last situation it would be less acceptable to produce
the utterance in (39):[10]

(39)   Jane votes for the Communist party but Mary votes Labour,
        Susan votes SDP and Anne votes Tory.

For here you would be drawing attention to the respect in which Mary,
Susan and Anne are different from Jane. That is, the hearer's task would
be to establish what property Mary, Susan and Anne do not have that
Jane has. Since in this context it is more relevant to know what property
Jane does not have than what property she has, the utterance of (39)
would be odd.

Obviously, if Jane is different from, say, Susan, then Susan is different

from Jane. However, as I have suggested *but* is not simply used to draw attention to a difference. The point here is a subtle one. The effect of reversing the order of the conjuncts could be described simply as a matter of emphasis. Nevertheless, I think that it is instructive to see how it arises.

According to the arguments of Section II, a speaker who produces a conjoined utterance gives the hearer a guarantee that the conjoined proposition it expresses has relevance over and above the relevance of each conjunct taken individually. In some cases the relevance of a conjoined proposition simply lies in the fact that it is a list. Consider, for example, the utterance in (33) produced in response to the question in (40):

(40)   Who do your friends vote for?

In this case each conjunct is interpreted against the same set of contextual assumptions. In other cases, however, the hearer will treat the first conjunct as contributing towards and hence modifying the context for the interpretation of the next. For example, in (41 the first conjunct is interpreted as the case of the event described in the second.[11]

(41)   The road was icy and she slipped.

Not surprisingly, the conjuncts of such an utterance cannot be reversed without change of acceptability of interpretation.

The asymmetry of (37) can be given a similar explanation. The use of *but* indicates that the hearer is expected to derive a proposition of the form *not (F (Jane))*. Voting for the Communist Party may be taken to be incompatible with any number of properties. However, given the context of the interpretation of the first part of the utterance the hearer will recover a particular value for F – for example, being politically acceptable or having an appropriate rosette.

This analysis enables us to see what this use of *but* has in common with its denial of expectation use. In both cases it instructs the hearer to derive a negation of a proposition P. And in both cases the value of P is determined by the interpretation of the first clause. However, the role played by the first clause is very different in each case.[12] In the denial of expectation use the proposition introduced by *but* negates or implies the negation of a proposition which the speaker assumes the hearer to have derived as a contextual implication from the first clause. That is, the speaker is understood to have presented two propositions each of which is consistent with the Principle of Relevance, and *but* is a constraint on the relevance of the proposition it introduces. In the contrast use there is

no suggestion that the speaker is assumed to have derived P (in the case of (37) $F(Jane)$) from the first clause. The first clause affects the interpretation of the second in the sense that it gives the hearer access to a property whose ascription is understood to be negated by the second clause. That is, the speaker is understood to have presented a single conjoined proposition whose relevance hinges on the way in which the first conjunct affects the context for the interpretation of the second – a way which is linguistically constrained by the use of *but*.

NOTES

* The original version of this paper was based on a section of my book *Semantic Constraints on Relevance*. However, it has undergone substantial revision since it was first submitted to *Linguistics and Philosophy*, and as a consequence, some of its claims depart from those made in the book. Both versions owe a great deal to Robyn Carston and Deirdre Wilson with whom I have had many useful discussions about conjunction and contrastivity. I would also like to thank Scott Soames and an anonymous reviewer for their comments on the earlier version. I have not always followed their advice and any mistakes that follow are mine alone.

[1] For a clear statement of this approach to the meaning of *but* see Wilson (1975).

[2] Abraham (1977) has argued for three *buts* corresponding to the German *aber*, *sondern* and *dafür*.

[3] This suggests a non-unitary theory of linguistic semantics. On the one hand, there is the study of logical form – that essentially conceptual theory which deals with the way in which elements of linguistic structure map onto constituents of propositional representations. On the other, there is the study of linguistic constraints on relevance – that essentially procedural theory which deals with the way in which elements of linguistic structure affect pragmatic computations. For further discussion see Blakemore 1987.

[4] For a more detailed analysis of these expressions see Blakemore 1987.

[5] Notice that a conjoined proposition may be expressed across two (or more) speakers' contributions. However, in such cases I would say that the second speaker is continuing or taking over the first speaker's utterance rather than responding to it. That is, the conjunction of the two contributions will be consistent with the Principle of Relevance. Notice too that *and* is not always used to form a conjoined proposition which has relevance over and above that of its conjuncts. It is sometimes used to express what I have called a discourse, a use which is often represented orthographically by making *and* sentence initial.

[6] This analysis sheds light on H. Clark's observation (cited in Gazdar (1979), also see Clark (1977)) that whereas the causal connotations of the conjoined utterance in (i) are also conveyed by the full-stop utterance in (ii), the suggestion conveyed by (iii) cannot be conveyed by the conjoined utterance in (iv):

    (i)   The road was icy and she slipped.
    (ii)   The road was icy. She slipped.
    (iii)   She slipped. The road was icy.
    (iv)   She slipped and the road was icy.

For further details see Blakemore (1987). This sort of phenomenon is also discussed by Bar-Lev and Palcas (1980) who argue for a semantic (rather than Gricean) account of asymmetric conjunction.

[7] There is an interpretation for this utterance which may appear to be very similar to the denial of expectation interpretation in which the speaker is taken to be proving the falsity of the claim that all Republicans are dishonest. However, notice that the success of the proof hinges on the truth of the conjunction. That is, it is the conjunction that is relevant.

[8] In Blakemore (1987) I suggested a rather different explanation for this phenomenon, namely that sets of assumptions can fall under the scope of logical operators. While I think that there are other examples which show this to be the case, I no longer with to maintain the view that *but* cannot be part of a conjoined utterance.

[9] I am grateful to an anonymous *Linguistics and Philosophy* reviewer for his/her comments on this section.

[10] Notice that (39) would be acceptable if *but* were understood in its denial of expectation sense.

[11] For a more detailed analysis of the connotations conveyed by conjoned utterances see Carston (forthcoming).

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