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8

ON GRICE'S THEORY OF CONVERSATION*

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It is now ten years since Paul Grice, in his William James Lectures, laid down the foundations for a theory of conversation.¹ Although the full text of these lectures has never been published, Grice's views have had considerable influence on most recent approaches to pragmatics. Following Grice, conversation is now generally conceived of as a cooperative venture, governed by maxims of truthfulness, relevance, informativeness and manner, which may be exploited for particular conversational effects.² A distinction between what the speaker explicitly said and what he tacitly implied or implicated, and a classification of implicatures into various types, are now part of the standard machinery for pragmatic analysis. Although specific proposals have been made for extending, supplementing or modifying Grice's machinery, it seems no exaggeration to say that most recent theories of utterance-interpretation are a direct result of Grice's William James Lectures.³

The value of Grice's work derives not so much from the detail of his analyses as from the general claim that underlies them. Grice has shown that given an adequate set of pragmatic principles – to which his conversational maxims are a first approximation – a wide range of what at first sight seem to be arbitrary semantic facts can be seen as consequences of quite general pragmatic constraints. The broad outline of this position is extremely convincing, and we have relied on it in our own recent research. However, it seems to us that its detail needs considerable modification if any further progress is to be made. In this paper, we shall assume that the advantages of a Gricean approach are well enough known to need no further comment, and concentrate instead on three main areas of dissatisfaction. First, we shall argue that the distinction between saying and implicating is not as simple as Grice suggests, and that the hearer uses Grice's maxims not only in deciding what has been implicated, but also in deciding what proposition has actually been expressed. Secondly, we shall argue that there is more to the interpretation of such figures as irony and metaphor than a mere knowledge of the maxims of conversation, although Grice seems to suggest that there is not. Thirdly, we shall take up the notion of implicature itself, and go on to argue that the maxims are not all independently necessary for the generation of implicatures: that they may in fact be

reduced to a single principle, which we call the principle of relevance. The resulting account, while it differs considerably from Grice's, seems to us to do greater justice to the processes involved in the interpretation of utterances.

1. The Role of Grice's Maxims in Determining What is Said

Grice seems to be attempting to provide a framework into which every aspect of the interpretation of an utterance can be fitted. He draws a major distinction between what is actually said and what is tacitly implicated, suggesting that every aspect of interpretation can be assigned to one or other category. What is said (in our terms, what proposition the utterance is taken to express) is largely determined by linguistic rule, while what is implicated is largely determined by social and other maxims. The implicatures are subclassified into various types, the most important being the conversational implicatures, governed by the conversational maxims. It seems to follow, within Grice's framework, that (a) the maxims play no role in determining what is said, and (b) any aspect of interpretation governed by the maxims must be analysable as a conversational implicature. In fact, neither of these claims seems to be true. We shall argue that while there is a valid distinction between the proposition expressed by an utterance and the conversational implicatures conveyed, the hearer uses Grice's maxims as much in determining what proposition has been expressed as in determining its conversational implicatures. In other words, the scope of the maxims, and of pragmatic theory, is wider than Grice thought, and the semantics-pragmatics distinction cannot be reduced to a distinction between saying and implicating.

As Grice points out, in order to know what the speaker actually said on a given occasion of utterance, two things are necessary: first, knowledge of the range of possible senses of the utterance and its range of possible referents; and secondly, a decision about which sense and reference the speaker intended it to have on that particular occasion. Now while the first of these is explicitly given by semantic rules, the second is not. What Grice fails to notice is that the maxims of conversation play just as great a role in determining this second, context-sensitive aspect of what is said as they do in working out the conversational implicatures of an utterance. In other words, the distinction between saying and implicating is not co-extensive with the semantics-pragmatics distinction, and neither corresponds exactly to the distinction

between explicitly and implicitly given information.

Consider the following utterance:

(1) Refuse to admit them.

In Grice's terms, (1) has at least two possible senses, depending on whether *admit* means 'let in' or 'confess to'. It also has an indefinite range of possible referents, since *them* could refer to any group of people or objects known to speaker and hearer. Now imagine that (1) is said in response to (2):

(2) What should I do when I make mistakes?

Interpreting (1) in this context, the hearer can immediately eliminate all of the possible interpretations of (1) except the one in which *admit* means 'confess to' and *them* refers to the speaker's mistakes. When (1) is said in response to (3), the interpretation changes considerably:

(3) What should I do with the people whose tickets have expired?

Here, *admit* will be interpreted as meaning 'let in', and *them* as referring to the people whose tickets have expired. In considering how these interpretations are achieved, there is an obvious point to make. Whatever the context, (1) still has an indefinite range of logically possible interpretations, any one of which could have been intended by a speaker who was not observing Grice's maxims. It seems clear that the hearer's ability to select the appropriate interpretation for (1) in the context of (2) or (3) must depend on his tacit assumption that the speaker has observed Grice's maxims, and in particular the maxim of relevance. He can then eliminate any interpretation which does not accord with this assumption. In other words, at least two aspects of what is said (what proposition is expressed) — disambiguation and the assignment of reference — are not semantically but pragmatically determined: they are not explicitly given by semantic rule but implicitly determined by context and the maxim of relevance. The semantics-pragmatics distinction cross-cuts the distinction between saying and implicating.

This in turn suggests the more general claim, to which we know of no serious counter-examples, that hearers invariably ascribe sense and reference to utterances (within the limits allowed by the grammar) in such a way as to preserve their assumption that the conversational maxims have been observed. If this is true, the disambiguation of

utterances, and the assignment of reference to their referring phrases, must fall squarely within the domain of pragmatics, and within the scope of the conversational maxims, contrary to what Grice appears to claim.⁴ Pragmatics must be concerned with more than just the nonconventional implicatures of an utterance: it should also be able to account for certain implicit aspects of what is actually said.

Nor is it just disambiguation and the assignment of reference in which the maxims play a role. Quite often, they lead the hearer to ascribe to an utterance some propositional content that is not strictly warranted by semantic rules alone. Suppose John Smith is playing the violin in front of us, and I say to you:

(4) John plays well.

In these circumstances, I would naturally be taken as having expressed the proposition in (5):

(5) John Smith plays the violin well.

The fact that *John* is taken as referring to John Smith, and that *play* is taken as meaning 'play a musical instrument' rather than 'play a game', has already been accounted for. The resulting proposition should be (6), where the missing direct object in (4) is semantically interpreted in terms of a specific indefinite phrase:

(6) John plays some musical instrument well.

It is clear, though, that the hearer of (4) will normally interpret it as expressing not (6), but the more specific (5). We shall not attempt a full account of this fact here. Note, however, that (5) entails (6), so that whenever (5) is true (6) will also be true, but not vice-versa. (5) therefore has more chances of being informative than (6), and one can conceive of circumstances in which (5), but not (6), would satisfy the maxims of informativeness, and (5) would thus be preferred to (6). It seems clear that any adequate account of how (4) is interpreted as expressing (5) rather than (6) will have to appeal to the maxims of informativeness, and that these may lead the hearer to choose a more specific interpretation than is warranted by the semantic rules alone.

Grice's framework forces us to ask whether in cases like the above the speaker of (4) SAID (5), or merely implicated it. Neither answer seems to be entirely adequate. On the one hand, the speaker of (4) can

deny without contradiction that he meant (5) – as in (7), for example:

(7) John plays well – he just doesn't play the VIOLIN well.

This suggests that (5) should be classed as a conversational implicature rather than part of what is said, since it is a defining property of conversational implicatures that they are always cancellable. However, disambiguation and the assignment of reference give rise to similar cancellable aspects of the interpretation of an utterance, which Grice explicitly claims form part of what is said. Moreover, if we want to maintain the intuitive distinction between the propositions expressed by an utterance and the implicatures worked out on the basis of the propositions expressed, then (5) does not fall at all naturally into the class of conversational implicatures, since it is on the basis of (5) rather than (6) that the implicatures of (4) will be worked out. Within Grice's framework there will thus be certain aspects of interpretation that cannot be satisfactorily classified: they are not explicitly given by semantic rule, but they are not conversational implicatures either. Rather than distinguishing, as Grice does, between what is explicitly said and what is tacitly implicated, it would be more satisfactory to distinguish, as we have been suggesting, between the proposition the speaker is taken to have expressed – partly explicitly, partly implicitly – and the deductions of various types which can be drawn from it. The conversational maxims, and in particular the maxim of relevance, have a role to play in both aspects of interpretation.⁵

The main purpose of this section has been to show that Grice's fundamental distinction between what is said (as given by semantic rules) and what is conversationally implicated (as given by the conversational maxims) is neither exclusive nor exhaustive. The maxims play a role in disambiguation, the assignment of reference and, more generally, in determining the proposition expressed by an utterance as well as its conversational implicatures. If he fails to invoke the maxim of relevance in particular, the hearer will not only miss the subtler implications of an utterance; quite often he will have no idea what was actually being said. In this respect at least, the scope of the maxims, and hence of pragmatic theory, is wider than Grice thought.

2. The Role of the Maxims in the Interpretation of Figurative Utterances

Grice claims that irony, metaphor, meiosis (understatement) and

hyperbole can all be analysed in terms of conversational implicatures. Not only that, they all result from violation of the same maxim: 'Do not say what you believe to be false'. In other words, the salient feature of figurative utterances, as Grice sees them, is that they are patently false. According to Grice, the hearer concludes that the speaker must have been attempting to get across some closely related proposition which does not violate the maxim of truthfulness: in the case of irony, for example, it might be the contradictory of the proposition uttered, and in the case of metaphor it might be a comparison, so that a metaphor is reinterpreted as implicating a simile. Grice makes no suggestion about which related propositions would be conveyed by meiosis or hyperbole; however, in the case of meiosis it might be a strengthened version of the proposition expressed by an utterance, and in the case of hyperbole a weakened version. The originality of this approach lies mainly in its attempt to incorporate traditional rhetorical ideas into a modern theory of pragmatics. However, the attempt seems to us to raise a number of new problems, while failing to provide solutions to many of those already in existence.

In most of the examples of conversational implicature that Grice discusses, the speaker of an utterance intends to convey both what is conversationally implicated *and* what is actually said. In the case of metaphor, irony and so on, the speaker intends to convey only what is conversationally implicated: the conversational implicatures of the utterance thus have to be seen as cancelling what is actually said. This analysis seems to us to involve an unjustified extension of the notion of a conversational implicature. The basic rationale behind the notion of conversational implicature is that the hearer posits the existence of an implicature in order to preserve his assumption that the conversational maxims have been observed on the level of what is said. In the case of metaphor, irony and so on, the fact that an implicature has to be *substituted* for what was literally said ought to confirm the hearer's suspicion that the maxims have been violated, rather than preserving his assumption that they have been obeyed. In other words, the implicatures carried by irony, metaphor, etc. do not seem to be at all of the same type as more standard implicatures; they do not satisfy the same basic definition, and they must be worked out according to rather different principles.

The connection between Grice's conception of irony and metaphor and the traditional rhetorical view that certain utterances have 'figurative' as opposed to 'literal' meaning should be obvious. In both cases the interpretation of an utterance is claimed to involve the substitution of

one type of conveyed meaning for another; in both cases the relations between 'literal' and 'figurative' meaning, and the rationale for substituting one for the other, remain unclear.

Grice claims that when faced with a blatant and deliberate falsehood, the hearer looks around for some proposition closely related to the one expressed, and interprets this as an implicature. One of the problems here is simply deciding what counts as a 'closely related proposition', one which could be got across by a figure of speech. Given that there are figures based on contradiction and comparison, for example, why not also a figure based on reversal of subject and object roles, so that where *Peter loves Mary* is patently false, it is taken as implicating *Mary loves Peter*? There is a vast range of similar logical relationships among propositions which are never called on in the interpretation of utterances.⁶ This strongly suggests that it is not logical factors alone, but also other psychological factors, that govern our perception of relationships among propositions. Certain such relationships spring immediately to mind, while others, just as obvious from the logical point of view, are simply never noticed.

Even given that certain patently false utterances are interpreted as implicating their contradictories, others as implicating related similes, and so on, it would still be a mystery, in Grice's framework, why not all patently false utterances are figuratively interpreted. If Grice's account of figurative speech is correct, it should always be possible, for example, to hand someone a £5 note and say (8), knowing that it will be interpreted as ironical:

(8) This is not a £5 note.

In the same circumstances, (9) should always be capable of metaphorical interpretation, (10) of interpretation as meiosis, and (11) of interpretation as hyperbole:

(9) This is a 5 yen note.

(10) This is a £3 note.

(11) This is a £20 note.

Obviously, in the absence of special circumstances, if the falsehoods in (8)–(11) are explicable at all, they would be taken as mistakes, jokes or irrelevancies, rather than as figurative uses of language.⁷

The above examples show that violation of the maxim of truthfulness is not a sufficient condition for figurative interpretation. In fact, it is

not necessary either. This should be obvious enough in the case of meiosis, which is generally truthful but not informative enough, as where (12) is said of a goalkeeper who has let in twelve or fourteen goals:

(12) It's not his best game ever.

But in addition, ironical declaratives such as (13) and hyperbolic declaratives such as (14) have as counterparts such questions as (15) and (16); these retain their figurative character even though there can be no question of their violating the maxim of truthfulness.

(13) Hector's a genius.

(14) No-one could be nicer than Stella.

(15) a. Isn't Hector a genius?

b. Is Hector a genius?

(16) Who could be nicer than Stella?

It is true that (15) and (16) can be interpreted as 'rhetorical questions', which simultaneously implicate and ask a question about their related declaratives (13) and (14). The irony in (15) and the hyperbole in (16) could then be linked to the fact that the alleged implicatures in (13) and (14) are patent violations of the maxim of truthfulness. But such an account, however plausible, is incompatible with Grice's framework. In Grice's framework, the hearer looks for an interpretation which conforms to the maxims, and only introduces an implicature in order to arrive at such an interpretation. Now (15) and (16) can perfectly well be understood as non-rhetorical questions which carry no implicatures at all. Moreover, to interpret (15) as implicating (13), and (16) as implicating (14), is to *introduce* a violation of the maxims, rather than getting rid of one, since by hypothesis, in these figurative cases, (13) and (14) would be literally false. Nothing in Grice's framework appears to justify such a move.

Given a metaphor such as (17), there is always a related question such as (18) and a related declarative such as (19), both of which would be interpreted metaphorically even though they do not violate the maxim of truthfulness:

(17) Her mother is an angel.

(18) Isn't her mother an angel?

(19) Her mother is no angel.

It would, of course, be possible to persist in the claim that figurative utterances always result from violation of one of the maxims. But as is shown by (12), (15), (16), (18) and (19), it is just as likely to be a violation of informativeness or relevance as a violation of truthfulness that gives rise to figurative interpretation. It does not seem that any particular one of Grice's maxims should be given a privileged position in a unified account of figurative language.

Grice's account of figurative language seems inadequate in some respects and mistaken in others. The most serious objection to his account is that the interpretation of a figurative utterance cannot be reduced to the mere search for an appropriate implicature. The interpretation of an utterance may be regarded as a set of propositions: as we have seen, some of these are propositions expressed by the utterance, while others are implicated by it. However, in addition to the propositions it expresses or implicates, an utterance may suggest to the hearer certain non-propositional lines of interpretation – for example by evoking images or states of mind – which are precisely characteristic of figurative utterances, and which cannot be analysed within Grice's framework at all.

Grice probably has these aspects of interpretation in mind at the end of *Logic and Conversation* (1975), when he suggests that an utterance may implicate, not a specific proposition, but an open-ended disjunction of propositions. However, he defines implicatures as premises in an argument designed to preserve the hearer's assumption that the maxims have been obeyed, and an open-ended disjunction of propositions can never be a premise in a valid argument. What this suggests is that some other process, quite distinct from implicature, is at work in figurative interpretation. Instead of saying that a figurative utterance implicates an open-ended disjunction of propositions, we shall say that it evokes a range of propositions, possibly interspersed with images.

To take a concrete example, consider Grice's case of meiosis: the remark in (20) applied to someone known to have broken up all the furniture:

(20) He was a little intoxicated.

What makes (20) figurative is precisely that it does not simply implicate a proposition closely related to the one literally expressed. In particular, it is not merely equivalent to (21), as we believe Grice wants to suggest:

(21) He was exceedingly drunk.

As well as implicating something like (21), (20) calls to mind, as (21) does not, a world in which it *would* be considered appropriate to utter (20) of a man in an advanced state of drunkenness; a world, perhaps, in which the full extremes of drunkenness and violence are much more commonly encountered, and have much more notable consequences. Alternatively, (20) might evoke, as (21) does not, an image of its speaker as a man of such unassailable stoicism and imperturbability that even violent drunkenness fails to move him. In either case, (20) does much more than merely implicating (21) – not because it carries other, equally specific implicatures, but rather because it evokes an indefinite range of conjectures and images.

Thus, while Grice underestimated the scope of the maxims in the case of saying versus implicating, he seems to have overestimated it in the case of figurative interpretation. What seems to be needed is a new type of interpretive mechanism, in addition to the semantic and pragmatic ones already available, which can account for irony, metaphor, and figurative interpretation in general. Considerable progress has been made, largely thanks to Grice, by relieving semantics of a number of problems which were better handled within an improved theory of pragmatics; it now seems that if pragmatics is to progress further, it will have to be relieved in turn of a number of problems which cannot be handled in purely grammatical or logical terms, and demand treatment within a separate theory of rhetoric.⁸

3. Conversational Implicatures and the Reduction of Grice's Maxims

Grice defines a conversational implicature as a proposition which the hearer must take the speaker to believe, in order to preserve his assumption that the Co-Operative Principle and maxims have been obeyed. Such implicatures, although often intuitively grasped, must also, Grice says, be capable of being explicitly worked out: by this he presumably means that they are deducible on some basis from the content of the utterance and the fact that it was made. There are a number of ways of construing this definition, and the examples of conversational implicature that Grice gives do not always point to a unique construal. In this section, we shall choose a fairly narrow construal, but our main purpose will be to show that Grice's fundamental distinction between saying and implicating obscures a number of aspects of utterance-interpretation, and to provide a more satisfactory account. In this new account, conversational implicatures will play a central role, but will by no

means exhaust the propositions contributed by the pragmatic interpretation process.

Consider question (22) and the range of possible answers in (23a-d):

(22) Do you ever talk to Charles?

(23) a. No, I never talk to him.

b. He is a philosopher, and I never talk to philosophers.

c. I never talk to philosophers.

d. I never talk to plagiarists.

Assume that in (23a-d) the hearer construes the referring phrases *he/him* and *I* along the lines suggested in section 1: in accordance with the maxim of relevance. Assume also that it has already been established between the speaker and hearer of (23c) that Charles is a philosopher, but that it has not been similarly established for (23d) that Charles is a plagiarist. In these circumstances, each of (23a-d) may be construed as conveying the answer (24) to (22):

(24) The speaker of (23) never talks to Charles.

In virtue of this, each of (23a-d) is a relevant response to (22); however, it is intuitively clear that each is less direct than the preceding one, in the sense that each requires the hearer to do more work in arriving at the conclusion (24).

In the circumstances just outlined, (24) is directly expressed by (23a). While not directly expressed by (23b), it is deducible from (23b) given standard rules of deduction. While not deducible from (23c) alone, it is deducible from (23c) together with premise (25), which we are assuming to be an established part of shared knowledge:

(25) Charles is a philosopher.

Finally, while (24) is neither expressed by (23d) nor deducible from it in any of the ways just mentioned, it would be so deducible if the extra premise in (26) could be added to shared knowledge:

(26) Charles is a plagiarist.

The increasing indirectness of the responses in (23a-d) can thus be correlated with the amount of work each requires from the hearer in order to arrive at (24). (23a) requires him to do no work beyond

establishing which proposition is expressed by the utterance; (23b) requires him to do this, and also to draw a deduction from the proposition expressed; (23c) requires him first to retrieve a proposition from his memory store, and then to draw a deduction from the proposition retrieved, together with the proposition expressed by the utterance; and (23d) requires him to construct, rather than retrieve, a certain proposition, and then to draw a deduction from it, together with the proposition expressed. A framework which provided an account of these facts would be able to reconstruct the intuitive notion of 'indirectness of response' in the way just outlined.

It is clear from the account of (23a-d) just given that the process of utterance-interpretation is essentially a deductive one, and that the elements involved in the deduction are:

- (a) the propositional content of the utterance
- (b) items of the hearer's background knowledge
- (c) a set of inference rules
- (d) the maxims of conversation.

In the case of (23a-c) the deductive process is a straightforward one, with the maxims, and in particular the maxim of relevance, playing no role apart from constraining input and output propositions: selecting the relevant premises, and determining when a relevant conclusion has been reached. We shall argue that the interpretation of (23d) is also straightforwardly deductive, but that the assumption that the speaker has observed the maxim of relevance itself occurs as a crucial premise in the deduction.

Part of the hearer's background knowledge will derive from the fact that a certain utterance has been made, and the circumstances and manner in which it was made. Knowledge of this type is contributed by every utterance, not in virtue of its content, but in virtue of its context and style. In the case of (23a-c) knowledge of this type plays no crucial role in the interpretive process, but in the case of (23d) it seems that it must play such a role.

When the content of the utterance alone does not suffice to establish its relevance, as it does not in the case of (23d), a hearer who assumes that the conversational maxims have been observed may introduce as one of the premises in his deduction the fact that it was said, and said in a particular manner, perhaps in response to other remarks. In the case of (23d) he might reason as follows. (23d) was said in a manner which does not suggest that the speaker was opting out of the maxim

of relevance, and said in response to question (22). (22) is itself a yes-no question, and a maximally relevant response to it will entail either (24) or its negation (27):

(27) The speaker of (23d) sometimes talks to Charles.

To establish the relevance of (23d), its hearer must thus supply premises which, together with the content of (23d), will entail either (24) or (27). The additional premise that Charles is a plagiarist, together with the content of (23d), entails (24), and would therefore establish the relevance of the utterance. If the speaker can find no other such premise, and can find none that would combine with (23d) to yield (27), then it follows that *only* with this additional premise can the relevance of (23d) be established. On the assumption that the maxim of relevance has been observed, it will then follow logically that Charles is a plagiarist – or that the speaker of (23d) wants the hearer to think so. In this way, the additional premise is deducible, not from the content of (23d) alone, but from its content together with the fact that it has been made in certain circumstances, and from the maxim of relevance itself. Given the additional premise, he can then proceed to the conclusion that the speaker of (23d) never talks to Charles, and so establish the relevance of the utterance.

According to the account just given, the interpretation of the utterances in (23a–d) proceeds in essentially the same fashion. In each case, the hearer tries to establish the relevance of the utterance by deducing either (24) or (27). In the case of (23a–b), items of background knowledge are used only in deciding what proposition the utterance expresses. In the case of (23c), a crucial premise must be supplied from the hearer's background knowledge, and in the case of (23d) a crucial premise must itself be deduced in the way outlined above. We suggest the following terminology for distinguishing the four separate cases: (23a) **expresses** (24); the proposition expressed by (23b) **logically implies** (24); and (23c) and (23d) both **pragmatically imply** (24), where pragmatic implication is defined as follows:

- (28) A proposition P pragmatically implies a proposition Q if f:
- (a) P, together with other premises M, supplied by the hearer, logically implies Q
 - (b) P does not logically imply Q
 - (c) M does not logically imply Q.⁹

Where the pragmatic implication follows from the content of the utterance and the hearer's background knowledge alone, as in the case of (23c), we shall call it a **direct pragmatic implication**; where an additional premise, not part of the hearer's background knowledge, has to be supplied, as in the case of (23d), we shall call it an **additional premise**; and the pragmatic implications which follow from additional premises and the maxim of relevance, as in the case of (23d), we shall call **indirect pragmatic implications**.

It is an open question which of the categories defined above Grice would regard as conversational implicatures. Broadly speaking, direct and indirect pragmatic implications and additional premises could all be seen as conversational implicatures; but the essential differences between them would then be obscured. A narrower construal is suggested by two facts: first, Grice continually refers to conversational implicatures as premises rather than conclusions in a deductive process; and secondly, he continually refers to them as deriving from the fact that the utterance was made rather than its propositional content alone. Given this, the most plausible assumption is that Grice intended conversational implicatures to be co-extensive with what we have been calling additional premises. If this is so, it follows, as we have suggested above, that the distinction between saying and conversationally implicating is very far from exhausting all aspects of utterance interpretation: there is no place in Grice's framework for the categories of direct and indirect pragmatic implications, which play a crucial role in interpretation.

As a result of these omissions, it seems to us that Grice has deprived himself of the necessary tools for defining relevance. We shall argue that the relevance of an utterance can be assessed in terms of its pragmatic implications, both direct and indirect; we would also claim that additional premises contribute only indirectly to the relevance of an utterance, via the indirect pragmatic implications they bring along with them. A framework with no explicit place for pragmatic implications is thus a framework which lacks the categories necessary for defining relevance.

On an extremely intuitive level, the more pragmatic implications an utterance has, the more relevant it is. This needs some qualification: of two utterances which are equally rich in semantic content, it will be the one with more pragmatic implications that is also more relevant; however, of two utterances which are equally rich in pragmatic implications, it will be the one with *less* semantic content that is also more relevant. For example, if (29) has more pragmatic implications than (30), it is (29) that will be more relevant:

- (29) The girl Bill saw yesterday works as a part-time cashier in a bank.
(30) The girl Bill saw yesterday works in a bank.

On the other hand, if (29) and (30) have the same number of pragmatic implications, it is (30) rather than (29) that will be more relevant. In other words, if the information that the girl referred to is a part-time cashier contributes to the pragmatic implications of (29), then (29) will be more relevant than (30); on the other hand, if this information contributes no pragmatic implications at all, this will *detract* from the relevance of the utterance, so that (30) will be more relevant than (29).

Because of the connection between pragmatic implications and background assumptions, two different hearers with different beliefs and assumptions will not always draw the same pragmatic implications from a given utterance, and will thus not perceive its relevance in the same way. A single hearer at different times and in different circumstances will bring different beliefs and assumptions to bear on the interpretation of an utterance, and in this case too, his judgements of relevance may vary. In general, the relevance of an utterance is established relative to a set of beliefs and assumptions — that is, a set of propositions; relevance is a relation between the proposition expressed by an utterance, on the one hand, and the set of propositions in the hearer's accessible memory on the other.

On a slightly more abstract level, the more pragmatic implications a proposition P has relative to a set of assumptions M, the more relevant P is to M. When two propositions P and Q have the same pragmatic implications relative to a set of assumptions M, the proposition with less semantic content is the more relevant to M.¹⁰

One of the factors affecting judgements of relevance will thus be the set of assumptions M brought to bear on the interpretation of an utterance. One of the tasks of pragmatic theory is to describe how a given utterance helps to determine the set of assumptions against which its relevance — and that of the following utterance — is to be assessed. We can state the problem a little more precisely. There are two fairly well-defined sets of propositions available to speaker and hearer at a given moment in conversation. On the one hand, there is the set consisting of the shared beliefs and assumptions of speaker and hearer which are actually accessible to them at that moment; on the other hand, there is the set of propositions which have been used in the interpretation of the preceding utterance, or which form part of its interpretation. In general, the set M against which the relevance of an utterance is assessed

is included in the former set, and includes the latter. Depending on the nature of the conversation (reasoned argument or informal chat), on whether the previous remark came early or late in the development of an argument, and on whether this remark was a question or an answer, the preferred set of assumptions *M* will vary between its upper and lower limits. In any case, speaker and hearer have a certain latitude in interpretation, and the hearer must thus form some hypothesis about the contents of the set *M* against which the speaker intended his utterance to be relevant; this hypothesis will be affected by the factors just mentioned. It seems to us that, put in these terms, the problem of how *M* is actually determined on any given occasion is in principle capable of solution, and that the notion of relevance in context is thus not irremediably vague.

We can use this definition of relevance to provide the following account of how utterances are interpreted.

The hearer treats (31) as axiomatic:

(31) The speaker has done his best to be maximally relevant.

The notion of 'doing one's best' will of course vary according to the type of conversation (cocktail party chat or academic seminar), and the amount of effort needed to establish the relevance of the utterance will also vary depending on the range of alternative hypotheses about the extent of *M*, the need for construction of additional premises, and so on. There will generally be several logically possible assignments of sense and reference to a given utterance: the hearer will choose the assignment which most clearly satisfies (31).

Taking the proposition thus expressed, together with a chosen set of assumptions *M*, the hearer proceeds to work out the direct pragmatic implications of the utterance. If there are enough of these to satisfy (31) above, the interpretation ends. If not, taking as his initial premises the fact and circumstances of utterance, the hearer attempts to construct additional premises. When these are added to *M*, indirect pragmatic implications may be obtained, and these, together with any direct pragmatic implications, may establish the relevance of the utterance. If this procedure fails, the rhetorical mechanisms of evocation are brought into play.

In other words, we are claiming that Grice's maxims can be replaced by a single principle of relevance (31). In interpreting an utterance the hearer uses this principle as a guide, on the one hand towards correct disambiguation and assignment of reference, and on the other in

deciding whether additional premises are needed, and if so what they are, or whether a figurative interpretation was intended. The principle of relevance on its own provides an adequate, and we think rather more explicit, account of all the implicatures which Grice's maxims were set up to describe. We shall try to illustrate this taking each maxim in turn. The maxims of quantity (32a) and (32b) are particularly vague:

- (32) a. Make your contribution as informative as is required (for the present purposes of the exchange).
- b. Do not make your contribution more informative than is required.

No clue is given about what constitutes the required level of informativeness. The principle of relevance subsumes both these maxims, and at the same time makes them more precise. If the speaker holds back some information which, together with M, would yield pragmatic implications, he is violating both the principle of relevance and maxim (32a). If he gives information which yields no pragmatic implications, he is violating both the principle of relevance and maxim (32b). Grice himself points out that the effect of (32b) is secured by his maxim of relevance. The effect of (32a) should be equally secured by a principle of *maximal* relevance, such as (31). Hence, in a system which contains (31), both maxims of quantity are redundant.

The maxims of quality (33a) and (33b) raise a number of problems, not all of which we shall go into here:

- (33) a. Do not say what you believe to be false.
- b. Do not say that for which you lack adequate evidence.

As we said above, being relevant is a matter of inducing the hearer to expand or modify his set of initial beliefs or assumptions. Such expansion or modification is the result of a deductive process based on premises supplied by shared knowledge, the content of the utterance, and, if necessary, the fact that the utterance has been made, and the circumstances in which it was made. It should go without saying that the premises used in this deduction include only those which the hearer believes or assumes to be true: to establish the relevance of an utterance, the hearer has to make valid inferences from a set of premises which are true, or assumed to be true.

A speaker aiming to maximise relevance will generally succeed in doing so if he does his best to speak truthfully and on the basis of

adequate evidence. Thus, in most cases, the principle of relevance subsumes the maxims of quality. However, there are certain cases in which the principle of relevance and Grice's maxims of quality make rather different predictions. For example, if (34) is said to a doctor by a patient who 'lacks adequate evidence', from Grice's point of view there will have been a violation of maxim (33b): the result should be a conversational implicature:

(34) I'm ill.

From our point of view, the circumstances of utterance are such that if the remark is sincerely made, its relevance is guaranteed: the fact that the speaker was not competent to pronounce on whether he was ill or otherwise would have little effect on the implications of the utterance. In such cases, it seems to be the principle of relevance which makes the correct predictions.

The maxim of relation (35) is clearly subsumed under the principle of relevance:

(35) Be relevant.

There remain only the maxims of manner, (36a-d):

- (36) a. Avoid obscurity of expression
 b. Avoid ambiguity.
 c. Be brief (avoid unnecessary prolixity).
 d. Be orderly.

(36a) obviously follows from the principle of relevance. Establishing the relevance of an utterance involves working out its pragmatic implications. This can only be done if the hearer knows which proposition has been expressed, and a speaker who talks obscurely runs the risk that the hearer will be unable to decide which proposition this is. Hence to speak obscurely is to violate the principle of relevance. (36b) is misplaced. In the first place, since virtually every utterance IS ambiguous, it seems that this maxim could never be satisfactorily obeyed. In the second place, there is in general no point in avoiding ambiguity, since, as we have argued, hearers normally select the interpretation on which the utterance would be most relevant. It is only in the rare cases where two senses of an utterance would be equally relevant that semantic ambiguity is accompanied by pragmatic equivocation.

Equivocation poses the same problem as obscurity of expression, and violates the principle of relevance in exactly the same way.

At the very least, maxim (36c) is misstated. The claim is that, given two utterances of different length which express the same propositions, it is always the shorter of the two that is the most appropriate. Apart from the fact that no clue is given how brevity should be measured (in terms of word-counts, syllable-counts, phrase-counts, syntactic or semantic complexity) the sentence-pairs in (37) and (38) clearly demonstrate that this claim is false:

- (37) a. Peter is married to Madeleine.
b. It is Peter who is married to Madeleine.
- (38) a. Mary ate a peanut.
b. Mary put a peanut into her mouth, chewed and swallowed it.

By any brevity-measure, the (a) member of these pairs is shorter than the (b) member. However, there are contexts in which the (b) member would be more appropriate, and where no conversational implicature would result from the consequent violation of the maxim of brevity.

In (37) and (38), the (a) and (b) members differ not in their logical implications, but in the relative importance assigned to them. By changing the linguistic form of his utterance — even at the expense of making it longer — the speaker can draw the hearer's attention to certain of its logical implications.¹¹ If these are the implications on which the relevance of the utterance depends, the speaker will then have done his best to indicate to the hearer how its relevance is to be established. This suggests the following corollary to the principle of relevance:

- (39) Where the linguistic form of an utterance draws attention to certain of its logical implications, these are the ones on which the relevance of the utterance depends.

Suppose that the speaker does not observe (39). Suppose, for example, that he says (40b) rather than (40a):

- (40) a. The baby is eating arsenic!
b. The baby is putting arsenic into his mouth, chewing and swallowing it!

(40b) suggests, absurdly in the context, that certain aspects of the

meaning of *eat* are particularly relevant to its interpretation. This is the real reason for its unacceptability: the fact that it is also longer than (40a) is incidental.

Maxim (36d) ('Be orderly') was set up mainly to explain contrasts of the following type:

- (41) a. Jenny sang, and Maria played the piano.
b. Maria played the piano, and Jenny sang.

In certain contexts, (41a) and (41b) are pragmatically equivalent, carrying the same implications and implicatures. However, as Grice points out, there are also possible interpretations on which (41a) and (41b) impute different temporal or causal relations to their constituent propositions. (41a), for example, would suggest that Jenny sang before Maria played the piano, and (41b) would suggest the reverse order of events. The maxim of orderliness was designed to explain these facts without appeal to any semantic claim that *and* has an extra sense, equivalent to *and then* or *and so*. We think the contrast between (41a) and (41b) can indeed be explained without postulating an extra sense of *and*, but we also think it can be explained without postulating a special maxim or orderliness.

All we need is the assumption that the hearer may establish the relevance of a co-ordinate proposition in two different ways. Either he works out the pragmatic implications of the two constituent conjuncts on the basis of the same set of initial assumptions M; or the implications and implicatures of the first conjunct are added to the set M on the basis of which the relevance of the second conjunct is established. In the latter case, differences in the order of conjuncts will be accompanied by differences in interpretation: when the constituent conjuncts refer to events, a temporal or causal link between them could thus be implicated. More generally, the order in which propositions are expressed — whether co-ordinate or not — will affect the set of initial assumptions M on the basis of which the relevance of succeeding utterances is established. Hence something rather more explicit than the maxim of orderliness follows automatically from the principle of relevance.

To sum up the arguments of this section: two of the manner maxims ('Avoid ambiguity' and 'Be brief') seem to us to be eliminable, at least in their present form. We have argued that all the other maxims reduce to a principle of relevance which, by itself, makes clearer and more accurate predictions than the combined set of maxims succeeds in doing.

Finally, we have suggested that there is a corollary to the principle of relevance, which can be used to account for certain effects of linguistic form on the pragmatic interpretation of utterances – effects which Grice largely ignored.

4. Concluding Remark

Grice claims that a speaker who observes the conversational maxims will in general also be observing the Co-operative Principle (42):

- (42) Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk-exchange in which you are engaged.

Would a theory in which Grice's maxims have, as we propose, been replaced by a principle of relevance and its corollary, also vindicate the Co-operative Principle?

It seems that the answer is no. Unlike the maxims, the principle of relevance does not follow from the Co-operative Principle. Obviously, it does not contradict it either: a theory which claimed that conversation was not a co-operative venture at all would be rather lacking in plausibility. However, it is not at all clear that it is *because* conversation is a co-operative venture that utterances are interpreted in the way they are. The account we are proposing might suggest rather that the speaker tries to have the maximum possible effect on the hearer's set of initial assumptions: a certain amount of co-operation is the price the speaker has to pay in order to succeed in this essentially egotistic enterprise. We do not want to defend this alternative view here: for one thing, it is extremely imprecise. However, we do want to draw attention to an important issue it raises: contrary to what Grice's theory leads one to expect, no clear moral or sociological principle emerges from the regularities that govern conversational behaviour.

Notes

*A shorter version of this paper appeared in French in *Communications*, 30 (1979) 80–94. We are grateful to Diane Brockway, Ruth Kempson, Geoff Pullum and Neil Smith for a number of helpful comments.

1. The term 'theory of conversation', though now standard, is really a misnomer. Grice's theory is in fact an account of how utterances are interpreted, and

not a theory of conversation at all: in the first place, it hardly touches on the characteristic alternation of roles in conversation, and in the second place, utterances which do not strictly form part of a conversation – for example lectures, articles, books – do fall within the scope of the maxims. See Grice (1968), (1975), (1978).

2. The maxims are stated in (32), (33), (35) and (36) below, and the Cooperative Principle in (42).

3. See, for example, Gazdar (1979), Kempson (1975), Wilson (1975), Harnish (1977), Morgan (1978) and Sadock (1978). In France, Ducrot (1972) has independently proposed a somewhat similar approach to Grice's.

4. Walker (1975) makes a similar point about disambiguation. The point is often overlooked: cf. Kaplan (1978), Stalnaker (1972), who suggest that context alone can determine disambiguation. This can clearly only be so to the extent that there is a highly constrained procedure for selecting a unique disambiguation, GIVEN a context. This procedure is what the maxims, and the assumption that they are being observed, seem to us to provide.

5. This new distinction has implications for the analysis of negative 'pre-supposition-carrying' utterances such as (i):

(i) Lydia's sister didn't play a piano sonata.

(i) is standardly interpreted as presupposing (ii); the problem is to decide whether it is related to (ii) by semantic or pragmatic rule:

(ii) Lydia has a sister.

Within Grice's framework, there are only two possibilities: either (ii) is part of the conventional meaning of (i), related to it by semantic rule, or it is a conversational implicature of (i), related to it via the maxims of conversation. Both possibilities have been investigated in some detail (see Oh and Dinneen, eds., 1979, for a representative collection of papers). However, as suggested above, there is a third possibility: that (ii) is related to (i) as (5) is related to (4), neither by conventional meaning alone, nor as a conversational implicature: as part of the proposition the speaker of (i) is taken to have expressed, but not in virtue of the semantic rules alone.

Suppose that (i) is semantically interpreted as expressing the external negation (iii):

(iii) It is not the case that Lydia has a sister who played a piano sonata.

Just as (6) is entailed by the more specific (5), so (iii) is entailed by the more specific internal negation (iv):

(iv) Lydia has a sister who didn't play a piano sonata.

A properly defined maxim of informativeness could lead the hearer to interpret (i) as expressing (iv) rather than the less specific (iii), in just the same way as it leads him to interpret (4) as expressing (5) rather than the less specific (6). (ii) is neither entailed nor conversationally (nor conventionally) implicated by (i): it is part of the proposition the speaker is taken to have expressed, but a part not determined by semantic rules alone.

6. See Harnish (1977) for further discussion of this point.

7. Grice (1978) makes this point about irony, but his discussion of it is rather inconclusive.

8. See Sperber (1975), Sperber and Wilson (forthcoming a, forthcoming c), for an account of figurative language along the lines laid down in this section.

9. The logic used in deriving pragmatic implications must in fact be more restricted than standard logics in at least one respect: it must lack certain 'trivial' inference rules contained in most standard logics. The 'trivial' rules are those that (a) apply to any proposition at all, regardless of its form or content, and hence (b) may reapply an indefinite number of times given a single initial premise or pair of premises. With the exclusion of these rules, the pragmatic implications of a given proposition will always be finite, given a finite set of premises. For further discussion, see Sperber and Wilson (forthcoming b).

10. For a more detailed definition of relevance along these lines, together with discussion of some problems it might seem to raise, see Sperber and Wilson (forthcoming b).

11. A detailed account of the mechanisms involved is given in Wilson and Sperber (1979). We have no space to do more than mention them here.

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