# H. P. Grice (1913–1988)

## STEPHEN NEALE

#### Life

Herbert Paul Grice was born on March 13, 1913, in Birmingham, England. He attended Corpus Christi College, Oxford, graduating in 1936. From 1938 until 1967 he held various fellowships and lectureships at St John's College. His time at Oxford was interrupted by nearly five years' wartime service in the Royal Navy, first in the North Atlantic and later in Admiralty intelligence. In 1967, he moved to the University of California, Berkeley as Professor of Philosophy. He was elected to the British Academy in 1966, and gave the William James Lectures at Harvard in 1967, the John Locke lectures at Oxford in 1978, and the Tanner Lectures at Stanford in 1980. He died in Berkeley in August 1988, shortly before the publication of his first book, *Studies in the Way of Words.* 

Grice was one of the most gifted and respected philosophers of the second half of the twentieth century. He set impossibly high standards and was always reluctant to go into print – heroic efforts were required by editors and friends to extract from him the handful of papers he deemed worthy of publication – yet he exerted considerable influence through seminars and invited lectures. He worked on topics in Aristotle, metaphysics, ethics, and philosophical psychology; but his strongest influence was in the philosophy of language, where his thought continues to shape the way philosophers, linguists, and cognitive scientists think about meaning, communication, and the relation between language and mind.

With respect to a particular sentence, *X*, and an "utterer" *U*, Grice stressed the importance of separating (1) what *X means*, (2) what *U said* on a given occasion by uttering *X*, and (3) what *U meant* by uttering *X* on that occasion. Second, he attempted to say what meaning *is* by providing analyses of utterer's meaning, sentence meaning, and what is said. Third, he tried to explain how what *U* says and what *U* means can diverge. Fourth, he defended conceptual analysis and some form of analytic/synthetic distinction. Fifth, by characterizing the distinction between the "genuinely semantic" and "merely pragmatic" implications of a statement, Grice clarified the relationship between classical logic and the semantics of natural language. Sixth, he deployed his notion of "implicature" to devastating effect against overzealous strains of "ordinary-language philosophy," without abandoning the view that philosophy must pay atten-

tion to the nuances of ordinary talk (see AUSTIN). Seventh, Grice undercut the most influential arguments for a philosophically significant notion of "presupposition." Eighth, he made significant contributions to debates about the semantics of proper names, definite descriptions, and pronouns. Ninth, he sketched a philosophical psychology and a theory of value that promise to provide the basis of future work on actions, mental states, and moral philosophy, and to explain the relationship between mind and language inherent in his philosophy of language.

#### Meaning, use, and ordinary language

The view that the only useful thing to say about the meaning of an expression is that it is usable in such-and-such circumstances, exercised a powerful influence on philosophy in postwar Oxford. Austin, Ryle, and others undercut philosophical positions or disposed of philosophical problems by pointing to a misuse of some expression playing an essential role in the presentation of the position or problem. Consider attempts to analyze *knowledge* in terms of *belief* along the following lines: A knows that p if and only if (1) A believes that p, (2) p, and (3) A is justified in believing that p. It might be charged that it is a feature of the use of "believe" that one does not use it if one can sincerely use "know" instead. Such a claim might be supported by observing that it would be inappropriate for a man to say "I believe Smith is dead" when he knows Smith is dead. And so it might be concluded that the proposed analysis must be discarded because clause (1) conflicts with the ordinary use of the verb "believe."

Grice accepted that a theory of meaning must be sensitive to use and attempted to explicate the meaning of an expression (or any other sign) in terms of what its users *do with it*, that is, in terms of what its users (could/would/should) mean by it on particular occasions of use. Two important ideas came out of this sensitivity to use. The first is that the locution *by uttering x*, *U meant that p* can be analyzed in terms of complex audience-directed intentions on the part of *U*. The second is that the most "basic" notion of meaning is that of an utterer *U* meaning something by doing something on a particular occasion; all other notions of meaning are derivative. What *U* means by producing *x* on a given occasion is a function of what *U* intends, in a complex way, to *get across* to his audience. The basic idea is, very roughly, that for an "indicative-type" utterance, the locution *by uttering x*, *U meant that p* expresses a truth iff *U* uttered *x* intending to produce in some audience *A* the belief that *p* by means of *A*'s recognition of this intention. Sentence meaning is to be analyzed in terms of regularities over the intentions with which utterers produce sentences on given occasions.

By uttering a sentence of the form "p or q." U may well imply that he has non-truthfunctional grounds for his assertion; but this is not part of what the sentence (or the statement made) implies. Grice wanted any adequate explanation of the possibility of pragmatic implications to flow from a completely *general* theory. To demonstrate the definite existence of pragmatic implications distinct from semantic implications, Grice considered an extreme example. Suppose A asks U for an evaluation of his student Mr. X. All U says is "Mr. X has excellent handwriting and is always very punctual." If U leaves it at that, those present are likely to conclude that U thinks Mr. X is not much good at philosophy. There is surely no temptation to say that the proposition that Mr. X is not much good (or that U thinks Mr. X is not much good) at philosophy is (or is a consequence of) the statement *U* made. The sentence *U* uttered has a clear linguistic meaning based on the meanings of its parts and their syntactical arrangement; and it seems quite wrong to say that, when he uttered that sentence, *U* made the statement that Mr. *X* is not much good at philosophy. On the other hand, it seems quite natural to say that, in the circumstances, what *U* meant (or part of what *U* meant) by making the statement he in fact made was that Mr. *X* is not much good (or that *U* thinks Mr. *X* is not much good) at philosophy. This is something *the utterer* implied by making the statement he did in this context, not something implied by the sentence uttered or by the statement *U* made by uttering the sentence.

## The theory of conversation

With respect to what *U* means by a linguistic utterance, Grice proposed to separate what *U* says and what *U* implicates (e.g. implies, indicates, or suggests). What *U* says is to be closely tied to the conventional meaning of the words uttered, which both falls short and goes beyond what is said.

It falls short because a specification of what *U* said on a particular occasion must take into account not only the conventional meaning of the sentence used but also (e.g.) the references of referring expressions (e.g. proper names, demonstratives, and indexicals) and the time and place of utterance. *What U said* is to do duty for *what U stated* or *the proposition expressed* by *U*. Where the sentence uttered is of the type conventionally associated with the speech act of asserting (i.e. when it is in the "indicative mood") what is said will be straightforwardly *truth-conditional*. When the sentence uttered is in the imperative or interrogative mood, what is said will not be straightforwardly truth-conditional, but it will be systematically related to the truth conditions of what *U* would have said, in the same context, by uttering the indicative counterpart (or one of the indicative counterparts) of the original sentence.

The conventional meaning of a sentence also goes beyond what is said because of devices that signal the performance of "noncentral speech acts" parasitic upon the performance of the "central speech acts" of asserting, questioning, and ordering. Such devices, although they play a part in determining what U meant, play no part in determining what U said. If U utters (1) rather than (2),

- 1 She is poor but she is honest
- 2 She is poor and she is honest

very likely U will be taken to be implying that there is (or that someone might think there is) some sort of contrast between poverty and honesty (or her honesty and her poverty). This type of implication is no part of what U says because it does not contribute in any way to the *truth conditions* of the utterance. By uttering (1), U has *said* only that she is poor and she is honest; and this does not entail that there is any (e.g.) contrast between poverty and honesty (or between her poverty and her honesty). The implication in question Grice calls a *conventional implicature*.

According to Grice, by uttering (1) U is performing two speech acts, *saying* that she is poor and she is honest and *indicating* (or *suggesting*) that someone (perhaps U) has a certain attitude toward what *is* said. Grice did not develop this idea; he just left us with the claim that a conventional implicature is determined (at least in part) by the (con-

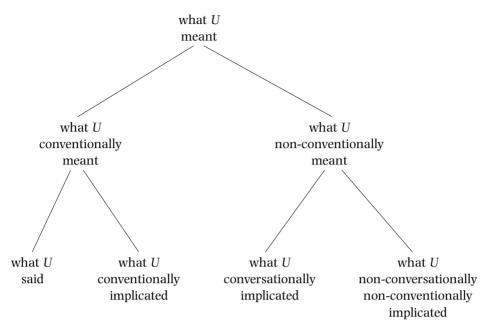


Figure 1

ventions governing) the words used. He does stress, however, that the sort of implication we have just been considering is not a *presupposition* (as originally defined by Strawson and adopted by others). B is a presupposition of A, just in case the truth or falsity of A requires the truth of B. (If the *truth* of A requires the truth of B, but the falsity of A does not, B is an *entailment* of A.) More precisely, if A presupposes B, A lacks a truth value if B is false. But as Grice points out, an utterance of (1) can be false even if the implied proposition is false, effectively scotching the idea that the implication is presupposition (at least not on the standard semantic conception of that notion). It is Grice's view that any alleged presupposition is either an entailment or an implicature.

For something to be (part of) what U says, it must also be (part of) what U meant, that is, it must be backed by a complex intention of the sort that forms the backbone of Grice's theory of meaning (see figure 1). If U utters the sentence "Bill is honest" ironically, on Grice's account U will not have said that Bill is honest: U will have made as if to say that Bill is honest. For it is Grice's view that a statement of the form "by uttering x, U said that p" entails the corresponding statement of the form "by uttering x, U meant that p." So on Grice's account, one cannot unintentionally say something (a fact that has interesting consequences for, for example, slips of the tongue and misused expressions).

Grice's work provides a breakdown of what *U* meant as shown in figure 1.

What *U* conventionally implicates and what *U* says are both closely tied to the conventional meaning of the sentence uttered, and they are taken by Grice as exhausting *what U conventionally means* (i.e. means by virtue of linguistic convention). Let us now

turn to what *U* non-conventionally means. Consider again, the example concerning Professor *U*'s evaluation of Mr. X. By uttering the sentence "Mr. X has excellent handwriting and is always very punctual," *U* said (or made as if to say) that Mr. X has excellent handwriting and is always very punctual. In addition, on Grice's account *U* conversationally implicated that Mr. X is not much good at philosophy (there is a conversational implicature to the effect that Mr. X is not much good at philosophy). Conversational implicature is a species of pragmatic (non-semantic, non-conventional) implication and is to be contrasted with the (at least partly semantic) implication that Grice calls conventional implicature. The principal difference between a conventional and a conversational implicature is that the existence of a conventional implicature depends upon the presence of some particular conventional device (such as "but," "moreover," "still," "yet," or heavy stress) whereas the existence of a conversational implicature does not.

Grice proposes to explain the possibility of a divergence between what U says and what U means (or at least between what U conventionally means and what U means) by appeal to the nature and purpose of rational interaction. Conversation is viewed by him as a characteristically purposeful and cooperative enterprise governed by what he calls:

The *Cooperative Principle*: 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. Subsumed under this principle, Grice distinguishes four categories of more specific maxims and submaxims enjoining truthfulness, informativeness, relevance, and clarity:

*Quantity*: Make your contribution as informative as is required (for the current purposes of the exchange); do not make your contribution more informative than is required.

*Quality*: Try to make your contribution one that is true. Specifically: (1) Do not say what you believe to be false; (2) Do not say that for which you lack adequate evidence.

*Relation*: Be relevant.

*Manner*: Be perspicuous. Specifically: (1) Be brief; (2) Be orderly; (3) Avoid ambiguity; (4) Avoid obscurity of expression.

Grice's basic idea is that there is a systematic correspondence between what U means and the assumptions required in order to preserve the supposition that U is observing the Cooperative Principle and conversational maxims. In the case of Professor U's evaluation of Mr. X, on the surface the Cooperative Principle or one or more of the maxims is intentionally and overtly not fulfilled. By saying "Mr. X has excellent handwriting and is always very punctual" (in this particular context), U seems not to have fulfilled one of the maxims of Quantity or the maxim of Relation. (If Mr. X is one of U's students, U must be in a position to volunteer more relevant information than judgments about Mr. X's handwriting and timekeeping; furthermore, U knows that more information, or more relevant information, is required.) The hearer is naturally led to the conclusion that U is trying to convey something else, something more relevant to the purposes at hand. In the circumstances, if U thought Mr. X was any good at philosophy he would have said so. So U must think Mr. X is no good at philosophy and be unwilling to say so. And so U has conversationally implicated that Mr. X is no good at philosophy.

One interesting feature of this example is that it might well be the case that only what is implicated is meant (i.e. backed by U's communicative intentions). Umay have no idea what Mr. X's handwriting is like because Mr. X has shown U only typed manuscripts of his work (or because he has never shown U anything), and U may have no opinion as to whether or not Mr. X is punctual. In such a version of the envisioned scenario, U has only made as if to say that Mr. X has excellent handwriting and is always very punctual because U had no intention of inducing (or activating) in his audience the belief that (U thinks that) Mr. X has excellent handwriting and is always very punctual. The truth-values of what U said (or made as if to say) and what U conversationally implicated may of course differ. Mr. X may have quite atrocious handwriting, and U may know this; but given the relevance of what is conversationally implicated, U may care very little about the truth-value of what he has said (or made as if to say). The primary message is to be found at the level of what is conversationally implicated.

In general, Grice claims, a speaker conversationally implicates that which he must be assumed to think in order to maintain the assumption that he is observing the Cooperative Principle (and perhaps some conversational maxims), if not at the level of what is said, at least at the level of what is implicated. At some overarching level of what is *meant*, *U* is presumed to be observing the Cooperative Principle. The wording of Grice's maxims suggests that some concern only what is said (e.g. "Do not say what you believe to be false") while others concern, perhaps, what is *meant* (e.g. "Be relevant"). We should probably treat this as something of an uncharacteristic looseness of expression on Grice's part. Except for the maxims under Manner (which can apply only to what is said) it seems reasonable to understand Grice as allowing a maxim not to be fulfilled at the level of what is said to be licensed or overridden by adherence at the level of what is implicated. On such a view, blatantly violating a maxim at the level of what is said but adhering to it at the level of what is implicated would not necessarily involve a violation of the Cooperative Principle.

Some important questions are still unanswered: How are *saying* and *implicating* to be defined? How are implicatures calculated? What is the status of the Cooperative Principle and maxims? What happens when a speaker cannot simultaneously observe all of the maxims? It is important to see how Grice attempts to face such questions.

No one should deny that in the example of the evaluation of Mr. X there is an intuitive and obvious distinction to be made between what U said and what U conversationally implicated. But in view of the sorts of example that really bother Grice – "the *F* is *G*," "*p* or *q*," "if *p* then *q*," etc. – he could not rest with an intuitive distinction. The example concerning the evaluation of Mr. X is clear-cut, obvious, and uncontentious. And herein lies the problem. The examples of purported conversational implicature that most interest Grice are philosophically important ones with respect to which many philosophers have not felt the need to invoke such a distinction. This might be because it is not at all obvious that there is such a distinction to be made in the cases in question (or if there is, how relevant it is), or because adherence to some form of the "meaning is use" dogma has blinded certain philosophers to the possibility of such a distinction. So Grice ultimately needs *analyses* of "what is said" and "what is conversationally implicated" in order to get philosophical work out of these notions.

Grice hopes to analyze the notion of saying in terms of utterers' intentions. This proposal will be examined after discussion of Grice's theory of meaning. He attempts to define conversational implicature in terms of an, as yet, undefined notion of saying. The following schema is supposed to be a first step:

Someone who, by (in, when) saying (or making as if to say) that p has implicated that q, has conversationally implicated that q, provided that (1) he is to be presumed to be observing the conversational maxims, or at least the Cooperative Principle; (2) the supposition that he is aware that q is required in order to make his saying or making as if to say p consistent with this presumption; and (3) the speaker thinks (and would expect the hearer to think that the speaker thinks) that it is within the competence of the hearer to work out, or grasp intuitively, that the supposition mentioned in (2) is required.

We appear to have here a set of *necessary* conditions. The conditions are not *sufficient* because conventional implicatures are not excluded. Whenever there is a conversational implicature, one should be able to reason somewhat as follows: (i) U has said that p; (ii) there is no reason to suppose that U is not observing the Cooperative Principle and maxims; (iii) U could not be doing this unless he thought that q; (iv) U knows (and knows that I know that U knows) that I can see that U thinks the supposition that U thinks that q is required; (v) U has done nothing to stop me thinking that q; (vi) U intends me to think, or is at least willing to allow me to think, that q; (vii) and so, U has implicated that q. In each of the cases Grice considers, it does seem to be possible to justify the existence of the implicature in question in this sort of way. But notice that q is simply introduced without explanation in step (iii), so Grice has certainly not stated any sort of method or procedure for calculating the content of conversational implicatures. A good deal of work needs to be done on the calculation of particular implicatures if Grice's evident insights are to form the basis of a finally acceptable theory.

A necessary condition on conversational implicatures that is intimately connected to condition (3) is that they are *intended*. This follows, if not from condition (3), at least from the fact that (a) what *U* implicates is part of what *U* means, and (b) what *U* means is determined by *U*'s communicative intentions. A hearer may think that, by saying that *p*, *U* has conversationally implicated that *q* (*A* may even have reasoned explicitly in the manner of (i)–(vii) above). But if *U* did not intend the implication in question it will not count as a conversational implicature.

We have, then, four conditions that are necessary but not sufficient for classifying an implication as a conversational implicature. Entailments do not seem to have been excluded. In order that we may stay focused on the relation between the speaker and certain propositions, let us make a harmless addition to Grice's terminology. If the proposition that p entails the proposition that q, then if U is a competent speaker who says that p, U thereby says\* that q. So if U is a perfectly competent English speaker who has sincerely uttered the sentence "John is a bachelor," not only has U said (and said\*) that John is a bachelor, he has also said\* that John is unmarried. It seems desirable that no proposition be both an entailment and a conversational implicature of the same utterance. But it is not obvious that the conditions laid down thus far on conversational implicature actually rule out entailments. Furthermore, Grice cannot just impose a further condition to the definition to the effect that no entailment is a conversational implicature. One of Grice's avowed aims is to ward off certain ordinary language arguments by invoking a sharp distinction between what we are now calling conversational implicature and entailment; so it is not good enough for him to use the notion of an entailment in a definition of conversational implicature.

A fifth condition Grice imposes on conversational implicatures seems to help. Unlike an entailment, a conversational implicature is supposed to be *cancelable* either explicitly or contextually, without contradiction. If U says<sup>\*</sup> that p, and p entails q, then U cannot go on to say\* that not-q without contradiction. For example, U cannot say "John is a bachelor and John is married." But if U says\* that p, and thereby conversationally implicates that q, U can go on to say\* that not-q without contradiction. Consider again the case of U's evaluation of Mr. X. After uttering "Mr. X has excellent handwriting and is always very punctual," U might (without irony) continue "Moreover, Mr. X's recent modal proof of the immortality of the soul is a brilliant and original contribution to philosophy." In the light of the first comment, this addition might be rather odd, but it would not result in U contradicting himself. (In addition to distinguishing conversational implicatures from entailments, the cancelability test is also supposed to distinguish conversational from conventional implicatures. Although it will not lead to contradiction, attempting to cancel a conventional implicature will result in a genuinely linguistic transgression of some sort. This is precisely because there is a distinct semantic component to conventional implicatures.)

Putting these five conditions together, we come as close as we can with Grice's machinery to a set of necessary and sufficient conditions on conversational implicature.

#### Philosophical psychology

For Grice, the principles involved in an account of conversational implicature are to be grounded in a philosophical psychology that explicates the purportedly hierarchical relationships that hold between the various types of psychological states we ascribe to creatures that can reason and form complex intentions. The beginnings of this line of thought can be traced to the end of his 1957 paper "Meaning." It contains the seeds of (1) the view that the Cooperative Principle and conversational maxims (in particular the maxim enjoining relevance) are to play a central role not only in an account of possible divergences between what *U* said and what *U* meant but also in an account of the resolution of ambiguities, and (2) the view that the use of language is one form of rational activity and that the principles at work in the interpretation of linguistic behavior are (or are intimately related to) those at work in interpreting intentional *non*-linguistic behavior.

Two questions spring to mind immediately: (1) What are the relative rankings of the maxims in cases where it is hard (or impossible) for U to observe all of them (or all of them to the same degree), and why? (2) What is the basis for the assumption that speakers will in general (*ceteris paribus* and in the absence of indications to the contrary) proceed in the manner prescribed by the Cooperative Principle and maxims?

Grice is explicit about the position of at least one of the maxims of Quality in any hierarchy. Suppose A is planning an itinerary for a vacation to France. A wants to see his friend C, if so doing would not require too much additional traveling. A asks B

"Where does *C* live?" *B* replies "Somewhere in the south of France." *B* knows that *A* would like more specific information but he is not in a position to be more specific. So *B* is faced with not fulfilling either a maxim of Quality or a maxim of Quantity. Quality wins out. The maxims of Quality have a very special status within Grice's overall theory and Grice entertains the idea that the first maxim of Quality should be part of some broader background; the other maxims come into operation only on the assumption that the maxim of Quality is satisfied. The maxims of Quality (or at least the first maxim of Quality) should not be thought of as admitting of degree or varying across cultures. In some sense this is an empirical matter; but unlike the maxims of Quantity and Manner, it does not seem very plausible to suppose that there are thriving cultures in which standardly people do not behave (for particular reasons to be determined by anthropologists) as if they are observing the maxims of Quality.

Grice was not satisfied with the idea that it is just a well-recognized empirical fact that people do behave in accordance with the maxims and the Cooperative Principle, that in childhood they learned to do so and have not lost the habit. He wanted to find a basis that underlies our behavior and believed it would have a moral dimension: not only do we *in fact* behave in the required way, but it is *reasonable* for us to do so, and the practice is something we *should not* abandon given our common purposes or goals. Conversation is one among a range of forms of rational activity for Grice. Observance of the CP and maxims is reasonable (rational): anyone concerned about the goals central to communication must be expected to have an interest, given suitable circumstances, in participation in informational exchanges that will be profitable only on the assumption that they are conducted in general accordance with the CP and maxims.

On Grice's view, value predicates such as "proper," "correct," "optimal," and "relevant" cannot be kept out of an account of rational activity because a rational creature is essentially a creature that *evaluates*. Whether a value-oriented approach to the interpretation of intentional behavior can be developed in a fruitful way remains to be seen. But as Grice's unpublished work on ethics and philosophical psychology becomes more widely available, there will likely be a resurgence of interest in the matter of the precise location of the theory of conversation within a larger scheme.

## The logic of natural language

One task of semantics is to provide a systematic characterization of judgments concerning truth, falsity, entailment, contradiction, and so on. In the light of theoretical considerations, an initial judgment of, say, entailment might be rejected on the grounds that the perceived implication is an implicature rather than an entailment. So far, we have considered only examples of what Grice calls "particularized" conversational implicature, examples in which there is no temptation to say that the relevant implication is an entailment (or a "presupposition"). Of more philosophical interest are "generalized" conversational implicatures, the presence and general form of which depend little upon the particular contextual details. Examples discussed by Grice include those attaching to utterances of sentences containing intentional expressions like "look," "feel," and "try," and "logical" expressions such as "and", "or," "if," "every," "a," and "the." According to Grice, philosophers who see divergences in meaning between "formal devices" such as "&," $\lor$ ," " $\supset$ ," "( $\forall x$ )," "( $\exists x$ )," and "(tx)" and their natural language counterparts tend to belong to one of two camps, which he calls "formalist" and "informalist." The informalist position is essentially the one taken by Strawson (and others of the "ordinary-language movement"). The formalist camp is dominated by positivists and others who view natural language as inadequate to the needs of the science and philosophy of an age of precision. A typical formalist recommends the construction of an "ideal" or "logically perfect" language such as the language of first-order quantification theory with identity (or some suitable extension thereof). Since the meanings of the logical particles are perfectly clear, using an ideal language, philosophers can state propositions clearly, clarify the contents of philosophical claims, draw the limits of intelligible philosophical discourse, draw the deductive consequences of sets of statements, and generally determine how well various propositions sit with each other.

Grice views the formalists and informalists as mistaken in the assumption of semantic divergence. Both sides have taken mere pragmatic implications to be parts of the meanings of sentences of natural language containing "logical" expressions. The case of "and" highlights some important methodological considerations. Although it is plausible to suppose that "and" (when it is used to conjoin sentences) functions semantically just like "&," there are certainly sentences in which it appears to function rather differently:

- 1 Jack and Jill got married and Jill gave birth to twins.
- 2 Nero yelled and the prisoner began to tremble.

Someone who uttered (1) would typically be taken to imply that Jack and Jill got married *before* Jill gave birth to twins. And someone who uttered (2) would typically be taken to imply that Nero's yelling contributed in some way to the prisoner's trembling. Thus one might be led to the view that "and" is not always understood as "&," that it is (at least) three ways ambiguous between truth-functional, temporal, and causal readings.

The postulation of semantically distinct readings looks extravagant and Grice suggests it is good methodological practice to subscribe to "modified Occam's razor": senses are not to be multiplied beyond necessity. Given the viability of the distinction between what is said and what is meant, if a pragmatic explanation is available of why a particular expression appears to diverge in meaning in different linguistic environments (or in different conversational settings) then *ceteris paribus* the pragmatic explanation is preferable to the postulation of a semantic ambiguity. Grice's idea is that the implication of temporal sequence attaching to an utterance of (1) can be explained in terms of the fact that each of the conjuncts describes an event (rather than a state) and the presumption that U is observing the submaxim of Manner enjoining orderly deliveries. It seems to be Grice's view, then, that by uttering (1) U will conversationally implicate (rather than say) that Jack and Jill got married before Jill gave birth to twins (if this is correct then what is conversationally implicated would appear to entail what is said in this case). Similarly, the implication of causal connection attaching to an utterance of (2) is apparently to be explained in terms of the presumption that the speaker is being relevant. Before looking at problems for this proposal, I want first to get clear about its strengths.

Conversational explanations trump semantic ambiguities on grounds of theoretical economy and generality. A conversational explanation is free: the mechanisms appealed to are already in place and independently motivated. The generality lost by positing several readings of "and" is quite considerable. First, implications of (e.g.) temporal priority and causal connection attach to uses of the counterparts of "and" across unrelated languages. Second, implications of the same sorts would surely arise even for speakers of a language containing an explicitly truth-functional connective "&." Third, the same implications that attach to utterances of "*p* and *q*" would attach to an utterance of the two sentence sequence "*p*. *q*" not containing an explicit device of conjunction. On *methodological* grounds, then, pragmatic accounts of the temporal and causal implications in (1) and (2) are preferable to accounts that appeal to semantic ambiguity.

Grice opposes postulating idiosyncratic *pragmatic rules* with which to derive generalized implicatures. Conversational implicatures must be explicable in terms of the Cooperative Principle and maxims, construed as *general* antecedent assumptions about the rational nature of conversation. To call an implicature "generalized" rather than "particularized" is only to acknowledge the fact that the presence of the implicature is relatively independent of the details of the particular conversational context, a fact that is to be explained by the cooperative nature of conversation.

A second challenge to classical logic semantics came from Strawson, who challenged Russell on the grounds that the theory does not do justice to ordinary usage: speakers use descriptions to *refer*, not to quantify, and hence Russell's theory is open to a number of objections (see STRAWSON). But according to Grice, a number of Strawson's objections can be defused by distinguishing sentence meaning, what is said, and what is meant.

In Grice's terminology, one of Strawson's main complaints against Russell is that his theory conflates the meaning of a sentence "the F is G" and what U says by uttering this sentence (and similarly the subsentential counterparts of these notions) and so cannot explain the fact that U may say different things on different occasions by uttering the same sentence. Grice is right that Strawson can get no mileage out of Russell's failure to separate sentence meaning and what is said in his discussions. Upon reflection it is clear that Russell's concern is with what is said rather than sentence meaning. If Russell were being more precise, he would not say that the *sentence* "the F is G" is equivalent to the *sentence* "there is exactly one F and every F is G"; rather, he would say that what U says by uttering "the F is G" on a particular occasion is that there is exactly one F and every F is G (occurrences of "F" in the foregoing may, of course, be elliptical). The fact that a description (or any other quantified noun phrase) may contain an indexical component ("the present king of France," "every man here," etc.) does not present a problem: all this means is that there are some descriptions that are subject to the Theory of Descriptions (see RUSSELL) and a theory of indexicality. Grice is surely right, then, that although we need a sharp distinction between sentence meaning and what is said (and their subsentential counterparts), Strawson's appeal to this distinction when challenging Russell is empty.

Grice neatly disposes of the view that descriptions are ambiguous between Russellian and referential (or identificatory) readings. When a description is used to identify something, what *U* means diverges from what *U* says. What *U* says is given by the Russellian

expansion but *U* also intends to communicate information about some particular individual, and although this is part of what *U* means, it is not part of what *U* says. This provides a perfectly satisfactory account of what is going on when *U* uses a description that does not fit its target, but such cases are not needed to see Grice's distinctions at work. According to Grice, when a description is used in an identificatory way, there will *always* be a mismatch between what *U* says and what *U* means (even where the description uniquely fits the individual the speaker intends to communicate information about) because what is said is, on Russell's account, analyzable as a quantificational proposition, whereas what is meant will always include a singular or object-dependent proposition.

Again, methodological considerations strongly favor the Gricean account of referential usage over an account that posits a semantic ambiguity: (1) If we were taught explicitly Russellian truth conditions, referential usage would still occur; (2) exactly parallel phenomena occur with indefinite descriptions and other quantified noun phrases; (3) modified Occam's razor enjoins us to opt for the simpler of two theories, other things being equal. Subsequently, far more detailed defenses of Russell along Gricean lines have been proposed by other philosophers, but the debts these works owe to Grice are considerable. More generally, a debt is owed to Grice for rejuvenating the position that classical logic is a remarkably useful tool as far as the semantics of natural language is concerned.

#### The theory of meaning

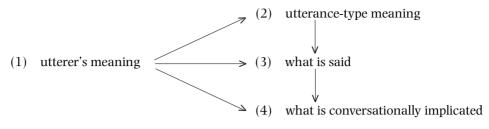
Grice attempted to analyse or explicate *what is said* and *what is implicated* in terms of intention, belief, desire, and recognition. Analyzing locutions of the forms "X did Y intentionally," "X caused Y," "X is true," "X entails Y," and so on, has been seen by many philosophers as a central task of philosophy. Grice's analyses of "by uttering X, U meant that *p*," "X means '*p*'," and "by uttering X, U said that *p*" seem to have a reductive and explicative flavor in that it appears to be his view that locutions of the forms can be wholly explicated without appealing to semantical concepts.

He begins with what *people* mean rather than with what this or that expression, sign, or action means, seeking to analyze this in terms of complex audience-directed intentions on the part of the utterer, and to analyze utterance-type meaning (e.g. sentence meaning and word meaning) in terms of utterer's meaning.

Although Grice aims to neutralize many ordinary language maneuvers with his saying/implicating distinction, one of the driving forces behind his work is still the idea that the meaning of an expression is a function of what its users do with it. Abstracting away from certain details that I will get to later, the direction of analysis for Grice is shown in figure 2.

The idea, then, is to begin by providing an analysis of (1) utterer's meaning, and then to use this analysis in an analysis of (2) utterance-type meaning. (3) What is said is then to be defined in terms of a near coincidence of utterer's meaning and utterance-type meaning (for certain utterance-types); and finally (4) conversational implicature is to be defined in terms of saying and utterer's meaning.

Although Grice does not address this point directly, it is clear that the task of explicating the locution "by uttering x, U said that p" takes on some urgency for him,



The "\_\_  $\rightarrow$  \_\_" is understood as "\_\_ (or its analysis) plays a role in the analysis of \_\_ (but not vice versa)."

#### Figure 2

because the saying/implicating distinction is so central to his attempts to counter ordinary language arguments of the sort examined earlier. A direct *analysis* of saying appears out of the question because Grice openly declares that he is using "say" in a special sense, and this precludes systematic appeal to intuitions about ordinary usage. By contrast, when it comes to pronouncing on the truth of instances of "by uttering *x*, *U meant* that *p*," Grice believes he can help himself to such intuitions, many of them quite subtle. Strictly speaking, then, saying is to be *defined* rather than analyzed.

To some philosophers and linguists, Grice's program seems to constitute something of a snub to serious compositional semantics. The idea that sentence meaning is to be analyzed in terms of utterer's meaning has been felt to conflict with (1) the fact that knowing the meaning of a sentence is typically a necessary step in working out what U meant by uttering that sentence, i.e. for recovering U's communicative intentions, and (2) the fact that the meaning of a sentence is determined, at least in part, by the meanings of its parts (i.e. words and phrases) and the way the parts are put together (syntax). Both of these charges are based on misunderstandings of Grice's project, as will become clear.

## **Utterer's meaning**

The basic Gricean analysis of utterer's meaning is this:

- I. "By uttering *x*, *U* meant something" is true iff for some audience *A*, *U* uttered *x* intending:
  - (1) A to produce some particular response r,
  - (2) A to recognize that U intends (1), and
  - (3) A's recognition that U intends (1) to function, in part, as a reason for (1).

To provide a specification of *r*, says Grice, is to say *what U* meant. Where *x* is an "indicative" utterance, *r* is *A*'s *believing something*.

- II. "By uttering x, U meant that p" is true iff for some audience A, U uttered x intending:
  - (1) *A* to believe that *p*,
  - (2) and (3) as above.

This type of complex intention Grice calls an "*M*-intention": by uttering *x*, *U* meant that *p* iff for some audience *A*, *U* uttered *x M*-intending *A* to believe that *p*.

Two general problems face II. The first is that Grice provides a number of examples in which it would be correct to say that U means that p but incorrect to say that Uintends A to believe that p (1989: 105–9). Suppose U is answering an examination question and says "The Battle of Waterloo was fought in 1815." Here U meant that the Battle of Waterloo was fought in 1815; but U did not M-intend the examiner to think that the Battle of Waterloo was fought in 1815 (typically, U will be under the impression that the examiner already knows the answer). In response to this and related examples, Grice suggests that clause (1) of II. be changed to (1<sub>1</sub>):

 $(1_1)$  A to think that U thinks that p.

A distinction is then made between *exhibitive* utterances (utterances by which U *M*-intends to impart the belief that U has a certain propositional attitude) and *protreptic* utterances (utterances by which U *M*-intends, *via* imparting a belief that [U] has a certain propositional attitude, to induce a corresponding attitude in the hearer).

The suggested revision may not seem to comport with the commonly held view that the primary purpose of communication is the transfer of information about the world; on the revised account, the primary purpose seems to be the transfer of information about one's mental states. Another worry is that even if the proposed revision is an improvement, it does not weaken the analysis in such a way as to let in cases of reminding (some cases of which bring up another problem). Suppose *U* knows that *A* thinks that *p* but needs reminding. So *U* does something by which he means that *p*. Not only does it seem incorrect to say (as the original analysis would require) that *U* intends *A* to think that p - U knows that *A* already thinks that p - it also seems incorrect to say (as the modified analysis requires) that *U* intends *A* to think that *U* thinks that *p* (*U* may know that *A* already thinks that *p*). What seems to be needed here, says Grice, is some notion of an *activated* belief: (1) needs to be changed not to (1<sub>1</sub>) but to something more like (1<sub>2</sub>):

 $(1_2)$  A actively to believe that U thinks that p.

But there seems still to be a problem involving reminding. Suppose *A* has invited *B* over for dinner tonight at seven-thirty. *B* has agreed to come but *U* doubts *B* will show up and says as much to *A*. At seven o'clock, *U* and *A* are deep in philosophical conversation and *U*, realizing that *A* has lost track of time, says "*B* will be here in half an hour." This type of example suggests we are better off with something like  $(1_3)$ , at least for some cases:

 $(1_3)$  A actively to believe that *p*.

So perhaps a disjunctive clause is going to be required in any finally acceptable analysis.

Perhaps the problem with the first clause of II. is an instance of a more general difficulty concerning the content of the intention (or *M*-intention) characteristic of communicative behavior. This seems to be the view of Searle (1969). One way of putting Searle's general point is as follows: by paying too much attention to examples in which *U* intends to induce in *A* some propositional attitude or other, Grice has mistakenly taken a particular type of intention that does in fact accompany many utterances – the subintention specified in clause (1) – to be an essential ingredient of communicative behavior. But there are just too many cases of meaning involving linguistic (or otherwise conventional) utterances in which U does not seek to induce in an audience any propositional (or affective) attitude. Searle brings up three problems: first, it is not at all clear what attitude I *M*-intend to impart when making a promise by uttering a sentence of the form "I promise to \_\_\_"; second, sometimes I don't care whether I am believed or not; I just feel it is my duty to speak up; third, only an egocentric author intends me to believe that *p* because he has said so.

These are genuine difficulties for Grice's analysis as it stands, but they do not seem to warrant abandoning Grice's project; rather they suggest that the specification of the *type* of response mentioned in the first clause needs to be weakened to something like the following:

 $(1_4)$  A actively to entertain the belief/thought/proposition that *p*.

Of course, in many cases *U* also intends (or at least would like) *A* to go on to believe that *p*, but this fact would not enter into the analysis of utterer's meaning. A revision along these lines might provide the beginning of a way out of Searle's problems.

The second problem is that clause (3) of II. seems problematic. The original motivation for clause (2) is clear. It is not enough, Grice points out, for U to mean that p, that U utter x intending A to think that p. U might leave B's handkerchief near the scene of the murder with the intention of getting the detective (actively) to entertain the thought that B is the murderer. But there is no temptation to say that by leaving the handkerchief, U meant that B is the murderer. Hence clause (2), which requires U to intend A to recognize the intention specified in the first clause (however stated).

But what of clause (3)? Grice wants this in order to filter out cases in which some natural feature of the utterance makes it *completely obvious* that *p*. He worried about cases like this: in response to an invitation to play squash, Bill displays his bandaged leg. According to Grice, we do not want to say that Bill *meant* that his leg was bandaged (though we might want to say that he meant that he could not play squash, or even that he had a bad leg).

Many people's intuitions are less robust than Grice's here. He seems to be worried that in cases like these there is something approximating natural meaning that interferes with the idea of Bill non-naturally meaning that he has a bandaged leg. Given the links Grice seeks to forge between natural and non-natural meaning, it is not clear why the putative presence of natural meaning is supposed to be problematic, and so it is not clear why the third clause of II. is needed. Grice himself brings up cases that seem to create a problem for the third clause. Suppose the answer to a certain question is "on the tip of *A*'s tongue." *U* knows this; that is, *U* knows that *A* thinks that *p* but can't quite remember. So U reminds A that p by doing something by which he (U) means that p. In such a scenario, even if U has the intention specified in the first clause (however stated), it does not seem to be the case that U has the intention specified in the third clause. It is noteworthy that the examples Grice uses to justify the third clause involve non-linguistic utterances (Grice's "John the Baptist" and "bandaged leg" cases). However, it is possible to construct cases involving properly linguistic utterances in which the fact that *p* is made just as obvious by the utterance as in Grice's non-linguistic cases. Consider an utterance by me of (e.g.) "I'm right here" yelled in the direction of someone known to be looking for me. Here there is a strong inclination to say that I did not *mean* what I said.

Problems await Grice if he does not concede the third clause is overly restrictive. Ultimately, he wants to define locutions of the form "by uttering *x*, *U* said that *p*"; but one of the conjuncts in his proposed definiens is "by uttering *x*, *U* meant that *p*." So if he refuses to allow that (e.g.) I can mean that I can speak in a squeaky voice by uttering, in a squeaky voice, "I can speak in a squeaky voice," Grice will be forced either to conclude that I have not *said* that I can speak in a squeaky voice, or else to abandon the idea of defining saying in terms of utterer's meaning (he cannot, of course, say that in such a scenario I have only "made as if to say" that I can speak in a squeaky voice). It would seem, then, that the third clause will have to be discarded (or at least modified) if saying requires meaning.

One positive result of discarding the third clause would be the disappearance of the "tip-of-the-tongue" problem. Another would be that Bill could mean that he had a bandaged leg in the scenario above, which is not obviously incorrect. When it comes to linguistic utterances, there might well be another interesting consequence. Typically, linguistic utterances do not seem to be underwritten by intentions as complex as *M*-intentions. Weakening the analysans by the removing clause (3) goes a long way toward quieting this worry; however, there are grounds for thinking that the relevant intention will have to be more complex than the one specified by clauses (1) and (2).

The following type of example shows that clauses (1), (2), and (3) do not specify a rich enough intention (or batch of intentions). Suppose *A*, a friend of mine, is about to buy a house. I think the house is rat-infested, but I don't want to mention this outright to *A* so I let rats loose in the house knowing that *A* is watching me. I know that *A* does not know that I know that he is watching me do this. I know *A* will not take the presence of my rats to be natural evidence that the house is rat-infested; but I do know, indeed I intend, that *A* will take my letting rats loose in the house as grounds for thinking that I intend to induce in him the belief that the house is rat-infested. Conditions (1)–(3) of II. above are fulfilled. But surely it is not correct to say that by letting rats loose in the house I mean that the house is rat-infested.

The problem is that in this example my intentions are not *wholly overt*. One possible remedy involves adding a fourth clause:

(4) A to recognize that U intends (2).

But the same sort of counterexample can still be generated, and then we need a fifth clause, then a sixth, and so on. Grice proposed to block an infinite regress by adding a condition that would prohibit any "sneaky" intention: instead of adding additional clauses, his idea was to add a second part to the analysis, the rough import of which is that *U* does not intend *A* to be deceived about *U*'s intentions (1)-(3). As long as *U* does not have a deceptive intention of this sort, *U* is deemed to mean that *p*.

Something like the following is best seen as the characterization of utterer's meaning that Grice left us to explore and refine:

III. By uttering *x*, *U* meant that *p* iff for some audience *A*,

- (1) U uttered x intending A actively to entertain the thought that p (or the thought that U believes that p)
- (2) U uttered x intending A to recognize that U intends A actively to entertain the thought that p
- (3) U does not intend A to be deceived about U's intentions (1) and (2).

#### Sentence meaning and saying

The idea of using utterer's meaning to explicate sentence meaning is thought by some philosophers to conflict with the idea that the meaning of a sentence is a function of the meanings of its parts (i.e. words and phrases) and their syntactical organization. Grice's project gets something "backwards" it is claimed: surely any attempt to model how we work out what someone means on a given occasion will progress from word meaning plus syntax to sentence meaning, and from sentence meaning plus context to what is said, and from what is said plus context to what is meant. And this clashes with Grice's view that sentence meaning is analyzable in terms of utterer's meaning.

But this is incorrect. Suppose there is a sentence Y of a language L such that Y means (pre-theoretically speaking) "Napoleon loves Josephine" (e.g. if L is English, then the sentence "Napoleon loves Josephine" will do). When L-speakers wish to mean that Napoleon loves Josephine they are more likely to use Y than a sentence Z that means (pre-theoretically speaking) "Wisdom is a virtue." To say this is not to say that it is *impossible* for U to mean that Napoleon loves Josephine by uttering Z, it's just to say that normally (usually, typically, standardly) U has a much better chance of getting across the intended message by uttering Y. Thus it might be suggested that an arbitrary sentence X means (in L) "Napoleon loves Josephine" iff (roughly) by uttering X, optimally, L-speakers mean (would/should mean) that Napoleon loves Josephine.

Grice is not committed to the absurd position that a hearer must work out what U meant by uttering a sentence X in order to work out the meaning of X. To see this as a consequence of Grice's theory is to ignore the connection between the theory of conversation and the theory of meaning. It is Grice's view that typically the hearer must establish what U has said (or made as if to say) in order to establish what U meant; and it is by taking into account the nature and purpose of rational discourse that the hearer is able to progress (via, for example, conversational implicature) from what U has said (or made as if to say) to what U meant. An *analysis* of sentence meaning in terms of utterer's intentions does not conflict with this idea.

We must distinguish (1) accounts of what U said and what U meant by uttering X and (2) accounts of how hearers recover what U said and what U meant by uttering X. What U meant by uttering X is determined solely by U's communicative intentions; but of course the *formation* of genuine communicative intentions by U is constrained by U's expectations: U cannot be said to utter X M-intending A to  $\vartheta$  if U thinks that there is very little or no hope that U's production of X will result in  $A \vartheta$ -ing. If U M-intends A actively to entertain the belief that (U thinks) Napoleon loves Josephine, and U and A are both English speakers, U may well utter the English sentence "Napoleon loves Josephine." To say this is not to commit Grice to the view that sentences that are not directly (or *so* directly) connected to the proposition that Napoleon loves Josephine may not be employed to the same effect.

On the contrary, the theory of conversation is supposed to provide an explanation of how this is possible (in the right circumstances). On the assumption that U and Aare both operating in accordance with the Cooperative Principle and maxims, there may well be facts about the context of utterance, the topic of conversation, background information, and so on that make it possible for U to mean that Napoleon loves Josephine by uttering a very different sentence. U's conception of such things as the context of utterance, the topic of conversation, background information, and A's ability to work out what U is up to may all play roles in the *formation* of U's intentions; but this does not undermine the view that what determines what U means are U's communicative intentions.

We can put aside, then, the question of the conceptual coherence of Grice's analytical program; the interesting questions concern the adequacy of his concrete proposals for explicating sentence meaning and saying. The basic idea is to analyze sentence meaning in terms of utterer's meaning, and then define saying in terms of a near coincidence of utterer's meaning and sentence meaning. Sentence meaning for Grice is a species of complete utterance-type meaning, the relevant analysandum for which is "*X* means '*p*'," where *X* is an utterance type and *p* is a specification of *X*'s meaning. Grice puts forward the following as indicative of the general approach he is inclined to explore:

IV. For population group G, complete utterance-type X means "p" iff (a) at least some (many) members of G have in their behavioral repertoires the procedure of uttering a token of X if they mean that p, and (b) the retention of this procedure is for them conditional on the assumption that at least some (other) members of G have, or have had, this procedure in their repertoires.

For a language containing no context-sensitive expressions, the technical difficulties involved in Grice's use of the variable "*p*" both in and out of quotes can be remedied easily enough. But once we turn (as we must) to complete utterance-type meaning for a language that contains indexicals such as "I" and "you," demonstratives such as "this" and "that," and anaphoric pronouns such as "him" and "her," it is clear that some work is needed to transform IV. into something acceptable. This is, I think, a very serious matter; for without such a transformation, Grice simply will not be able to provide an analysis of utterance-type meaning for a language like English, and consequently he will not be able to provide the sort of definition of saying he wants.

What, then, is the precise relation between sentence meaning and saying for Grice? It might be thought that if we abstract away from the problems raised by indexicals and other expressions that highlight the gap between sentence meaning and what is said, we will be able to move directly from *when uttered by U, X meant "p"* to *by uttering X, U said that p.* But there are two problems here. First, only where an utterance-type has certain features do we want to say that a token of that type may be used to *say* something. A motorist does not say anything, in Grice's sense, when he indicates an intention to make a left turn by signalling.

Second, certain cases involving, for example, irony or conversational implicature can be used to show that we cannot make the relevant move directly. If *U* utters the sentence "Smith is an honest man" ironically, although it would be true to say that the sentence in question means "Smith is an honest man," it would not be true to say that *U* is *saying* that Smith is an honest man. On Grice's account, since *U* does not *mean* that Smith is an honest man (*U* has no intention of getting *A* to believe that (he believes that) Smith is an honest man) *U* is only *making as if to say* that Smith is an honest man. (Parallel remarks could apply in the case of Professor *U*'s utterance of the sentence "Mr *X* has wonderful handwriting and is always very punctual.") On Grice's account, what is said is to be found in the area where sentence meaning and utterer's meaning overlap. Abstracting away from context-sensitive expressions once again, it looks as though something like the following preliminary definition is on the right track:

- V. By uttering *X*, *U* said that *p* iff
  - (1) by uttering X, part of what U meant was that p
  - (2) X consists of a sequence of elements (such as words) ordered in a way licensed by a system of rules (syntactical rules), and
  - (3) X means "p" in virtue of the particular meanings of the elements in X, their order and their syntactical structure.

Grice's unhappiness with V. derives from the existence of *conventional* implicatures. Recall that Grice does not want to allow the sorts of implications that result from the use of words such as "but," "yet," "still," "even," and "moreover," to count as part of what is said. For example, if U (sincerely and non-ironically) utters the sentence "She is poor but she is honest," U does not *say* that there is some sort of contrast between poverty and honesty (or between her poverty and her honesty). Rather, U performs a "central speech act," by which U says that she is poor and she is honest, and performs in addition a "noncentral speech act," by which U conventionally implicates some sort of attitude toward what is said. Putting together what U says and what U conventionally implicates we get *what U conventionally means* (see figure 1). So for Grice, at best the three conditions in V. define *by uttering X, U conventionally meant that p* rather than *by uttering X, U said that p*.

This is as far as Grice goes. He leaves us with the non-trivial task of separating what U says and what U conventionally implicates, a rather disappointing terminus. The notion of what is said is for Grice a fundamentally important notion in philosophy. If this or that philosopher is unclear about what he is saying (as opposed to what he or she is implicating) then that philosopher is liable to make all sorts of mistakes, as is borne out, Grice thinks, by the crude way in which, for instance the causal theory of perception and the theory of descriptions have been written off by philosophers concerned with the nuances of ordinary language. Furthermore, not until what is said and what is conventionally implicated are separated can what is *conversationally implicated* be defined in the manner examined earlier.

So for Grice, an analysis of saying takes on some urgency, and it is unfortunate that he does not get any closer to one than he does in producing V. above. However, it may well be that Grice has brought us as far as we can go without crossing our own paths. Recall that he wants what is said to comprise the truth-conditional content of what is conventionally meant by someone making a statement; but he cannot appeal directly to truth conditions for fear of undermining one part of his project. There may be no simple way out of this. At the same time, only one part of Grice's project is threatened: the possibility of providing a definition of saying in terms of utterance-type meaning and what is meant. No appeal to truth-conditional content is needed in analyses of *utterer's meaning* or *utterance-type meaning*, and to that extent Grice has certainly illuminated these important notions. In so doing, he has also alerted us to a host of important distinctions that philosophers, linguists, cognitive scientists, and literary theorists ignore at their peril.

## **Bibliography**

Works by Grice

1989: *Studies in the Way of Words*, Cambridge: Cambridge University Press. 1991: *The Conception of Value*, Oxford: Clarendon Press.

Works by other authors

Avramides, A. (1989) Meaning and Mind, Cambridge, MA: MIT Press.

Grandy, R. E. and Warner, R. (eds.) (1986) Philosophical Grounds of Rationality: Intentions, Categories, Ends, Oxford: Clarendon Press.

Martinich, A. P. (1984) Communication and Reference, New York: Walter de Gruyter.

Schiffer, S. (1972) Meaning, Oxford: Clarendon Press.

Searle, J. R. (1969) Speech Acts, Cambridge: Cambridge University Press.

Sperber, D. and Wilson, D. (1986) Relevance, Oxford: Blackwell Publishers.