Meaning, intentionality and communication

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Keywords: speech act, communicative intention, inferential model of communication

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Abstract

This article probes the connections between the metaphysics of meaning and the investigation of human communication. It first argues that contemporary philosophy of mind has inherited most of its metaphysical questions from Brentano's puzzling definition of intentionality. Then it examines how intentionality came to occupy the forefront of pragmatics in three steps. (1) By investigating speech acts, Austin and ordinary language philosophers pioneered the study of intentional actions performed by uttering sentences of natural languages. (2) Based on his novel concept of speaker's meaning and his inferential view of human communication as a cooperative and rational activity, Grice developed a three-tiered model of the meaning of utterances: (i) the linguistic meaning of the uttered sentence; (ii) the explicit truth-conditional content of the utterance; (iii) the implicit content conveyed by the utterance. (3) Finally, the new emerging truth-conditional trend in pragmatics urges that not only the implicit content conveyed by an utterance but its explicit content as well depends on the speaker's communicative intention.

1. Introduction

This article lies at the interface between the scientific investigation of human verbal communication and metaphysical questions about the nature of meaning. Words and sentences of natural languages have meaning (or semantic properties) and they are used by humans in tasks of verbal communication. Much of twentieth-century philosophy of mind has been concerned with metaphysical questions raised by the perplexing nature of meaning. For example, what is it about the meaning of the English word "dog" that enables a particular token used in the USA in 2008 to latch onto hairy barking creatures that lived in Egypt four thousand years earlier (cf. Horwich 2005)?

Meanwhile, the study of human communication in the twentieth century can be seen as a competition between two models, which Sperber & Wilson (1986) call the "code model" and the "inferential model." A decoding process maps a signal onto a message associated to the signal by an underlying code (i.e., a system of rules or conventions). An inferential process maps premises onto a conclusion, which is warranted by the premises. When an addressee understands a speaker's utterance, how much of the content of the utterance has been coded into, and can be decoded from, the linguistic meaning of the utterance? How much content does the addressee retrieve by his ability to infer the speaker's communicative intention? These are the basic scientific questions in the investigation of human verbal communication.

Much philosophy of mind in the twentieth century devoted to the metaphysics of meaning sprang from Brentano's puzzling definition of the medieval word "intentionality" (section 2). Austin, one of the leading ordinary language philosophers, emphasized the fact that by uttering sentences of some natural language, a speaker may perform an action, i.e., a speech act (section 3). But he espoused a social conventionalist view of speech acts, which later pragmatics rejected in favor of an inferential approach. Grice instead developed an inferential model of verbal communication based on his concept of speaker's meaning and

his view that communication is a cooperative and rational activity (section 4). However, many of Grice's insights have been further developed into a non-Gricean truth-conditional pragmatics (section 5). Finally, the "relevance-theoretic" approach pioneered by Sperber & Wilson (1986) fills part of the gap between the study of meaning and the cognitive sciences (section 6).

2. Intentionality: Brentano's legacy

Brentano (1874) made a twofold contribution to the philosophy of mind: he provided a puzzling definition of intentionality and he put forward the thesis that intentionality is "the mark of the mental." Intentionality is the power of minds to be about things, properties, events and states of affairs. As the meaning of its Latin root (*tendere*) indicates, "intentionality" denotes the mental tension whereby the human mind aims at so-called "intentional objects."

The concept of intentionality should not be confused with the concept of intention. Intentions are special psychological states involved in the planning and execution of actions. But on Brentano's view, intentionality is a property of all psychological phenomena. Nor should "intentional" and "intentionality" be confused with the predicates "intensional" and "intensionality," which mean "non-extensional" and "non-extensionality": they refer to logical features of sentences and utterances, some of which may describe (or report) an individual's psychological states. "Creature with a heart" and "creature with a kidney" have the same extension: all creatures with a heart have a kidney and conversely (cf. Quine 1948). But they have different intensions because having a heart and having a kidney are different properties. This distinction mirrors Frege's (1892) distinction between sense and reference (cf. article 3 (Textor) *Sense and reference* and article 4 (Abbott) *Reference*). In general, a linguistic context is non-extensional (or intensional) if it fails to license both the substitution of coreferential terms *salva veritate* and the application of the rule of existential

generalization.

As Brentano defined it, intentionality is what enables a psychological state or act to represent a state of affairs, or be directed upon what he called an "intentional object." Intentional objects exemplify the property which Brentano called "intentional inexistence" or "immanent objectivity," by which he meant that the mind may aim at targets that do not exist in space and time or represent states of affairs that fail to obtain or even be possible. For example, unicorns do not exist in space and time and round squares are not possible geometrical objects. Nonetheless thinking about either a unicorn or a round square is not thinking about nothing. To admire Sherlock Holmes or to love Anna Karenina is to admire or love something, i.e., some intentional object. Thus, Brentano's characterization of intentionality gave rise to a gap in twentieth-century philosophical logic between intentional-objects theorists (Meinong 1904; Parsons 1980; Zalta 1988), who claimed that there must be things that do not exist, and their opponents (Russell 1905; Quine 1948), who denied it and rejected the distinction between being and existence. (For further discussion, cf. Jacob 2003.)

Brentano (1874) also held the thesis that intentionality is constitutive of the mental: all and only psychological phenomena exhibit intentionality. Brentano's second thesis that only psychological (or mental) phenomena possess intentionality led him to embrace a version of the Cartesian ontological dualism between mental and physical things. Chisholm (1957) offered a linguistic version of Brentano's second thesis, according to which the intensionality of a linguistic report is a criterion of the intentionality of the reported psychological state (cf. Jacob 2003). He further argued that the contents of sentences describing an agent's psychological states cannot be successfully paraphrased into the behaviorist idiom of sentences describing the agent's bodily movements and behavior.

Quine (1960) accepted Chisholm's (1957) linguistic version of Brentano's second thesis which he used as a premise for an influential dilemma: if the intentional idiom is not

reducible to the behaviorist idiom, then the intentional idiom cannot be part of the vocabulary of the natural sciences and intentionality cannot be "naturalized." Quine's dilemma was that one must choose between a physicalist ontology and intentional realism, i.e., the view that intentionality is a real phenomenon. Unlike Brentano, Quine endorsed physicalism and rejected intentional realism.

Some of the physicalists who accept Quine's dilemma (e.g., Churchland 1989) have embraced eliminative materialism and denied the reality of beliefs and desires. The short answer to this proposal is that it is difficult to make sense of the belief that there are no beliefs. Others (such as Dennett 1987) have taken the "instrumentalist" view that, although the intentional idiom is a useful stance for predicting a complex physical system's behavior, it lacks an explanatory value. But the question arises how the intentional idiom could make useful predictions if it fails to describe and explain anything (cf. Jacob 1997, 2003 and Rey 1997).

As a result of the difficulties inherent to both eliminative materialism and interpretive instrumentalism, several physicalists have chosen to deny Brentano's thesis that only non-physical things exhibit intentionality, and to challenge Quine's dilemma according to which intentional realism is not compatible with physicalism. Their project is to "naturalize" intentionality and account for the puzzling features of intentionality (e.g., the fact that the mind may aim at non-existing objects and represent non-actual states of affairs), using only concepts recognizable by natural scientists (cf. section 3 on Grice's notion of non-natural meaning).

In recent philosophy of mind, the most influential proposals for naturalizing intentionality have been versions of the so-called "teleosemantic" approach championed by Millikan (1984), Dretske (1995) and others, which is based on the notion of biological function (or purpose). Teleosemantic theories are so-called because they posit an underlying connection between teleology (design or function) and content (or intentionality): a

representational device is endowed with a function (or purpose). Something whose function is to indicate the presence of some property may fail to fulfill its function. If and when it does, then it may generate a false representation or represent something that fails to exist.

Brentano's thesis that only mental phenomena exhibit intentionality seems also open to the challenge that expressions of natural languages, which are not mental things, have intentionality in virtue of which they too can represent things, properties, events and states of affairs. In response, many philosophers of mind, such as Grice (1957, 1968), Fodor (1987), Haugeland (1981) and Searle (1983, 1992), have endorsed the distinction between the underived intentionality of a speaker's psychological states and the derived intentionality (i.e., the conventional meaning) of the sentences by the utterance of which she expresses her mental states. On their view, sentences of natural languages would lack meaning unless humans used them for some purpose. (But for dissent, see Dennett 1987.)

Some philosophers go one step further and posit the existence of an internal "language of thought:" thinking, having a thought or a propositional attitude is to entertain a token of a mental formula realized in one's brain. On this view, like sentences of natural languages, mental sentences possess syntactic and semantic properties. But, unlike sentences of natural languages, they lack phonological properties. Thus, the semantic properties of a complex mental sentence systematically depend upon the meanings of its constituents and their syntactic combination. The strongest arguments for the existence of a language of thought are based on the productivity and systematicity of thoughts, i.e., the facts that there is no upper limit on the complexity of thoughts and that a creature able to form certain thoughts must be able to form other related thoughts. On this view, the intentionality of an individual's thoughts and propositional attitudes derives from the meanings of symbols in the language of thought (cf. Fodor 1975, 1987).

3. Early pragmatics: ordinary language philosophy and speech act theory

Unlike sentences of natural languages, utterances are created by speakers, at particular places and times, for various purposes, including verbal communication. Not all communication, however, need be verbal. Nor do people use language solely for the purpose of communication; one can use language for clarifying one's thoughts, reasoning and making calculations. Utterances, not sentences, can be shouted in a hoarse voice and tape-recorded. Similarly, the full meaning of an utterance goes beyond the linguistic meaning of the uttered sentence, in two distinct aspects: both its representational content and its so-called "illocutionary force" (i.e., whether the utterance is meant as a prediction, a threat or an assertion) are underdetermined by the linguistic meaning of the uttered sentence.

Prior to the cognitive revolution of the 1950's, the philosophy of language was divided into two opposing approaches: so-called "ideal language" philosophy (in the tradition of Frege, Russell, Carnap and Tarski) and so-called "ordinary language" philosophy (in the tradition of Wittgenstein, Austin, Strawson and later Searle). The word "pragmatics," which derives from the Greek word *praxis* (which means *action*), was first introduced by ideal language philosophers as part of a threefold distinction between syntax, semantics and pragmatics (cf. Morris 1938 and Carnap 1942). Syntax was defined as the study of internal relations among symbols of a language. Semantics was defined as the study of the relations between symbols and their denotations (or designata). Pragmatics was defined as the study of the relations between symbols and their users (cf. article 88 (Jaszczolt) *Semantics and pragmatics*).

Ideal language philosophers were interested in the semantic structures of sentences of formal languages designed for capturing mathematical truths. The syntactic structure of any "well-formed formula" (i.e., sentence) of a formal language is defined by arbitrary rules of formation and derivation. Semantic values are assigned to simple symbols of the language by stipulation and the truth-conditions of a sentence can be mechanically determined from

the semantic values of its constituents by the syntactic rules of composition. From the perspective of ideal language philosophers, such features of natural languages as their context-dependence appeared as a defect. For example, unlike formal languages, natural languages contain indexical expressions (e.g., "now", "here" or "I") whose references can change with the context of utterance.

By contrast, ordinary language philosophers were concerned with the distinctive features of the meanings of expressions of natural languages and the variety of their uses. In sharp opposition to ideal language philosophers, ordinary language philosophers stressed two main points, which paved the way for later work in pragmatics. First, they emphasized the context-dependency of the descriptive content expressed by utterances of sentences of natural languages (see section 4). Austin (1962a: 110–111) denied that a sentence *as such* could ever be ascribed truth-conditions and a truth-value: "the question of truth and falsehood does not turn only on what a sentence is, nor yet on what it means, but on, speaking very broadly, the circumstances in which it is uttered." Secondly, they criticized what Austin (1962b) called the "descriptive fallacy," according to which the sole point of using language is to state facts or describe the world (cf. article 5 (Green) *Meaning in language use*).

As indicated by the title of Austin's (1962b) book, *How to Do Things with Words*, they argued that by uttering sentences of some natural language, a speaker performs an action, i.e., a speech act: she performs an "illocutionary act" with a particular illocutionary force. A speaker may give an order, ask a question, make a threat, a promise, an entreaty, an apology, an assertion and so on. Austin (1962b) sketched a new framework for the description and classification of speech acts. As Green (2007) notes, speech acts are not to be confused with acts of speech: "one can perform an act of speech, say by uttering words in order to test a microphone, without performing a speech act." Conversely, one can issue a warning without saying anything, by producing a gesture or a "minatory facial expression."

Austin (1962b) identified three distinct levels of action in the performance of a speech act: the "locutionary act," the "illocutionary act," and the "perlocutionary act," which stand to one another in the following hierarchical structure. By uttering a sentence, a speaker performs the locutionary act of saying something by virtue of which she performs an illocutionary act with a given illocutionary force (e.g., giving an order). Finally, by performing an illocutionary act endowed with a specific illocutionary force, the speaker performs a perlocutionary act, whereby she achieves some psychological or behavioral effect upon her audience, such as frightening him or convincing him.

Before he considered this threefold distinction within the structure of speech acts, Austin had made a distinction between so-called "constative" and "performative" utterances. The former is supposed to describe some state of affairs and is true or false according to whether the described state of affairs obtains or not. Instead of being a (true or false) description of some independent state of affairs, the latter is supposed to constitute (or create) a state of affairs of its own. Clearly, the utterance of a sentence in either the imperative mood ("Leave this room immediately!") or the interrogative mood ("What time is it right now?") is performative in this sense: far from purporting to register any pre-existing state of affairs, the speaker either gives an order or asks a question. By drawing the distinction between constative and performative utterances, Austin was able to criticize the descriptive fallacy and emphasize the fact that many utterances of declarative sentences are performative (not constative) utterances.

In particular, Austin was interested in explicit performative utterances ("I promise I'll come," "I order you to leave" or "I apologize,"), which include a main verb that denotes the very speech act that the utterance performs. Austin's attention was drawn towards explicit performatives, whose performance is governed, not merely by linguistic rules, but also by social conventions and by what Searle (1969: 51) called "institutional facts" (as in "I thereby pronounce you husband and wife"), i.e., facts that (unlike "brute facts") presuppose the

existence of human institutions. Specific bodily movements count as a move in a game, as an act of e.g., betting, or as part of a marriage ceremony only if they conform to some conventions that are part of some social institutions. For a performative speech act to count as an act of baptism, of marriage, or an oath, the utterance must meet some social constraints, which Austin calls "felicity" conditions. Purported speech acts of baptism, oath or marriage can fail some of their felicity conditions and thereby "misfire" if either the speaker lacks the proper authority or the addressee fails to respond with an appropriate uptake — in response to e.g., an attempted bet sincerely made by the speaker. If a speaker makes an insincere promise, then he is guilty of an "abuse."

Austin came to abandon his former distinction between constative and performative utterances when he came to realize that some explicit performatives can be used to make true or false assertions or predictions. One can make an explicit promise or an explicit request by uttering a sentence prefixed by either "I promise" or "I request." One can also make an assertion or a prediction by uttering a sentence prefixed by either "I assert" or "I predict." Furthermore, two of his assumptions led Austin to embrace a social conventionalist view of illocutionary acts. First, Austin took explicit performatives as a general model for illocutionary acts. Secondly, he took explicit performatives, whose felicity conditions include the satisfaction of social conventions, as a paradigm of all explicit performatives. Thus Austin (1962b: 103) was led to embrace a social conventionalist view of illocutionary acts according to which the illocutionary force of a speech act is "conventional in the sense that it could be made explicit by the performative formula."

Austin's social conventionalist view of illocutionary force was challenged by Strawson (1964: 153–154) who pointed out that the assumption that no illocutionary act could be performed unless it conformed to some social convention would be "like supposing that there could not be love affairs which did not proceed on lines laid down in the *Roman de la Rose*." Instead, Strawson argued, what confers to a speech act its illocutionary force is that

the speaker intends it to be so taken by her audience. By uttering "You will leave," the speaker may make a prediction, a bet or order the addressee to leave. Only the context, not some socially established convention, may help the audience determine the particular illocutionary force of the utterance.

Also, as noted by Searle (1975) and by Bach & Harnish (1979), speech acts may be performed indirectly. For example, by uttering "I would like you to leave," a speaker directly expresses her desire that her addressee leave. But in so doing, she may indirectly ask or request her addressee to do so. By uttering "Can you pass the salt?" — which is a direct question about her addressee's ability —, the speaker may indirectly request him to pass the salt. As Recanati (1987: 92–93) argues, when a speaker utters an explicit performative such as "I order you to leave," her utterance has the direct illocutionary force of a statement. But it may also have the indirect force of an order. There need be no socially established convention whereby a speaker orders her audience to leave by means of an utterance with a verb that denotes the act performed by the speaker.

4. Grice on speaker's meaning and implicatures

In his 1957 seminal paper, Grice did three things: he drew a contrast between "natural" and "non-natural" meaning; he offered a definition of the novel concept of speaker's meaning; and he sketched a framework within which human communication is seen as a cooperative and rational activity (the addressee's task being to infer the speaker's meaning on the basis of her utterance, in accordance with a few principles of rational cooperation). In so doing, Grice took a major step towards an "inferential model" of human communication, and away from the "code model" (cf. article 88 (Jaszczolt) *Semantics and pragmatics*.

As Grice (1957) emphasized, smoke is a natural sign of fire: the former naturally means the latter in the sense that not unless there was a fire would there be any smoke. By contrast, the English word "fire" (or the French word "feu") non-naturally means fire: if a

person erroneously believes that there is a fire (or wants to intentionally mislead another into wrongly thinking that there is a fire) when there is none, then she can produce a token of the word "fire" in the absence of a fire. (Thus, the notion of non-natural meaning is Grice's counterpart of Brentano's intentionality.)

Grice (1957, 1968, 1969) further introduced the concept of speaker's meaning, i.e., of someone meaning something by exhibiting some piece of behavior that can, but need not, be verbal. For a speaker *S* to mean something by producing some utterance *x* is for *S* to intend the utterance of *x* to produce some effect (or response *r*) in an audience *A* by means of *A*'s recognition of this very intention. Hence, the speaker's meaning is a communicative intention, with the peculiar feature of being reflexive in the sense that part of its content is that an audience recognize it.

Strawson (1964) turned to Grice's concept of speaker's meaning as an intentionalist alternative to Austin's social conventional account of illocutionary acts (section 2). Strawson (1964) also pointed out that Grice's complex analysis of speaker's meaning or communicative intention requires the distinction between three complementary levels of intention. For *S* to mean something by an utterance *x* is for *S* to intend:

(i) *S*'s utterance of *x* to produce a response *r* in audience *A*;

(ii) *A* to recognize *S*'s intention (i);

(iii) *A*'s recognition of *S*'s intention (i) to function at least as part of *A*'s reason for *A*'s response *r*.

This analysis raises two opposite problems: it is both overly restrictive and insufficiently so. First, as Strawson's reformulation shows, Grice's condition (i) corresponds to *S*'s intention

to perform what Austin (1962b) called a perlocutionary act. But for *S* to successfully communicate with *A*, it is not necessary that *S*'s intention to perform her perlocutionary act be fulfilled (cf. Searle 1969: 46–48). Suppose that *S* utters: "It is raining," intending (i) to produce in *A* the belief that it is raining. *A* may recognize *S*'s intention (i); but, for some reason, *A* may mistrust *S* and fail to acquire the belief that it is raining. *S* would have failed to convince *A* (that it is raining), but *S* would nonetheless have successfully communicated what she meant to *A*. Thus, fulfillment of *S*'s intention (i) is not necessary for successful communication. Nor is the fulfillment of *S*'s intention (iii), which presupposes the fulfillment of *S*'s intention (i). All that is required for *S* to communicate what she meant to *A* is *A*'s recognition of *S*'s intention (ii) that *S* has the higher-order intention to inform *A* of her first-order intention to inform *A* of something.

Secondly, Strawson (1964) pointed out that his reformulation of Grice's definition of speaker's meaning is insufficiently restrictive. Following Sperber & Wilson (1986: 30), suppose that *S* intends *A* to believe that she needs his help to fix her hair-drier, but she is reluctant to ask him openly to do so. *S* ostensively offers *A* evidence that she is trying to fix her hair-drier, thereby intending *A* to believe that she needs his help. *S* intends *A* to recognize her intention to inform him that she needs his help. However, *S* does not want *A* to know that she knows that he is watching her. Since *S* is not openly asking *A* to help her, she is not communicating with *A*. Although *S* has the second-order intention that *A* recognizes her first-order intention to inform him that she needs his help, she does not want *A* to recognize her second-order intention. To deal with such a case, Strawson (1964) suggested that the analysis of Grice's speaker's meaning include *S*'s third-order intention to have her second-order intention recognized by her audience. But as Schiffer (1972) pointed out, this opens the way to an infinity of higher-order intentions. Instead, Schiffer (1972) argued that for *S* to have a communicative intention, *S*'s intention to inform *A* must be mutually known to *S* and *A*. But as pointed out by Sperber & Wilson (1986: 18–19), people who share mutual

knowledge know that they do. So the question arises: how do speaker and hearer know that they do? (We shall come back to this issue in the concluding remarks.)

Grice (1968) thought of his concept of speaker's meaning as a basis for a reductive analysis of semantic notions such as sentence- or word-meaning. But most linguists and philosophers have expressed skepticism about this aspect of Grice's program (cf. Chomsky 1975, 1980). By contrast, many assume that some amended version of Grice's concept of speaker's meaning can serve as a basis for an inferential model of human communication. In his 1967 William James Lectures, Grice argued that what enables the hearer to infer the speaker's meaning on the basis of her utterance is that he rationally expects all utterances to meet the "Cooperative Principle" and a set of nine maxims or norms organized into four main categories which, by reference to Kant, he labeled maxims of Quantity (informativeness), Quality (truthfulness), Relation (relevance) and Manner (clarity).

As ordinary language philosophers emphasized, in addition to what is being said by an assertion — what makes the assertion true or false —, the very performance of an illocutionary act with the force of an assertion has pragmatic implications. For example, consider Moore's paradox: by uttering "It is raining but I do not believe it," the speaker is not expressing a logical contradiction, as there is no logical contradiction between the fact that it is raining and the fact that the speaker fails to believe it. Nonetheless, the utterance is pragmatically paradoxical because by asserting that it is raining, the speaker thereby expresses (or displays) her belief that it is raining, but her utterance explicitly denies that she believes it.

Grice's (1967/1975) third main contribution to an inferential model of communication was his concept of conversational implicature, which he introduced as "a term of art" (cf. Grice 1989: 24). Suppose that Bill asks Jill whether she is going out and Jill replies: "It's raining." For Jill's utterance about the weather to constitute a response to Bill's question, additional assumptions are required, such as, for example, that Jill does not like

rain (i.e., that if it is raining, then Jill is not going out) which, together with Jill's response, may entail that she is not going out.

Grice's approach to communication, based on the Cooperative Principle and the maxims, offers a framework for explaining how, from Jill's utterance, Bill can retrieve an implicit answer to his question by supplying some additional assumptions. Bill must be aware that Jill's utterance is not a direct answer to his question. Assuming that Jill does not violate (or "flout") the maxim of relevance, she must have intended Bill to supply the assumption that e.g., she does not enjoy rain, and to infer that she is not going out from her explicit utterance. Grice (1967/1975) called the additional assumption and the conclusion "conversational" implicatures. In other words, Grice's conversational implicatures enable a hearer to reconcile a speaker's utterance with his assumption that the speaker conforms to the Principle of Cooperation. Grice (1989a: 31) insisted that "the presence of a conversational implicature must be capable of being worked out; for even if it can in fact be intuitively grasped, unless the intuition is replaceable by an argument, the implicature (if present at all) will not count as a conversational implicature." (Instead, it would count as a so-called "conventional" implicature, i.e., a conventional aspect of meaning that makes no contribution to the truth-conditions of the utterance.) Grice further distinguished "generalized" conversational implicatures, which are generated so to speak "by default," from "particularized" conversational implicatures, whose generation depends on special features of the context of utterance.

Grice's application of his cooperative framework to human communication and his elaboration of the concept of (generalized) conversational implicature were motivated by his concern to block certain moves made by ordinary language philosophers. One such move was exemplified by Strawson's (1952) claim that, unlike the truth-functional conjunction of propositional calculus, the English word "and" makes different contributions to the full meanings of the utterances of pairs of conjoined sentences. For example, by uttering "John

took off his boots and got into bed" the speaker may mean that the event first described took place first.

In response, Grice (1967/1975, 1981) argued that, in accordance with the truth-table of the logical conjunction of propositional calculus, the utterance of any pair of sentences conjoined by "and" is true if and only if both conjuncts are true and false otherwise. He took the view that the temporal ordering of the sequence of events described by such an utterance need not be part of the semantic content (or truth-conditions) of the utterance. Instead, it arises as a conversational implicature retrieved by the hearer through an inferential process guided by his expectation that the speaker is following the Cooperative Principle and the maxims, e.g., the sub-maxim of orderliness (one of the sub-maxims of the maxim of Manner), according to which there is some reason why the speaker chose to utter the first conjunct first.

Also, under the influence of Wittgenstein, some ordinary language philosophers claimed that unless there are reasons to doubt whether some thing is really red, it is illegitimate to say "It looks red to me" (as opposed to "It is red"). In response, Grice (1967/1975) argued that whether an utterance is true or false is one thing; whether it is odd or misleading is another (cf. Carston 2002a: 103; but see Travis 1991 for dissent).

5. The emergence of truth-conditional pragmatics

Grice's seminal work made it clear that verbal communication involves three layers of meaning: (i) the linguistic (conventional) meaning of the sentence uttered, (ii) the explicit content expressed (i.e., "what is said") by the utterance, and (iii) the implicit content of the utterance (its conversational implicatures). Work in speech act theory further suggests that each layer of meaning also exhibits a descriptive dimension (e.g., the truth conditions of an utterance) and a pragmatic dimension (e.g., the fact that a speech act is an assertion). Restricting itself to the descriptive dimension of meaning, the rest of this section discusses

the emergence of a new truth-conditional pragmatic approach, whose core thesis is that what is said (not just the conversational implicatures of an utterance) depends on the speaker's meaning. By further extending the inferentialist model of communication, this pragmatic approach to what is said contravenes two deeply entrenched principles in the philosophy of language: literalism and minimalism.

Ideal language philosophers thought of indexicality and other context-sensitive phenomena as defective features of natural languages. Quine (1960: 193) introduced the concept of an eternal sentence as one devoid of any context-sensitive or ambiguous constituent so that its "truth-value stays fixed through time and from speaker to speaker." An instance of an eternal sentence might be: "Three plus two equals five." Following Quine, many philosophers (see e.g., Katz 1981) subsequently accepted literalism, i.e., the view that for any statement made in some natural language, using a context-sensitive sentence in a given context, there is some eternal sentence in the same language that can be used to make the same statement in any context. Few linguists and philosophers nowadays subscribe to literalism because they recognize that indexicality is an ineliminable feature of natural languages. However, many subscribe to minimalism.

Grice urged an inferential model of the pragmatic process whereby a hearer infers the conversational implicatures of an utterance from what is said. But he embraced the minimalist view that what is said departs from the linguistic meaning of the uttered sentence *only* as is necessary for the utterance to be truth-evaluable (cf. Grice 1989: 25). If a sentence contains an ambiguous phrase (e.g., "He is in the grip of a vice"), then it must be disambiguated. If it contains an indexical, then it cannot be assigned its proper semantic value except by relying on contextual information. But according to minimalism, appeal to contextual information is always mandated by some linguistic constituent (e.g., an indexical) within the sentence. In order to determine what is said by the utterance of a sentence containing e.g., the indexical pronoun "I," the hearer relies on the rule according to which

any token of "I" refers to the speaker who used that token. As Stanley (2000: 391) puts it, "all truth-conditional effects of extra-linguistic context can be traced to logical form" (i.e., the semantic information that is grammatically encoded).

Unlike the reference of a pure indexical like "I," however, the reference of a demonstrative (e.g., "he") can only be determined by representing the speaker's meaning, not by a semantic rule. So does understanding the semantic value of "here" or "now." A person may use a token of "here" to refer to a room, a street, a city, a country, the Earth, and so forth. Similarly, a person may use a token of "now" to refer to a millisecond, an hour, a day, a year, a century, and so forth. One cannot determine the semantic value of a token of either "here" or "now" without representing the speaker's meaning.

According to truth-conditional pragmatics, what is said by an utterance is determined by pragmatic processes, which are not necessarily triggered by some syntactic constituent of the uttered sentence (e.g., an indexical). By contrast, minimalists reject truth-conditional pragmatics and postulate, in the logical form of the sentence uttered, the existence of hidden variables whose semantic values must be contextually determined for the utterance to be truth-evaluable (see the controversy between Stanley 2000 and Recanati 2004 over whether the logical form of an utterance of "It's raining" contains a free variable for locations).

The rise of truth-conditional pragmatics may be interpreted (cf. Travis 1991) as vindicating the view that an utterance's truth-conditions depend on what Searle (1978, 1983) calls "the Background," i.e., a network of practices and unarticulated assumptions (but see Stalnaker 1999 and cf. article 38 (Dekker) *Dynamic semantics* for a semantic approach). Although the verb "to cut" is unambiguous, what counts as cutting grass differs from what counts as cutting a cake. Only against alternative background assumptions will one be able to discriminate the truth-conditions of "John cut the grass" and of "John cut the cake." However, advocates of minimalism argue that if, instead of using a lawn mower, John took out his pocket-knife and cut each blade lengthwise, then by uttering "John cut the grass" the

speaker would speak the truth (cf. Cappelen & Lepore 2005).

Three pragmatic processes involved in determining what is said by an utterance have been particularly investigated by advocates of truth-conditional pragmatics: free enrichment, loosening and transfer.

Free enrichment

Gice (1967/1975, 1981) offered a pragmatic account according to which the temporal or causal ordering between the events described by the utterance of a conjunction is conveyed as a conversational implicature. But consider Carston's (1988) example: "Bob gave Mary his key and she opened the door." Carston (1988) argues that part of what is said is that "she" refers to "Mary" and that Mary opened the door with the key Bob gave her. If so, then the fact that Bob gave Mary his key before Mary opened the door is also part of what is said. Following Sperber & Wilson (1986: 189), suppose a speaker utters "I have had breakfast," as an indirect way of declining an offer of food. By minimalist standards, what the speaker said was that she has had breakfast at least once in her life prior to her utterance. According to Grice, the hearer must be able to infer a conversational implicature from what the speaker said. However, the hearer could not conclude that the speaker does not wish any food from the truism that she has had breakfast at least once in her life before her utterance. Instead, for the hearer to infer that the speaker does not wish to have food in response to his question, what the speaker must have said is that she has had breakfast just prior to the time of utterance.

Loosening

Cases of free enrichment are instances of strengthening the concept linguistically encoded by the meaning of the sentence — for example, strengthening of the concept encoded by "the key" into the concept expressible by "the key Bob gave to Mary". However, not all pragmatic processes underlying the generation of what is said from the linguistic meaning of the sentence are processes of conceptual strengthening or narrowing. Some are processes of

conceptual loosening or broadening. For example, imagine a speaker's utterance in a restaurant of "My steak is raw" whereby what she says is not that her steak is literally uncooked but rather that it is undercooked.

Transfer

Strengthening and loosening are cases of modification of a concept linguistically encoded by the meaning of a word. Transfer is a process whereby a concept encoded by the meaning of a word is mapped onto a related but different concept. Transfer is illustrated by examples from Nunberg (1979, 1995): "The ham sandwich left without paying" and "I am parked out back." In the first example, the property expressed by the predicate "left without paying" is being ascribed to the person who ordered the sandwich, not to the sandwich itself. In the second example, the predicate expresses the property of being the owner of the car, not the property of being parked out back.

The gist of truth-conditional pragmatics is that speaker's meaning is involved in determining both the conversational implicatures of an utterance and what is said. As the following example shows, however, it is not always easy to decide whether a particular assumption is a conversational implicature of an utterance or part of what is said. Consider "The picnic was awful. The beer was warm." For the second sentence to offer a justification (or explanation) of the truth expressed by the first, the assumption must be made that the beer was part of the picnic. According to Carston (2002b), the assumption that the beer was part of the picnic is a conversational implicature (an implicated premise) of the utterance. According to Recanati (2004), the concept linguistically encoded by "the beer" is strengthened into the concept expressible by "the beer that was part of the picnic" and part of what is said.

6. Concluding remarks: pragmatics and cognitive science

Sperber & Wilson's (1986) relevance-theoretic approach squarely belongs to truth-

conditional pragmatics: it makes three contributions towards bridging the gap between pragmatics and the cognitive sciences. First, it offers a novel account of speaker's meaning. As Schiffer (1972) pointed out, not unless *S*'s intention to inform *A* is mutually known to *S* and *A* could *S*'s intention count as a genuine communicative intention (cf. section 3). But how could *S* and *A* know that they mutually know *S*'s intention to inform *A* of something? Sperber & Wilson (1986) argue that they cannot and urge that the mutual knowledge requirement be replaced by the idea of mutual manifestness. An assumption is manifest to *S* at *t* if and only if *S* is capable of representing and accepting it as true at *t*. A speaker's informative intention is an intention to make (more) manifest to an audience a set of assumptions {I}. A speaker's communicative intention is her intention to make it mutually manifest that she has the above informative intention. Hence, a communicative intention is a second-order informative intention.

Secondly, relevance theory is so-called because Sperber & Wilson (1986) accept a Cognitive principle of relevance according to which human cognition is geared towards the maximization of relevance. Relevance is a property of an input for an individual at t: it depends on both the set of contextual effects and the cost of processing, where the contextual effect of an input might be the set of assumptions derivable from processing the input in a given context. Other things being equal, the greater the set of contextual effects achieved by processing an input, the more relevant the input. The greater the effort required by the processing, the lower the relevance of the input. They further accept a Communicative principle of relevance according to which every ostensively produced stimulus conveys a presumption of its own relevance: an ostensive stimulus is optimally relevant if and only if it is relevant enough to be worth the audience's processing effort and it is the most relevant stimulus compatible with the communicator's abilities and preferences.

Finally, the relevance-theoretic approach squarely anchors pragmatics into what cognitive psychologists call "third-person mindreading," i.e., the ability to represent others'

psychological states (cf. Leslie 2000). In particular, it emphasizes the specificity of the task of representing an agent's communicative intention underlying her (communicative) ostensive behavior. The observer of some non-ostensive intentional behavior (e.g., hunting) can plausibly ascribe an intention to the agent on the basis of the desirable outcome of the latter's behavior, which can be identified (e.g., hit his target), whether or not the behavior is successful. However, the desirable outcome of a piece of communicative behavior (i.e., the addressee's recognition of the agent's communicative intention) cannot be identified unless the communicative behavior succeeds (cf. Sperber 2000; Origgi & Sperber 2000 and Wilson & Sperber 2002). Thus, the development of pragmatics takes us from the metaphysical issues about meaning and intentionality inherited from Brentano to the cognitive scientific investigation of the human mindreading capacity to metarepresent others' mental representations.

Thanks to Neftali Villanueva Fernández, Paul Horwich and the editors for comments on this article.

7. References

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