Article 3.9.73 "Pragmatics" c. 5000 words

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1. Introduction

Pragmatics is the study of the relation between the structure of a semiotic system (notably language) and its usage in context, and, along with semantics (see *Semantics*), forms part of the general theory of the meaning. Within the theory of meaning, pragmatics is especially concerned with implicit meaning, with inference and the unsaid, and the way in which language structure trades on this background of the presumed and the inferred. Pragmatics has come to play an important part in general linguistic theory in part because it has substantial intrinsic subject matter, partly because it promises explanations for other linguistic phenomena, and partly as a response to over-idealization in contemporary grammatical theory (see *Generative Grammar*). Its has also become an area of interdisciplinary concern, with fundamental contributions from philosophy of language, linguistics, psychology and the sociology of language.

2. History

The use of the term 'pragmatics' in modern semiotics derives from the philosophical work of C. S. Peirce and R. Carnap, reflected in C. Morris's (1938) three divisions of semiotics, the study of sign systems: *syntax*, which investigates the relation of signs to signs, *semantics*, which

investigates the relation of signs to the things referred to, and *pragmatics*, which studies the relation of signs to users of them. Since then, the usage of the term has bifurcated into a broad use, which subsumes *sociolinguistics* (see *Sociolinguistics*) and *discourse analysis* (see *conversation analysis, sociological*, and *discourse, anthropology of*), and a narrower use (associated especially with *philosophy of language* and approaches to the study of meaning which derive from it) in which pragmatics deals with those aspects of meaning that are systematically context-dependent.

3. Scope

Contemporary linguistic pragmatics is focussed on a number of special relations between linguistic meaning and context. On the narrower scope for pragmatics, concerned with context-dependent meaning, the following topics have come to be central: deixis, presupposition, speech acts, implicature, and conversational inference, which are discussed briefly in turn.

3.1 Deixis

Deixis, from the Greek for 'pointing' (the equivalent philosophical term *indexicality* is from the corresponding Latin) is the phenomenon whereby some linguistic expressions are systematically dependent on the context for their interpretation. Take for example the utterance "Put this book over there" – which book is being referred to, and which place it is to be put, are determined by features of the context outside the utterance itself, here typically gestures: *this* and *there* act as place-holders for contextually-specified parameters. A good test for whether an expression is deictic or not is whether an utterance in which it plays a part would be equally true (or false) regardless of speaker, address, time or place of utterance: thus "The square root of nine is three" has no obvious deictics, whereas "We are coming soon" has only deictic expressions.

At first sight deixis seems to be a simple phenomenon, a left over from the direct 'here and now' relevance of animal communication systems. But the intersection of this context-dependence with the property of abstract symbolic representation in language (Hockett's *displacement* feature of language design) leads to deep complexities, and the phenomena turn out to be very puzzling both philosophically and psychologically, for deixis introduces context-dependency into almost every utterance (in English for example, nearly all sentences are tensed, and tense is deictic, as in "It is Tuesday" where *is* locates the reference time as today). One of the central philosophical puzzles is that deixis makes possible self-reference in utterances, thus introducing, e.g., many paradoxes of the 'Cretan-liar' type: "This sentence is false" is true if and only if it is false. One of the central psychological puzzles is that deixis makes clear that there is a mismatch between what a sentence means and the thought corresponding to its utterance. For example, what exactly is the thought corresponding to the utterance "Today is Tuesday"; it is obviously not 'Tuesday is Tuesday', nor (if the day of speaking is 31st December 2035) "31st December 2035 is a Tuesday" since the speaker may have no idea of the date. Closer might be 'The diurnal span in which I am now speaking falls on the calendrical second day of the week' – but now we have paraphrased one deictic term (*today*) in terms of others (*I, now*). And the puzzle goes on.

Languages incorporate deictic context-dependency in many different places in their grammars and lexica, but it is conventional to consider four main notional parameters:

First, there is *person deixis*, reflected in the traditional grammatical categories of first, second and third person, where first and second person refer to members of the speech event (current speaker and current addressee respectively) in contrast to the third person. These categories are reflected in pronoun systems, verbal agreement and elsewhere. Many languages make unfamiliar demands here: for example, in S.E. Asia languages like Korean or Javanese have different word-forms for referring to entities like kinsmen, houses, food, according to the

relative status of speaker and addressee. Or in some Australian languages (like Dalabon) pronouns make reference to whether the speaker and the referent, or the referents in the case of plural third person pronouns, are one vs. two generations apart genealogically. This encoding of the social relation between speaker, addressee and third-party referents is often recognized as a separate deictic dimension, called *social deixis*.

A second important parameter is time. Temporal deixis is directly manifested in English in words like *now,* and, as mentioned, in tense. True tenses locate time relative to the moment of speaking, so that a past tense is used for events (or situations) preceding it, present for events including it, and future for events succeeding it. Not all languages have tenses (e.g. Malay or Chinese), and not all the grammatical categories that grammarians call tenses are truly deictic. Some languages though (e.g. Bantu or Papuan languages) have up to six deictic tenses, specifying e.g. that something happened the day before yesterday. There are many other manifestations of temporal deixis, from calendrical specifications like *Yesterday* to more covert items like *ago* (as in *ten years ago*) or *Good night* which presumes that it is night and that the speaker is parting.

A third parameter is spatial deixis, reflected in demonstratives like *this* and *that*, or adverbs like *here* and *there*, where spatial locations are indicated by reference to the place of speaking. Demonstrative systems vary greatly across languages, with some making distance from speaker primary, others making a contrast between 'this near speaker' vs. 'that near addressee', and others invoking attentional issues, so that one has a contrast between e.g. 'this we are talking about' vs. 'that to which I want to draw your attention'. Huge arrays of demonstratives are found in some languages (e.g. Inuit) where these sorts of parameters intersect with, for example, the shape of things referred to. Languages often have pairs of verbs, like *come vs. go, bring vs. take*, which are often interpreted according to whether the motion is towards or away from the place of speaking. Many other expressions in language are covertly place deictic. For

example, "the cat is behind the tree" implies that the tree is between the speaker and the cat, and

"Let's go to the local pub" implies that the pub is near to the place of speaking.

Lastly, discourse deixis involves the possibility of referring from one utterance backwards or

forwards to others, as in "That was a good speech" vs. "It made a sound like this: goooo".

Discourse deixis grades into anaphora, the use of expressions like pronouns to refer to entities

already introduced earlier, usually by fuller expressions (see *anaphora, Discourse*

Representation Theory). It is also closely related to *definiteness* (q.v.), as in *The man* vs. *a man*,

since all these phenomena rely on mental models of entities introduced into the discourse.

Considerable effort has gone into understanding how deixis works, and how it can be brought

within a formal theory of meaning. But for the most part theoretical models underestimate the

complexity and pervasiveness of deictic phenomena, and the richness of the contextual systems

that support them. For example, good studies of actual deictic usage are rare, and the study of

gesture is in its infancy (McNeill, 2000).

3.2 Presupposition

Presupposition is a second major topic in pragmatics, and concerns the way in which

propositions already presumed in a discourse context are usually not stated or questioned, but

encoded in a more 'background' way. For example, "Has he stopped bothering you?"

presupposes the proposition that you and I know that he has been bothering you, and asks

whether this has stopped. The classical test for presupposition is survival under negation: "He

hasn't stopped bothering me" and "He has stopped bothering me" both presuppose that he was

bothering me. Languages have complex systems for foregrounding and backgrounding

information in this way. Thus mental attitude verbs, like *know* or *regret*, or change of state

verbs like *start* and *stop* presuppose their complements, definite descriptions (like *the king of*

Buganda) presuppose the existence of the entities referred to, iteratives like *again* (as in *John*

did it again) presuppose earlier occurrences, and so on. The phenomena and corresponding explanations are complex, and are dealt with in a separate article (see *Presupposition*), but the relevance to pragmatics is that presupposition clearly implies that natural languages are built to trade on, and signal, the dependency of utterances on propositions already taken for granted. The pragmatic aspects of the phenomena are often underplayed in semantic accounts of the phenomena. For example consider the sentence *Sue cried before she finished her thesis* – this would normally presume that she finished thesis, this being a presupposition from the *before*-clause. But the minimally different sentence *Sue died before she finished thesis* seems to make no such presumption, because of course we happen to know that the dead do not complete theses. This *defeasibility*, or cancellation of an inference in the context of contrary assumptions, is a hallmark of pragmatic inference.

3.3. Speech acts.

A third major topic in pragmatics concerns the general force or point of utterances, and is usually discussed under the rubric of *Speech acts.* We can take a simple underlying proposition like 'The wine is (put) on the table', and we can embody it in utterances with different *illocutionary force* (in the terminology of the philosopher J. L. Austin). We can assert or vouch for the truth of the proposition, as in the assertion *The wine is on the table*. We can ask whether it is the case, as in *Is the wine on the table*? We can demand that the proposition be made true, as in *Put the wine on the table*, and we can forbid anyone making it true as in *Do not put the wine on the table*. Languages typically indicate a handful of such illocutionary forces in the grammar of *sentence types* (see that entry), as here in the English unmarked statement order, the marked inversion of yes-no questions, or the covert subjects of imperatives. Beyond statements, questions and imperatives, most languages have in addition minor sentence types, e.g. exclamatives as in *What a wonderful dress*, or hortatives like *Let's start,* or imprecatives like *Damn you!* and other more exotic types (e.g. special forms for blessings, curses,

warnings). Thus the grammars of languages seem to presume a set of fundamental uses for language, and there has been some philosophical and theoretical interest in these categories. However, actual usage is much more complicated than this discussion would suggest. For example, one can use the statements *I suppose the wine is on the table* to question whether it is, or *I would like the wine on the table* to request that it be put there, or *The wine should not be placed on the table* to forbid it. Some of these uses can be explained as secondary or derivative uses of one sentence type to perform a speech act prototypically associated with another. For example, *I would like ...* could be said to indirectly hint, rather than directly request, and can thus be described as an *indirect speech act*. What this discussion makes clear is that it is important to keep apart the grammar of sentence types from the illocutionary forces or speech acts they can be used to perform.

There has been much work on grammatical sentence types (and what the grammarians call *mood*), speech acts, and indirect speech acts, and their relationship to one another. This is the subject of a separate entry (see *Speech Acts*), but here one major point is that these phenomena directly indicate that natural languages are designed not just as abstract systems, but as tools for human communication, a point of view underlined in functional approaches to language structure (see *functional approaches to grammar*). Speech acts can also be seen to be fundamentally context dependent. First, speech acts are dependent on, and contribute to, the context in which speech is taking place. One way of seeing this is to construe speech acts as operations on the context (conceived of as sets of propositions taken for granted): a statement adds a proposition to the context, a question requests that such a proposition is added, a denial removes one, and so on. Note too how a permission presumes that a prohibition would otherwise be in force. Second, the interpretation of a sentence as performing a specific speech act is obviously context dependent. Consider the sentence *What are you doing tonight?* in, say,

the following discourse context where it has a straightforward informational query status:

A: "I can't wait for this evening"

B: "What are you doing tonight?"

Now compare its role in a different context:

A: "What are you doing tonight?"

B: "Oh I don't know, not much"

A: "Would you like to come to the movies?"

Here the utterance checks out a condition on an invitation, and in so doing can be seen to prelude such an invitation (a 'pre-invitation'), which is then (given an appropriate response) expected to follow. Sequences of utterances thus set up specific expectancies, crucial in interpretation, a matter dealt with more fully below.

3.4 Conversational implicature

So far we have considered ways in which the structures of languages build in presumptions of use, as in pronouns, demonstratives, verbs of presupposition, or sentence-types as indicators of speech acts. In these cases the semantics of the expressions triggers the pragmatic inferences, which are themselves subject to pragmatic resolution. But another very important aspect of pragmatics is concerned with inferences that are invited – or *implicated* – rather than required or triggered by the semantics: often, synonymous expressions will have different implicatures. The philosopher H. P. Grice noted that there are a number of different ways in which such invited meanings can be invoked, all of which point to a set of background assumptions about how language should be used, which he formulated as a set of *maxims of conversation*. He sketched four such maxims, with attendant submaxims: the maxim of Quality ('Say what you believe to be true'), the maxim of Relevance ('Make what you say relevant and timely'), the maxim of Quantity ('Don't say more or less than is required'), and the maxim of Manner ('Be brief and clear'). Then he showed that if a speaker overtly violates them, the speaker is

generally credited with some implicit, indirect meaning – for example, if it is raining, and the speaker says "Thank God I didn't bother to bring my umbrella", thereby clearly violating the maxim of Quality, an ironic interpretation is generated. (Any such interpretations which are suggested by reference to the maxims, Grice called *conversational implicatures* to distinguish them from logical implications). If on the other hand the speaker just seems to be following the maxims, then additional inferences are generated . For example, if you say "There are five gallons in the tank", I'll assume that there are no more than five gallons in the tank, because otherwise by the maxim of Quantity ("Say as much as is required") you should have said so (note that if there are more than five gallons, then of course what you have said is certainly true, but anyway misleading). Grice went on to note a number of interesting applications of his theory of implicature. For example, philosophers had long disagreed about just how close the ordinary language words "if", "or" and "and" are to their logical counterparts. Grice argued that the divergence between ordinary language and logic was largely due to the implicatures of language usage. For example, if I say "Glenn was an astronaut or he was a senator", I suggest that he was not both, but this does not mean that natural language *or* is not equivalent to logical (inclusive) disjunction. That is because if I knew he was both, I should (following the maxim of Quantity) have said so; since I didn't, I implicate that I believe he was one or the other but not both.

Although modern versions of implicature theory use somewhat different 'maxims', they follow Grice's idea that the presumption of background principles of language use can generate many detailed inferences that are suggested but not entailed by what has been said. There are two main branches of contemporary theory. One takes the line (following the trend in the cognitive sciences) that these background principles are innate cognitive mechanisms of information processing (see the separate entry *Relevance theory*). The other branch follows Grice more closely, and argues that these principles follow from rational design characteristics of

communication. The former line is more generally concerned with the nature of inference in communication, while the second "Neo-Gricean" line of argumentation has been developed more narrowly to give explanations of linguistic facts, and is thus of more direct relevance to linguistic theory, and so is the focus of the following remarks.

One central attraction of the Gricean approach is that it promises to simplify the kinds of meanings we attribute to expressions. For example, as mentioned, English *or* seems normally to have an exclusive use (as in "The book is either in the bedroom or the sitting room"), but obviously this is not always so (consider "I lent you my pen or my pencil, or both"). Grice's tactic is to avoid positing an ambiguity (between inclusive and exclusive *or*), by assuming that *or* has a wide, general meaning (e.g. the inclusive meaning), which is then specialized in context where appropriate by an extra pragmatic inference – namely the Quantity implicature 'not both'. By generalizing Grice's observations we can note, first, that any pair of expressions (like *and, or*), where the use of one expression would entail the other (as in *p and q* implying *p or q*), but not vice-versa, form a scale of informativeness – the use of *and* is more informative than *or*, because *p or q* allows not only for the circumstance that *p*, or that *q*, but also for the circumstance that *p and q*. In short, *p and q* rules out more alternatives states of affairs. Then we can also note that for any such pair of expressions, asserting the weaker or less informative member, will implicate the inapplicability of the stronger expression (for if you had meant that, you should have said it). Hence asserting *p or q* implicates that one is not in a position to assert *p and q*. Now consider many other such ordered pairs, where each is of the form <strong, weak>:

< and, or>, <all, some>, <certain, possible>, <four, three>, <must, may>, <hot, warm>.
For each of these, asserting the weaker, less informative expression will implicate that the stronger expression does not apply, as in "Some of the students are punctual", which, other things being equal, will implicate 'not all of the students are punctual'. Modern treatments of

these so-called *scalar implicatures* are quite developed (Atlas 2000, Gazdar 1979, Horn 1989, Levinson 2000).

Many further systematic observations can be made. Consider the contrast between "John could solve the problem" vs. "John had the ability to solve the problem" – the first suggests that he did solve it, while the second suggests he didn't. The opposition is one between a direct lexical coding with the verb *can* and a more periphrastic expression *have the ability to*. More generally, the opposition is between any simple, direct encoding, which invites a rich interpretation to the stereotypical scenario, and a less direct, unusual, more prolix or *marked* expression, which suggests a complementary interpretation. Consider for example "He went downtown and bought a coat", which suggests he a single complex action (a coat-buying expedition), vs. "He went downtown and in addition he bought a coat", which suggests two independent actions. These opposing tendencies of interpretation can be related to *iconicity* in language (see that entry), but what gives them reliability is mutual expectations between speaker and addressee – that is, that they follow from general principles or maxims.

Contemporary neo-Gricean theory recognizes two or three maxims, for example a maxim of Quantity (or Q-principle, giving us the scalar implicatures mentioned above), a maxim that maximizes information from direct, unmarked expressions (an Informativeness or I-principle), and a maxim of Manner or markedness (or M-principle) that curtails those informative interpretations (Levinson 2000). Three such principles suffice to capture many detailed inferences which interact closely with linguistic structure, and they can be thought of as stable heuristics which serve to amplify message content with default inferences.

In this sort of way, Grice's ideas can be given both precision and generality. The description of many crucial aspects of meaning (for example those associated with the natural language

connectives, quantifiers and modals) can be simplified and improved by taking into account these inferences which are closely associated with expressions by general principle, but not actually encoded in them. Such inferences have a default or presumptive character, and are easily confused with the semantics and syntax of expressions.

These observations have considerable importance for linguistic theory. If they are pushed home, they imply a rather different view about the relation of language competence to non-linguistic abilities than is usually assumed. For example, it turns out that pragmatics can not interface with semantics in the way originally imagined, as a module or system of principles that given the proposition coded in an utterance, would calculate additional non-coded inferences. The problem is that pragmatic inferences clearly play a central role in deriving the proposition in the first place. For example, in *It is better to drive home and drink than to drink and drive home* the proposition expressed depends on the antecedent construal of *and* as temporarily asymmetrical (i.e. as 'and then'), which is a matter of implicature. Thus what is coded semantically and what is inferred pragmatically are often necessarily integrated in the extraction of propositional content. The implication is that there is a single level of representation to which quite different kinds of principles contribute – semantics and logical inference on the one hand, and pragmatics and presumptive reasoning on the other.

Another possible radical implication is that many correlations between form and meaning that have been attributed to syntax are more properly ascribed to pragmatics. For example, it is normally supposed that in a sentence like *The chairman voted for him*, the chairman and the man voted for must be distinct by a rule of grammar. But in *No-one else voted for the incumbent chairman - only the chairman voted for him* it is possible to understand the chairman as voting for himself. Arguably, this is because normally one would express such co-reference by the reflexive *himself*, and the use of the non-reflexive pronoun thereby implicates a non-coreferential reading, unless there are other reasons to use it. Here there are such other reasons

– *Only the chairman voted for himself* would imply that everybody else voted for people other than themselves, and that may not be what is intended. Many such reductions of alleged syntactic patterns to general patterns in pragmatics may be possible (see Huang 1996, Levinson 2000).

3.5 Conversational structure

Conversational inferences seem to be of two kinds: first the implicature type, which relies on general background presumptions or heuristics, and second, inferences that are tied to more specific details of conversational interchange. Conversation – or the normal, informal exchange of speech, where there is rapid alternation of speakers – can be contrasted with more formal, specialized types of speech exchange (as in chaired meetings, interviews, or religious services). Needless to say, conversation is the primary form of human verbal interaction, the context in which all primary language-learning is accomplished and many details of linguistic structure are intimately tied to it. For example, a primary property of conversation is rapid turn-taking, and with this turn-taking the deictic centering also alternates: what was "I" is now referred to as "you", what was "here" becomes "there", and so forth, an alternation that children initially find difficult.

The characteristics of turn-taking (and indeed conversation in general) have been studied primarily by sociologists (under the rubric of *conversation analysis*, q.v.) . In the model advanced by Sacks and Schegloff, conversational turn-taking is organized as a sharing system whereby the current speaker has rights only to the end of a sentential construction or turn-taking unit, at which point transition to another speaker is governed by an ordered set of rules – if the speaker has selected a next speaker, that party should speak next, if not, other speakers may start speaking, failing which the original speaker may continue. These rules explain many details of conversational patterning, such as just where overlaps occur (e.g. as competing

starts). They also explain the differential significance of silence – if no-one decides to speak after a unit which selects no following speaker, silence is likely to be interpreted simply as a lapse in conversation, but after a next speaker is selected it is heard as a significant withholding of speech (Levinson 1983:300 after Atkinson & Drew):

A: *Is there something bothering you or not?*

B: (1.0 second silence)

A: *Yes or no?*

B: (1.5 seconds silence)

A: *Eh?*

B: *No.*

Differential meanings attributed to silence eloquently make the point that the semiotic significance of utterances is very much conditioned by the locus in which they occur. Consider for example that after a request, an acceptance or refusal is due, but these options are not equal: an acceptance is usually delivered immediately in simple form, whereas a refusal is typically delayed, indirect and accompanied by excuses. Recollect too, that as noted above, many speech acts are preceded by an utterance that checks out whether the conditions for that action are met – thus one can hint at an upcoming request for an appointment by asking whether the addressee would be available at a certain time. Then we can readily understand the following, where a telephone caller C already interprets a two-second pause as a negative answer (from Levinson 1983:320):

C: *So I was wondering would you be in your office on Monday*

   (micro-second pause)

   by any chance?

   (2.0 second silence)

C: *Probably not*

Here the interpretation relies (a) on the asymmetry between what the conversation analysts call

preferred and *dispreferred* responses to specific speech acts, and (b) on the understanding that the question is not idle, but functions as a prelude to a request.

The study of conversation thus shows that the attribution of meaning to utterances depends crucially on sequential location. Arguably, this is exactly what Grice had in mind by his maxim of Relevance, where the implicatures of an utterance would also derive from the expected goals of the speaker at a particular point in discourse. Goal-driven accounts of conversational understandings have been explored most thoroughly in artificial intelligence circles, where the construction of a machine that could enter into functional dialogues has been a long-term objective.

Conclusions

In addition to the topics reviewed here, there are pragmatic perspectives on many other phenomena, for example register, style, jargon and other specializations of language, the contrastive use of languages by multilingual speakers (see *Code-Switching*), and social constraints on the use of language (see e.g. *Politeness*). From research on all these topics, an overall picture is emerging of the systematic relations between semiotic systems and their contexts of use. First, any sign system or language makes systematic provision for contextual features, as in deixis or presupposition. Second, what is actually coded in signs or linguistic expressions is only a small part of the meaning attributed in context, the remainder being generated by presumptions of use. Third, the coded meaning or semantics is usually much less fully specified than conventional wisdom implies. Consider a roadsign depicting falling rocks - the depicted content is specific yet hardly conveys the full message: we must add the illocutionary force ('Beware!'), and the deictic inference ('in this vicinity' or 'the next kilometer'). Such a sign contrasts with other warning signs, e.g. a simple exclamation mark, which indicates general danger but implicates that the danger is other than rocks (since

otherwise the rock sign would have been used). All such signs contrast with no sign, which implicates no special foreseeable danger. In similar but much more complicated ways, pragmatic principles remain the essential basis for linguistic communication. For lexical limitations and the bounds of learning and memory deeply constrain natural language semantics. In addition, the relatively slow articulation of speech compared to understanding processes puts a clear premium on pragmatic inference. A pragmatic perspective offers fundamental insights into both the structure and use of language.

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