

Roland Posner

Universidade Técnica de Berlim

RESEARCH IN PRAGMATICS AFTER MORRIS

According to Charles Morris (1938: 4ff., 29ff. = 1971:19f., 41ff. and 1939: 132f. = 1971:416f.), pragmatics deals with the «pragmatical dimension of semiosis», which is based on the relation of sign vehicles to interpreters and manifests itself in the process of interpretation. This paper will therefore concentrate on what happens in the interpretation of a sign vehicle by an interpreter. It analyzes the conditions an entity must fulfil in order to function as an interpreter in a semiosis. § 1 shows how these conditions vary according to the various types of semiosis so that specialized roles of interpreters arise, which are discussed in § 2. § 3 characterizes focal points of current pragmatic research, devoting a section each to pragmatic processes in semiosis, to the types of signs that have been called «pragmatic signs», to pragmatic versus semantic information and to specifically pragmatic messages. § 4 surveys central strategies of pragmatic research applicable to coded communicative signs and § 5 complements this presentation by treating the pragmatics of codeless and of non-communicative signs. In each of these sections I will start by introducing my own terminology, then draw attention to relevant conceptions of Charles Morris, and confront them with dominant trends of current research; as a result, an assessment of Morris's contribution to pragmatics will be given in § 6.

1. Types of semiosis

1.1. Signaling and indicating processes

When someone or something takes something as a sign and interprets it as representing something else, a system *i* responds with behavior *r* to a stimulus *z*, which affects *i* through a medium *m*. This is what Morris (1938 and 1946) calls «a *semiosis*».

The *stimulus* *z* can be an object, property, relation, event, or state of affairs. Morris (1938 and 1946) refers to it as «a sign vehicle».

The *system* *i* can be a living being (or one of its parts) that is affected by a stimulus from its environment and responds by adjusting its body behavior; it can be a machine (or one of its parts) that changes its performance when it receives information through one of its channels; it can be a social institution that reacts to a new situation according to its own rules. Morris restricted his approach to living beings but was highly interested in the possibilities of extending it to machines and institutions (personal communication of August 1975; about machines as interpreters cf. Smythe 1990, about institutions as interpreters cf. Posner 1989).

The *medium* *m* can be any material connection between *i* and *z*: the light which gives access to stimulus colors and forms, the air which transmits sound and smell, a liquid which has a taste and a temperature; there may also be direct contact without intervening materials, as when the pressure exerted by an object is sensed. For *i* to be affected by *z*, it need not have sophisticated organs of perception such as «the five senses» of humans; the process can be much more primitive, as when microbes react to acid components in the surrounding liquid by moving away from them. The attempt to include all media and to cover the interpretation processes of all living beings has been one of the persisting challenges of Morrisian semiotics.

The *behavior* *r* with which *i* responds to *z* can be any change in the state of *i* which is caused by (and different from) the fact that *i* is affected by *z*. Such changes of state are called «*interpretants*». They may be body movements, machine performances or institutional actions. If *i* is equipped with specialized subsystems for perception and cognition, its response *r* to *z* may consist not in an overt performance but in the formation of a belief in a state of affairs *d* (which may itself be identical with or different from *z*). Generally I say that in every semiosis *z* functions as a *signal* for *i* to do *r*; every semiosis therefore is a *signaling* process. If the interpretant *r* consists in the formation of a belief in a state of affairs *d*, I say that *z* indicates *d* to *i*, *d* is a *message* indicated to *i* through *z*, *z* is an indicating sign (or indicator), and the semiosis as a whole is a process of *indication*. Thus if *i* is an organism and *z* is the fact of there being a dark area under a tree, *z* may function as a sign indicating to *i* that there is a shadow, or that there exists a source of light which throws the shadow, or that the light comes from a certain direction, or that it is cooler there than in the surroundings, etc. These are all possible messages indicated to *i* through the dark area. Such messages are called «*designata*» in Morris 1938, «*significata*» in Morris 1946, and «*significations*» in Morris 1964 — with some theoretical modifications to be discussed below in § 3.4.

Let us now suppose that the organism *i* in the above example moves into the shadow. The semiotic concepts introduced so far allow two different explanations for this behavior. In the one case, seeing the dark area causes the belief in *i* that it is cooler there, which in turn causes *i* to move there. In this case, the dark area under the tree functions as an indicating sign; that it is cooler there is its message; the formation of a belief in this message by *i* is its interpretant; and the movement is only a further consequence. In the other case, *i* has an innate tendency or acquired habit to shun bright light, and perceiving the dark area causes *i* to move, without any beliefs intervening. In this case the dark area functions only as a signaling sign and it is the movement that is its interpretant. Morris's conception of the interpretant is similarly broad. Depending on the type of semiosis in question, he takes the interpretant to be an act at one time (cf. Morris 1939: 132f. = 1971:416) and the activation of a disposition to act (which includes beliefs) at another time (cf. Morris 1946: 16ff. = 1971:93ff. and 1964:5f. = 1971:405f.). In order to explain how such a disposition turns into an act, Morris assumes the organism to be in some stage of a purposive

behavior, e.g., seeking cooling (cf. Morris 1946:51f. = 1971:127). In general, organisms take stimuli as indicating signs and postpone overt response when they are in what G. H. Mead (1938:3ff.) calls the perception phase of an action. Such signs are called «*designative signs*» by Morris.

The perception phase is then followed by the working and the consummation phases, within which stimuli are either taken as primitive signals or as indicating signs followed by immediate overt responses (cf. Morris 1964:3f. = 1971:403).

1.2. Signification

Whether the interpretant which *i* produces in the reception of *z* is the formation of a belief or not, it can be either a unique response (which is not generalizable with respect to any property of *z*) or it can be a reaction governed by a *code* *c*. Codes are either innate (in organisms), or programmed (into machines) or conventional (in individuals who are members of a group). Codes correlate signifiers with signifieds, and where they intervene, *i* takes *z* as a token of a signifier, and *i*'s response is a performance of or a belief in a token of the signified. Examples of the functioning of innate and programmed codes are the growth of an organism according to the instructions stored in the chromosomes and governed by the genetic code and the performance of a computer processing a given input according to its program which is specified in a programming language. Examples of the functioning of conventional codes are the diagnosis of an illness by a doctor on the basis of a medical symptomatology, the interpretation of a verbal utterance according to the grammatical and lexical rules of a natural language, and the identification of the genre of a piece of music according to the contemporary genre code. Where the interpretant is determined by a code (which brings signifiers and signifieds into play), I say that the sign in question is a *signifying sign* and the semiosis as a whole is a process of *signification*. As shown by the above examples of the genetic code and of an innate tendency to react, not only indicating signs but also other signaling signs can be signifying.

Although Morris does not use the term «code», he knows Saussure's (1916) distinction of «*langue*» (a system of signifiers paired with signifieds) versus «*parole*» (the interpretation of sign vehicles as tokens of signifiers paired with signifieds), and he reconstructs it on a behavioral basis (1946:37f. = 1971:115). Instead of distinguishing between signs and signifiers, he claims that signs often belong to sign families, which are «sets of similar sign vehicles which for a given interpreter have the same significata» (1946:19f. = 1971:96). Missing in this approach, however, is a parallel distinction on the side of the significata between signifieds and the tokens thereof occurring in particular semioses — a distinction which should not be confused with the distinction of signifieds vs referents («*significata*» vs «*denotata*» in the terms of Morris 1946). With this qualification, what is nowadays called «a code» can be taken to be equivalent to what Morris called «a *lansign* system»: It is «a set of plurisituational signs [sign families] with interpersonal significata common to mem-

bers of an interpreter family [...] and combinable in some ways, but not in others to form compound signs» (1946:35f. = 1971:113).

1.3. Sign manipulation

Whether a semiosis contains non-indicating signals or indicating signs, whether it is a process of signification or not, the sign involved can either result from unintended natural processes or it can have been produced by a living system, apparatus, or institution with the intention that it function as a signaling, indicating, or signifying sign for a certain interpreter. Examples are living beings that manipulate other living beings, machines, or institutions, as when a human experimenter puts acid into the water so that certain microbes take it as a *signal* to move away; or when a chimpanzee in a fight with another chimpanzee produces a body movement so that his partner take it as *indicating* a further movement (which he then may perform or fail to perform); or when a photographer directs his malfunctioning automatic camera toward the sun because bright light is a *signal* for it to react with the short shutter time he needs; or when a conscript commits selfmutilation so that the army take the state of his body as *indicating* unsuitability for military service; or when a murderer leaves a forged letter at the victim's corpse so that it will *signify* to the law court that the victim committed suicide. In each of these cases we have to distinguish two interpreters with different roles: a *sign producer* (the human experimenter, chimpanzee, photographer, conscript, murderer) who intends a sign to be a cause for an interpretant behavior in a certain interpreter; and a *recipient* who is affected by the sign and responds with his interpretant behavior (which may correspond to what the sign producer intended or not). Where there is intentional sign production, I say that the sign in question is a *manipulating* sign and the semiosis as a whole is a process of *sign manipulation*.

Morris 1946 paid much attention to the difference between the coded significata of signs and their use, i.e. their «production [...] as means-objects to accomplish some end» (1946:96f. = 1971:176). Taking as a guide Mead's segmentation of action into the perception phase, working phase, and consummation phase, Morris distinguishes three modes of signifying:

1. Signs that convey information (therefore being particularly appropriate in the perception phase of a recipient's action) are called «designative signs»; an example is a sentence such as: «Today, there is a steady westerly wind.»
2. Signs that incite a way of acting (therefore being particularly appropriate in the working phase of the recipient's action) are called «prescriptive signs»; an example is the sentence: «Keep ahead of the wind!»
3. Signs that induce a valuation (and are therefore particularly appropriate in the consummation phase of a recipient's action) are called «appraisive signs»; an example is the sentence: «What a wonderful wind!»

The context of action within which an interpreter receives a sign may influence his interpretant behavior, but it leaves the sign's signified unmodified. Coded signs change their significatum neither according to the phase of action the recipient happens to be in while receiving them nor according to the phase of action the sign producer happens to be in while emitting them. But the very fact that such signs have constant significata enables their producers to use them as instruments for their own goals. When a sailor in a harbor wakes his friends up in the morning and says to them «Today, there is a steady south-westerly wind of force 8» in order to make them go on a sailing trip with him, he uses a designative sign to incite a way of acting. When a sailor on a boat trip where the direction of the boat does not matter, says to the steersman «Keep ahead of the wind!» in order to make him aware of the fact that the wind has changed, he uses a prescriptive sign to convey information. When a guest on a sailing boat says «What a wonderful wind!» in order to make his hosts prolong the sailing trip, he uses an appraisive sign to incite a way of acting. Where the use a sign producer makes of a sign differs from its mode of signifying, Morris speaks of «secondary sign use» (1946:94f., 116 = 1971: 174, 193); *primary* sign use then is the production of designative signs to inform, of prescriptive signs to incite a way of acting, and of appraisive signs to induce a valuation. With these conceptualizations Morris was well ahead of his time in 1946; the distinction of primary and secondary sign use was only taken up two decades later by Jakobson (1960), Gordon and Lakoff (1971), and Searle (1975).

1.4. Communication

In the discussion of secondary sign use a point emerged which had been underestimated by Morris: the complexity of intentional relations between sign producer and recipient that are necessary for them to perform what is generally called «communication» (cf. Morris 1946:37f., 117ff. = 1971:115, 195ff. for his conception of «communization»). (1) In a communication process, the sign producer produces the sign not only with the intention of bringing about a certain interpretant behavior in the recipient but also with the belief that this behavior will occur if the recipient recognizes that the sign producer produced the sign with this intention (cf. Strawson 1964, Grice 1957, Schiffer 1972, Bach and Harnish 1979, and Meggle 1981). This implies that the sign producer intends to bring about a certain interpretant by making the recipient aware that this is his intention. (2) If the recipient reacts with that interpretant, he does so because he recognizes that the sign producer intends him to do so on the basis of the fact that he recognizes the sign producer's intention. An example is a standard request such as «Please close the door now». Here the sign producer believes that the recipient will perform just because the sign indicates to him that the sign producer wants him to perform. Another example is a standard statement such as «It is raining», uttered in a room without access to the outside. Here the sign producer believes that the recipient will form the belief that it is raining just because the sign indicates to him that the sign producer wants him to form that belief. (For other types

of speech acts cf. Searle 1969 and 1979:1-29). Non-linguistic examples of communication in this strict sense are body gestures of primates such as threats and appeasals (cf. Waal 1982), traffic signs (cf. Savigny 1980 and Krampen 1982), as well as house fronts, parades, and other means of self-presentation used by social institutions. Where the sign producer has a complex intention of the type described, I will call him «a sender», the intended recipient «an addressee», and the sign «a communicative sign»; if the addressee recognizes this intention, the resulting complex semiosis is called «a process of communication»; if he produces the intended interpretant, then the communication is called «successful».

Once reflexive intentions of the kind introduced are admitted, semiosis can reach unlimited levels of complexity which are restricted only by the interpreter's internal structure. One immediate consequence is the ability of the addressee to correct errors, i.e. unintended deviances of the sign event from the sign design, and to complement incomplete signs. When someone says «Please pass the salt», the coded meaning (i.e. the signified) of this sentence leaves the addressee options such as passing the salt immediately or an hour later. However, when he realizes the speaker's intention to say something relevant to the present interaction in a meal, he will conclude that he should do it immediately and he will react as if the speaker had said «Please pass the salt now». In this case the addressee takes circumstances of the communication situation as *indicating signs* that guide his interpretation of the *communicative sign*. The speaker can rely on such auxiliary sign processes to such a degree that he will anticipate the recognition of his intention by the addressee even on the basis of an incomplete communicative sign.

The assumption that the speaker intends to say something that is required by the purpose of the present interaction is what Grice (1975) calls the «*cooperative principle*». Its validity explains not only the occurrence of corrections and complementations but also of reinterpretations of an utterance that are less straightforward. If at all possible, an utterance is taken as underlyingly cooperative even when its coded meaning violates the cooperative principle.

An example is the English sentence «Can you close the door?» It indicates, according to the grammatical and lexical rules of English, that its sender intends its addressee to react by stating whether he is able to close a certain door or not. But it is often uttered in a situation where it is obvious to the speaker that the addressee is able to close the door and where the addressee is aware of this. In this situation the speaker counts on the addressee's assumption that he did not just want to make a pointless utterance, but to communicate something relevant. In trying to find out what this is, the addressee looks for a possible function of the utterance in the present interaction. He asks himself what would make a question such a «Can you...?» relevant. A possible answer is that it could be a preparation of the request «Please do...», which would have a good chance of success if uttered after a positive response to the question. Since the addressee knows that the speaker knows that the response would be positive, he can conclude that the speaker wants to draw the addressee's attention

to the possibility of requesting him to close the door. Other mutually known features of the communication situation may function as indicators that confirm or disconfirm such a conclusion. If the door is already closed or if the speaker is known to insist on having discussions in his room with the door open, this would refute the assumption that he wants to prepare a request for closing the door. If that is not so, however, and if the addressee may assume that the speaker regards the topic they are discussing as secret, he can infer that the speaker wants the door closed, which would constitute another condition for a felicitous request. Reasoning of this kind may lead the addressee to interpret the pointless question «Can you close the door?» as an indirect way of making the relevant request «Please close the door».

Such reasoning is normally performed automatically and remains below the threshold of consciousness. But it has to be taken into account if communicative interaction is to be adequately explained. A process of communication where the sender intentionally produces a signifying sign whose signified is different from what he intends to communicate to the addressee is called «*indirect communication*». Indirect communication is a special case of what Morris (1946:94f., 116 = 1971:174, 193) calls «secondary sign use». In secondary sign use the recipient can react to a sign in a way different from its signified without knowing whether there is a sign producer and, should there be one, what he intends in producing the sign. In indirect communication, however, the recipient reacts to a sign in a way different from its signified just because he believes that the sign producer intends him to react in this way and wants him to know this.

Examples of indirect communication combining the Morrisian modes of signifying with incongruent modes of use are the following:

- a. Someone who plans to sail to the other side of a lake and can presuppose that the persons around him know of this plan, asks one of them: «What will the weather be like today?» and receives the answer: «The weather will be excellent today!» Whether or not he adopts this valuation, he will conclude from the fact of its utterance that, in the opinion of the person he is talking with, the weather will provide a fair sky and a steady wind, which are both excellent conditions for sailing. In this case the addressee makes an informative use of the appraisive sign. Similarly, he could have made an informative use of a prescriptive sign in an answer of the type «You should take the big sail today».
- b. Someone who plans to go to the other side of a lake and has to decide if he can use his sailing boat or if he must take a motor boat, asks one of the persons around: «How do I get to the eastern lake shore?» and receives only the answer: «Well, there is a steady westerly wind». Whether or not he considers this description true, he will conclude from the fact of its utterance that in the opinion of his addressee he should use the sailing boat. He will assume that this message was to be communicated to him. In this case the addressee makes an incitive use of a designative sign. Similarly, he could have made an incitive use of an appraisive sign in an answer of the type «Look, what an excellent wind!»

- c. Someone who plans to sail to the other side of a lake and can presuppose that the persons around him know of this plan, asks one of them: «Will the weather stay good?» and receives only the answer: «You should take the big sail today». Whether or not he follows this advice, he will conclude from the fact of its utterance that, in the opinion of his addressee, the weather will stay good. He will assume that this message was to be communicated to him. In this case, his addressee makes a valuative use of a prescriptive sign. Similarly he could have made a valuative use of a designative sign in an answer of the type «There is a steady westerly wind today».

What is communicated in these examples is not only the signified of the sentences but also a message which differs from it. This makes the cases in question different from the sailor's examples discussed earlier (§ 1.3), where only the signified was communicated and the further response was intended by the sign producer without the receivers necessarily being aware of this intention. This shows that language is normally used for communicating a signified, but that this communication can itself serve either to communicate an additional message indirectly or to manipulate the addressee into a further response. In contrast with a widespread prejudice, communication (even in the strong sense of the term) does not rule out manipulation, on the contrary, it can be an effective instrument to accomplish just that.

We must reckon with both indirect communication and manipulation through language especially when the signs used are not simple sentences but longer texts or *discourses* (cf. Posner 1987:51, note 37). While the advantage of recipient manipulation for the sign producer is evident, the question that remains is which advantage indirect communication has over direct communication. In agreement with Morris one can answer this question by referring to the conclusions of content analysis. It was empirically proven in the 1940s that the interpreter's behavior depends not only on the purpose of the discourse but also on the dominant mode of signifying in its constituent signs. The use of designative discourse for valuative purposes (Morris 1946: 128ff. = 1971: 208ff.: «fictive discourse») gives the impression of greater impartiality and is thus in many cases more effective than the use of an appraisive discourse for such purposes. The use of an appraisive discourse for incitive purposes (Morris 1946: 138f. = 1971: 217f.: «moral discourse») has the effect of being less obtrusive and is thus in many cases more persuasive than the use of a prescriptive discourse for such purposes. The use of a prescriptive discourse for informative purposes (Morris 1946: 143f. = 1971: 221f.: «technological discourse») gives the impression of being less theoretical and is thus in many cases more convincing than the use of a designative discourse for such purposes. And so on. (On the criteria for judging the effect of informative, incitive, and appraisive sign use, cf. Morris 1946: 94-105 = 1971: 174-183).

These conclusions can be further differentiated by determining how the modes of signifying of a discourse's constituent signs vary in their percentage of distribution (cf. Morris 1946: 74f., 123ff. = 1971: 152f., 203ff.). However, an unsolved problem is

still how and to what extent the distribution of modes of signifying in a text — analyzed independently of its grammatical structure — influences the recipient's behavior.

Nevertheless, the double characterization of signs according to their modes of signifying and their modes of use has become an efficient instrument for the classification of discourses. Notwithstanding the theoretical and methodological difficulties indicated, this instrument has remained irreplaceable, especially in *journalism and media research* (cf. Kaplan 1943 and the response in Morris 1943; see also Kaplan and Lasswell 1942, Berelson 1952, and Bessler 1970).

1.5. Rhetoric, hermeneutics, and analytic philosophy

Indirect communication often occurs within well-regulated social institutions, because these determine specific features of the communication situation which can function as indicators of how the communicative sign produced by the sender is to be interpreted by the addressee. This has led to conventionalizations of the second degree: Certain ways of expressing a message indirectly have become so common that, instead of taking the expression at face value and going through the whole process of reinterpretation, the addressee expects it as the normal way of expressing the intended message. «Can you pass the salt?», said during a meal instead of «Please pass me the salt», and «I am sorry...», said by a politician in Parliament instead of «I apologize...», are examples of that kind. They have been studied and classified since Antiquity within the tradition of *rhetoric* (cf. Schreckenberger 1978 and Leech 1983). However, on the basis of modern pragmatic research the approach of rhetoric to make a list of such «rhetorical figures» can be shown to be inadequate: There is an infinite number of possible ways to express a message indirectly. That which can be finitely specified, if at all, is the number of principles followed in the transition between the signified coded meaning and the communicated message.

In each indirect communication the addressee has to decide which specific principles of inference he can use to reconstruct the sender's intention on the basis of the signified and shared knowledge about the communication situation. A particular case of this problem is the task of *hermeneutics*, which studies ways of reconstructing the sender's communicative intentions on the basis of a written text, especially when the sender has died long ago and his situation of communication and way of life are no longer known and only the text is left (cf. Betti 1955, Gadamer 1960, and Ricoeur 1965 and 1969, see also Bleicher 1980).

Another academic field which has cultivated discussions and proposals for the explanation of sign-based inference processes in the last decades is *analytic philosophy of language* (cf. Bach and Harnish 1979 as well as Sperber and Wilson 1986). But the problems that are left are still considerable both from the logical and methodological points of view. I will not go into them here; instead I will summarize the rudimentary classification of types of semiosis given so far.

Something functions as a sign only insofar as it has an interpreter in whom it elicits some interpretant. Therefore all semioses are *signaling* processes. For some signals the interpretant consists in the formation of a belief in some message. Where this is so, the semiosis is called «an *indication* of this message».

Some signs are tokens of signifiers which are correlated with signifieds through a code. If so, the semiosis is called «*signification*».

Some signs are not the result of natural processes but intentionally produced to cause certain interpretants. The resulting semiosis is called «*manipulation*». Some manipulating signs are produced with the intention to cause an interpretant by means of a recognition of this intention through the interpreter. The resulting semiosis is called «*communication*».

Signaling, indicating, manipulative, and communicative signs can, but need not, be signifying. Where someone intentionally produces a communicative sign which signifies something different from what he intends to communicate with it, the semiosis in question is called «*indirect communication*».

2. Roles of interpreters

As pointed out in the introduction, pragmatics was defined by Morris (1938:6 = 1971:21 and 1939:133 = 1971:416f.) as that branch of semiotics which studies the relation of sign vehicles to interpreters. What this relation is depends on the type of semiosis involved, which generates specialized roles of interpreters. For signs of the simplest type, such as signals which trigger involuntary behavior, or indicators which indicate some natural state of affairs (as symptoms indicate the presence of an illness), the interpreter has the role of a *recipient* who reacts with a certain behavior. In signifying signs the interpretation consists partly or wholly in decoding the signified on the basis of the signifier, of which the sign in question is a token; here the interpreter has the role of a *decoder*. Where a sign is produced intentionally, there are two types of interpreter, the recipient who responds to the sign in question with an interpretant, and the *sign producer* who must be able to interpret the sign, since he anticipates the recipient's response. Where the sign is a signifying sign, the sign producer has the role of an *encoder*. Where it is a communicative sign, the sign producer intends certain recipients to recognize his intention to make them respond with a certain interpretant. Thus communication implies that the sign producer is identified as a *sender* and that certain recipients are intended as *addressees*. In addition, a communicative sign may be interpreted by other recipients who are called «*by-standers*» when the communication is oral (cf. Levinson 1983:68 and 90). But a semiosis may be even more complex, as in telegraphy where the sign produced by the sender passes through intervening stations, e.g. an *emitter*, a number of *transducers* and a *receiver*, before it reaches the addressee. In public communication, further stations, e.g. ghost writers, translators, lectors, editors, publishers, distributors, and reciters can be involved (cf. Posner 1985). Each of these may or may not have a specific intention and may or may not use a recognized code to realize this intention.

These examples show that a pragmatic analysis of a given sign may be a very complicated matter.

But even where there is only one sender and one addressee, as in letter writing, complex processes of interpretation may be involved (cf. Etzl 1984). For the sender the task is to choose an appropriate signifier for the intended message, taking into account the codes known by the addressee, the other letters that have been exchanged so far, the general interests the addressee has, and the background knowledge that may be available to him. For the addressee the task is to identify the signified on the basis of the signifier, taking into account previous letters, the general interest of the sender, and his background knowledge. Such inferences are complicated by the fact that each party tends to make higher level assumptions on what the other assumes in accomplishing his task.

A field where the analysis of the complex relation between sign vehicles, senders, and addressees has become especially fruitful in the last decades is the study of literature. Literature may be analyzed as business that involves the interaction between institutions such as a writer (possibly with a secretary and a team of assistants), a publishing house (including a reading department, and production and public relations sections), a distribution system (including book stores in collaboration with wholesale firms, libraries with acquisition, catalogue and users' sections as well as book clubs), a network of literary criticism (including, in some cases, state censors, as well as private literary critics who publicize their views in periodicals, broadcasts, and discussion meetings) and, last but not least, ordinary readers (who communicate about books with one another privately or in the context of readings, literary cafes etc.). Even more interesting is the fact that the real writer of a literary text has to be distinguished from the special role of author which he gives himself in the text and the real reader has to be distinguished from the special role of addressee which the text imposes on him. Such text-determined roles have been investigated thoroughly in the last years in terms of the «implied», «internal», or «fictional» author (cf. Bach 1961, Stanzel 1964, Janik 1973, Kryszinski 1977, Chatman 1978) and the «implied», «internal», or «fictional» reader (cf. Iser 1972, Barthes 1973, Link 1976, Eco 1979, de Man 1979, and Culler 1981 and 1982).

In ordinary communication the sender has a personal knowledge of his addressee, and if he uses the auditory medium, he can rely on the jointly experienced communication situation to supply indications that will help the addressee infer the intended message from the coded meanings signified by his words. Literary communication, however, tends to separate the sender from his addressee and has increasingly done so in the last centuries. The visual medium enables the sender to produce his signs in a situation different from that of their reception, and while authors formerly used to write for a closed set of addressees, among them the person who commissioned the work and to whom it was explicitly dedicated, they now write for an indefinite number of possible readers. Also the members of this open set of persons are recipients intended by the author and thus deserve to be called «addressees». But

since the author does not know them personally and in most cases will never even know who they are, he is forced to make up for the lack of contextual indications by developing a system of textual indicators that show his readers how to interpret what he has written. He deliberately chooses specific verbal registers, inserts reflections and commentaries about his narrative techniques, alludes to other literary texts that require similar background knowledge and communicative attitudes, and thus makes the text itself indicate to the recipient what kind of sender he is to imagine and what kind of addressee he is supposed to be. When this strategy is successful, the real readers behave as if they were the author's preferred addressees and they assume the writer to be like the author presented to them in the text. Real communication with literary texts thus becomes guided by the fictional communication implicated in the text.

This introjective doubling of the senders and the addressees in literature has been noticed by various modern writers and thinkers (cf. Pagnini 1980 = 1987:3). Stéphane Mallarmé declared that «an artist makes himself upon the page»; Paul Valéry affirmed that the author is never anyone in reality; Marcel Proust distinguished between the «I» of the writer and the «other I» of the page; Benedetto Croce separated the «practical person» from the «poetic persona». In earlier times people spoke of a «mask» used by the author, and they described the act of creation as «divine furor», «enthusiasm», or «inspiration», implying that in poetic sign production another spirit slips into the poet's body and forces him to produce signs that are not his own. A parallel process takes place when the addressee is supposed to be transferred to another landscape, time or mood by his reading the literary text. The greater the difference between the real reader's character and the one required by the poet's addressee, and the greater the difference between the real writer and the fictional author presented in the text, the greater the fascination of the reading experience.

There is also a formal correspondence between the fictional author and the fictional addressee. When the writer explicitly introduces himself as author, as in first-person narrative, he can also address the reader explicitly and thereby specify his preferred role (this happens, e.g., in Fielding's *Tom Jones*). When the writer steps back behind the reported action and remains anonymous (as, e.g., in Kleist's novels), the reader can become aware of his preferred role only by implicature. Special techniques of letting the relation between author and reader disappear from the text altogether are the writing styles of *interior monologue* and *discours indirect libre* (cf. Leech and Short 1981:318ff.).

The reader's communicative attitudes required for optimal literary communication are usually kept constant in a given text. This is why special effects can be produced when a writer changes them from one paragraph to the next. William Sterne took joy in making the readers of his *Tristram Shandy* blatantly aware of their reading experience in this way.

In the study of literature, there have been many attempts at defining what characterizes literary discourse in general. The introjection of the roles of sender and addressees into the text seems to be one of the few invariants. It is this introjection that

enables the interpreter to set up fictional referents in the reading process. And it is this introjection that enables the interpreter to convert any given text into a means of literary reception.

Such an approach to the pragmatics of literature was taken explicitly by Pagnini 1980, Segre 1985 and Johansen 1989. It is currently also discussed in musicology and art history. Morris himself did not study these intricacies of aesthetic discourse; but, as I tried to show, they can be adequately analyzed within a suitably extended Morrisian framework (cf. Posner 1986a:570f.; about the «pragmatic messages» involved cf. § 3.4 below).

3. Focal points of pragmatic research

The formula which specifies the subject matter of pragmatics as the relation of sign vehicles to interpreters has been given various explications in the semiotic research of the last half century. Morris himself used to paraphrase his formula with «the relations of signs to their users» (cf. 1938:29 = 1971:43), a formulation which implies signs produced for a purpose and therefore seems to be inapplicable to signals and indicators which are not so produced (cf. Morris 1946:93ff. = 1971:172ff.). Carnap further restricted the scope of pragmatics to «the action, state and environment of a man who speaks or hears» a verbal sign (1939:4). It was only later (cf. Carnap 1942, 1954, and 1955) that he explicitly included non-linguistic signs and non-communicative semiosis. Approaches such as those of Morris 1938 and Carnap 1939 make pragmatics part of the theory of human action (cf. Goldman 1970) and focus on speech acts and other ways of intentional signing which rely on the use of codes.

Bearing this very special kind of semiosis in mind, analytic philosophers, linguists, anthropologists, sociologists, and psychologists have tended to characterize the task of pragmatics negatively as «the study of meaning insofar as it is not treated by semantics». The idea behind this approach is that semantics describes the meaning signified by signs without reference to interpreters and pragmatics has to study what interpreters do in order to make sense of this meaning in the situations they are in.

But there are also those who want to replace this negative delimitation of the subject matter of pragmatics by a positive characterization. They have pursued four different but related lines of research.

3.1. Pragmatic processes

Assuming that the relation between sign vehicles and interpreters becomes manifest in the processes which interpreters perform in order to interpret a sign vehicle, one can make these processes the central object of investigation. In contrast to relations, it cannot be assumed that processes are the same for sign producers as for recipients, for senders as for addressees. Take the sender in a communication process: Intending to convey a message to an addressee, he makes sure that he is connected with him by a medium, chooses an appropriate code, and selects from it a signified

that approximates the intended message. Since the signified is correlated through the code with a corresponding signifier, the sender then produces a sign vehicle that is a token of this signifier. The addressee, on the other side, perceives the sign vehicle through the medium and takes it as a token of the signifier, which refers him to the signified on the basis of the code. He then reconstructs the message from the signified with the help of indications given by the shared situation (see Fig. 1).

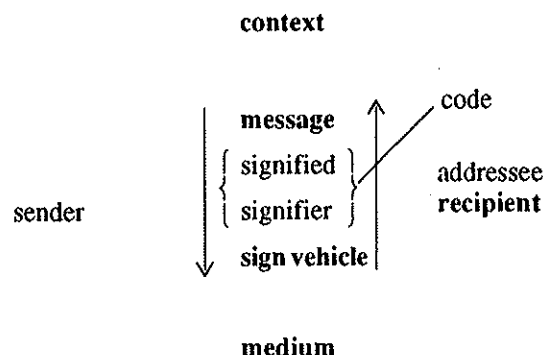


Figure 1: Components of semiosis. The terms denoting the components whose presence is necessary and sufficient for semiosis to take place are in bold type. The left-hand arrow indicates the sequence of choices in the sender, the right-hand arrow that in the addressee.

Such a characterization, although oversimplifying, shows that there are two types of process involved which occur in inverse order, even if they cannot be separated from each other in time (cf. Posner 1980): (1) code-related sign processing and (2) situation-dependent inferencing. While the first takes the form of encoding in the sender and decoding in the addressee, the second can only be described as a complex of inference processes some of which occur in sequence, some of which occur simultaneously within one and the same interpreter (cf. Leech 1983 and Sperber and Wilson 1986). Strictly speaking, all processes involved in sign interpretation must be called «pragmatic» according to the Morrisian formula. But it has become customary to call the situation-dependent inferencing «pragmatic» (in the narrow sense) in order to contrast it with the processes of syntactic and semantic encoding and decoding (see Fig. 2).

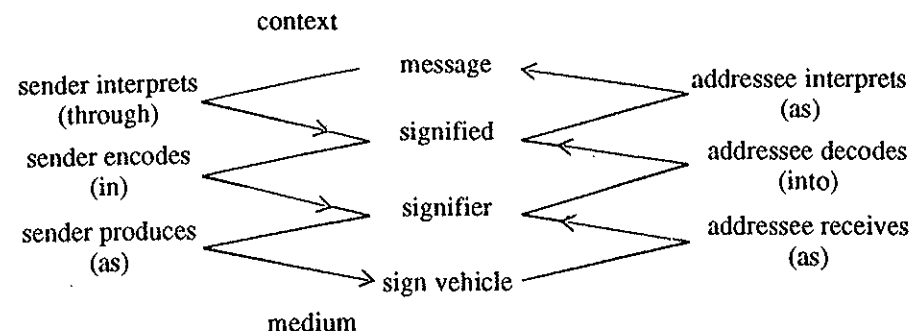


Figure 2: Pragmatic processes: The sender interprets the intended message through a signified, encodes the signified in a signifier, and produces the signifier as a sign vehicle. The addressee receives the sign vehicle as a signifier, decodes the signifier into a signified, and interprets the signified as a message. The sender's and addressee's interpretation activities are pragmatic processes in the narrow sense.

Pragmatic investigations which focus on the situation-dependent inferencing of the sign producer and the recipient usually concentrate on the principles that govern such inferences. Examples from the literature are

- the felicity conditions on speech acts assumed by Austin 1962 and Searle 1969,
- the conversational postulates introduced by Gordon and Lakoff 1971,
- the cooperative principle and the conversational maxims formulated by Grice 1975 (see § 1.4 above),
- the principle of rationality discussed by Kasher 1976 and 1979,
- the strategy of interactional pessimism described by Labov and Fanshel (1977) and Levinson (1983:274),
- the politeness principle, exploited by Leech 1983, and
- the principle of relevance taken as basic by Sperber and Wilson 1986.

3.2. Pragmatic signs

While the principles discussed by process-oriented pragmaticians are supposed to function independently of which signs are involved and which messages are communicated on the basis of which types of additional information, one can also focus on these signs, messages, and types of information. Researchers interested in codes such as the natural languages, the constructed languages of logic and artificial intelligence, the painting styles of art, and the rules of harmony in classical European music tend to pay special attention to those kinds of signs which require complex pragmatic processes (in the narrow sense) for their interpretation. This option has been taken up especially by linguists.

Suppose we find a bottle in the sea and inside it an English text which reads «Meet me here a week from now with a stick about this big». The coded meaning of

this sentence would be no problem for us, but nevertheless we do not know the message which the sender, if at all, intended to communicate to us (cf. Levinson 1983:55). The reason is that while we know, on the basis of its lexical meaning, that «me» refers to the sender, we do not know who the sender is. While we know that «here» refers to the place and «now» to the time in which this word was produced, we do not know where and when this was. While we know that «this big» refers to a size that is specified by a gesture, we do not know what that gesture might have been like. This shows that personal pronouns, place and time adverbials, and demonstratives are among the verbal signs that require taking additional indicators in the communication situation into account for their interpretation.

The need to rely on situational indicators for the interpretation of a sign is not restricted to language. A pointing finger which suggests looking in the direction it is pointing, a horn signal that is produced to draw immediate attention to the car from which it originates, an industrial good that is presented in a shop window in order to entice the onlooker to buy another good of that brand in the shop behind that window, these are all signs which refer to something relative to their own occurrence in time and space.

It was Peirce who postulated a special class of signs to account for such examples. He dubbed them «indexical signs» in 1867 (cf. Peirce 1931-36:1.558 = 1982ff.: vol. 2, 50) and Morris followed him in this (cf. Morris 1938:24ff. = 1971:38ff. and 1946:189ff. = 1971:271ff.). Later other terms came into use such as «egocentric particulars» (Russell), «token-reflexive words» (Reichenbach) and «deictics» (in the wide sense).

These terms should not mislead us into assuming that all indexicals function in the same way nor that a given indexical has only one use. An indexical such as the demonstrative adjective «this», on one hand, can be used to refer to itself or another portion of the more complex sign of which it is a part, as when an author summarizes «this paragraph» or an interviewer expresses his thanks for «this interview». On the other hand, the indexical sign «this» can refer to things which are different from it in character, as when someone says «This room is really a mess», referring to the room he is in, or when he says «Do not sweep this room, but this one and this one and this one», using a gesture with each mention of «this». The first case is what Fillmore 1971 calls a *symbolic* usage while in the second we have a *gestural* usage. Both are called «deictic» in the narrow sense and contrasted with the aforementioned non-deictic self-referential usages. Pragmatically most interesting are the gestural deictic usages. As indicated by the given example they can only be interpreted on the basis of an elaborate audio-visual-tactile monitoring of the speech event. Lyons (1977:637f.) pointed out that «there is much in the structure of languages that can only be explained on the assumption that they have developed for communication in face-to-face interaction». This observation shows the relevance that one canonical type of situation has acquired as a model for sign use in other types of situation. And this applies not only to sign use, but also to the coded meanings of lexical and grammatical morphemes in natural languages.

Indexicals cannot only be classified with respect to what is done to specify their reference in a given situation, but also with respect to the kinds of information on which their reference depends. Thus one can distinguish

- cotextual indexicals, which encode part of the text structure in which they occur (examples are anaphoric uses of pronouns, sentence connectives, and utterance-initial adverbs such as «anyway»);
- contextual indexicals, which encode the time and place of the sign production and sign reception, the personal roles of the sender and addressee(s) and the formality of the setting;
- object indexicals, which encode special features of third parties dealt with in the sign exchange (examples are expressions such as «His Honour» in English and many of the honorific systems used in South East Asian languages).

3.3. Pragmatic information

Instead of focusing on the principles which guide pragmatic inference processes or on the types of signs which give rise to such processes, one can also investigate the types of factual information which the sender draws upon when using such signs and which the addressee relies upon when interpreting them. Is it possible to give a general characterization of the sources of knowledge which the addressee must take into account when he wants to infer the message intended by the sender from the meaning of the sign he produced?

Examples of such knowledge have already been given. For cotextual indexicals it becomes accessible by carefully recording the output of the sign production. For contextual indexicals such knowledge can be gained by monitoring the production process itself. For object indexicals, the sources of the relevant knowledge are less easily specified. In natural languages they seem to depend on all that is relevant for the culture of the speech community concerned. Especially important are the social relationships existing between the sender and/or addressee and the persons talked about. These can be determined by kinship relations, totemic relations, clan membership, as well as rank differences in the various types of institutions the society in question has developed. Much use is also made of folk conceptions of psychology which pattern the assumptions tacitly made about the motivations and actions in stories (cf. Parret 1983:93ff.; see also Morris 1946:209ff. = 1971: 269ff.).

Although indexicals are by no means the only types of signs whose interpretation requires information in addition to their signified, we can take them as a model for classifying the domains of such information: We are concerned with either

- properties of the cotext or
- properties of the context or
- properties of the situation referred to in the communication.

Since the situations referred to can be anything in the world, the delimitation of information that is of potential pragmatic relevance is an impossible task. Informa-

tion-oriented pragmatics has therefore tended to converge with the ethnography of speaking (cf. Baumann and Sherzer 1974), with sociolinguists (cf. Gumperz and Hymes 1972), with the psychology of language (cf. Hörmann 1976), and with anthropology at large.

From what was said about the three focal points of pragmatic research, it may have become obvious that they differ greatly with respect to their scientific status.

1. Research in the principles of inference used in communication has resulted in a number of competing explanatory models and has received impulses from the expanding field of cognitive psychology and from artificial intelligence research. However, the generality of these models is endangered by a lack of reliable empirical data and by controversies about their methodological status.

2. Research in the types of pragmatic signs has resulted in a huge corpus of data and minute descriptions but yielded few explanatory generalizations.

3. Research in the sources of knowledge drawn upon in pragmatic processes has resulted in explications of intricate psychological, sociological, and ethnological folk conceptions but tended to treat them as a subject matter in its own right and separate them from their function in communication.

With these developments in mind, one is inclined to consider the sign- and information-oriented approaches as *substantive pragmatics* and contrast them with the *non-substantive pragmatics* of the process-oriented approach. Both directions of pragmatic research are necessary since they complement each other. But it seems that serious theoretical problems lie behind the basic concepts of a «pragmatic sign» and of «pragmatic information».

Reacting against Carnap's (1942) definitions of «syntactical» and «semantical» sign systems, Morris already warned in 1946 that the way he introduced the terms «pragmatical», «semantical», and «syntactical» gives «no warrant for their utilization as a classification of kinds of signs ('pragmatical signs', 'semantical signs', 'syntactical signs'); such extension of their signification is questionable, since it may blur the distinction between signs in various modes of signifying and the signs which make up [the metalanguages of] pragmatics, semantics, and syntactics conceived as the three divisions of semiotic» 1946:217f. = 1971:301f.). Morris would have argued the same way against Montague's concept of «pragmatic languages» (1986 and 1970). For Morris, every sign has a pragmatic dimension as well as a semantic and syntactic one and every system that deserves to be called a language can and must be described within pragmatics as well as semantics and syntactics. Thus one has to be careful not to be misled by the term «pragmatic sign», even when one uses it in the sense introduced in § 3.2.

Similar considerations hold for the concept «pragmatic information». There is nothing intrinsically pragmatic in the pieces of information that tend to be called «pragmatic information». Rather, this is a characteristic that pertains to the way such information is used in pragmatic processes (in the narrow sense).

Of course, these epistemological caveats do not imply that it may not be useful to investigate which types of signs function prominently in pragmatic processes in the languages of the world, and which information is drawn upon in these processes. Such investigations may result in important empirically based generalizations about natural languages.

In theory, however, indexical signs can belong to any syntactic category and can encode every possible information. This makes exclusively sign-oriented pragmatics theoretically uninteresting. For exclusively information-oriented pragmatics the situation is even worse: While the number of syntactic categories in a language is mostly finite or at least denumerable, the number of possible dimensions of reference (so-called «pragmatic indices») of pragmatic signs is indefinite (cf. Cresswell 1973:111ff.).

This leaves the process-oriented approach of inference analysis as the only one that can be pursued with the aim of leading to a general pragmatic theory with explanatory power.

3.4. Pragmatic messages

Substantive pragmatics can be characterized as a direction of research that projects the relation between the sign vehicle and the interpreter onto either the signifier or the information used in inferring the message from the signified. But what about the signified itself? It seems to be a core concept of semantics. Nevertheless there have been many attempts to distinguish among the coded meanings of signs components which deserved to be called «core meaning», «truth-functional meaning», or «designatum» from others which were called «emotive», «expressive», «interactive», «instrumental», or «social meanings». Morris also attempted such a distinction in 1938, when he wrote: «Semantical rules correlate sign vehicles with other objects; pragmatical rules state the conditions in the interpreters under which the sign vehicle is a sign. [...] in some languages there are sign vehicles governed by rules over and above any syntactical or semantical rules which may govern those sign vehicles, and such rules are pragmatical rules. Interjections such as 'Oh!', commands such as 'Come here!', value terms such as 'fortunately', expressions such as 'Good morning!', and various rhetorical and poetical devices occur only under certain definite conditions in the users of the language; they may be said to *express* such conditions, but they do not denote them at the level of semiosis in which they are actually employed in common discourse» (Morris 1938:35 = 1971:48; emphasis mine, R.P.).

The question arises why Morris here discusses only utterances of linguistic expressions, which have no truth value. He seems to have wanted to reduce non-designative signifieds to interpretants in 1938. This attempt vitiated the otherwise sound distinction between the signified of a sign and its conditions of use, which is also applicable to signs with truth-functional meaning.

In his 1946 book Morris extended what he regarded as coded meaning from designata to significata, which allowed not only for designative but also for appraisive and prescriptive signifieds. This enabled Morris to recognize the coded meanings of all examples given in the 1938 quotation as signifieds. However, Morris did not give up the concept of an expressive sign, but applied it to other cases: «[...] there is often a close correlation between the production of a certain sign and certain states of the producer of the sign. This correlation may exist with respect to the way the sign is produced as well as with respect to the signification of the sign produced. An excited person may speak with greater intensity, shorter utterances, more rapid speech than a person who is not excited, but equally well he may differ as to what designators he utters and the number and kind of appraisors or prescriptors which he employs. Hence the manner of production of signs and the kinds of signs produced may themselves be to the producer of the sign or to other persons signals [i.e., indicators] of the state of the producer of the sign. This is a common situation, and such signs can be called 'expressive signs'. A sign on this usage is expressive if the fact of its production is itself a sign to its interpreter of something about the producer of the sign» (Morris 1946:67f. = 1971:146f.; emphasis mine, R.P.).

This characterization of expressive signs can be generalized in the formulation: A sign is expressive to the degree to which the fact of its occurrence in a situation is itself a sign indicating a property of the situation. Understood in this way, any coded sign not only signifies but also expresses messages by the fact that it occurs in a given situation. This doctrine, together with the definition of the pragmatic dimension as the relation of sign vehicles to interpreters, made possible a fourth version of pragmatics. According to this approach, every occurrence of a sign indicates which states of affairs are brought about by felicitous performance of the semiosis in question. The messages indicated in this way are often called «pragmatic messages». An imperative such as «Come!» signifies the request to come, and the fact of its utterance in a given situation expresses the making of that request. Thus the pragmatic message of uttering this imperative is «the speaker requests someone to come». A simple sentence such as «Paul closes the door» signifies the statement that Paul closes a certain door at the time of its utterance, and the fact of its utterance expresses that the sender is making that statement, that the sender is presupposing the existence of a person with the name «Paul», that the sender is thinking of a certain door, that he believes that it was open until a moment ago etc. According to this approach, these are all pragmatic messages expressed by the speaker in uttering that sentence.

Now let us consider an example where not only the way a message is transmitted is pragmatic (as when it is expressed and not signified) but also the message itself is pragmatic (in that it specifies a relation between a sign vehicle and its interpreters). Such a case is the communicative relevance attributed to the constituents of a sentence by its speaker. Compare «That Umberto was elected President is auspicious» with «Umberto was, auspiciously, elected President». The fact that the speaker

encodes his appraisal as a predicate of the main clause and the appraised event as a dependent clause indicates that it is the appraisal which is the main point in the utterance of the first sentence. In the second sentence, the fact that the speaker encodes the event as a main clause and the appraisal as a parenthetic adverbial indicates, by contrast, that the emphasis is on the event and the evaluation is given only concomitantly (cf. Posner 1972: 15ff. and 1982:88ff.).

But what about the speaker uttering «I emphasize that it is auspicious that Umberto was elected President»? Here the message that the speaker emphasizes the evaluation is not expressed but signified. Is it still a pragmatic message? According to the message approach, we have to answer this question with both yes and no. It is pragmatic insofar as the message concerns a relation between the sign producer and the sign produced. It is not pragmatic insofar as the message is no longer expressed but signified. This example shows that there are two competing criteria of pragmaticity at work here and we have to decide whether to abandon one or both of them.

In accordance with the initial stipulation of this paragraph, I advocate the following solution:

1. It is always possible for someone to use a language in order to say something about himself or about others present in the situation of communication. This topic as such is not sufficiently different from other topics that it should be contrasted with them by calling it «pragmatic». Thus I propose to give up interpreting the formula «relation of sign vehicles to interpreters» as requiring *signs* that convey a *message about* the interpreter or other parts of the situation of semiosis.
2. It is always possible that the fact of a sign's production in a given situation becomes an indicator of something else. But two types of cases must be distinguished here.
 - a. Often the signified of the sign requires reference to the fact of its production in a given situation for its interpretation. This is so in the case of the pointing finger and the honking car, as well as in linguistic indexical expressions and interjections such as «Oh!». Here the fact of a sign's production functions as an indicator in the pragmatic process that determines the sign's intended message. It may therefore be called «a pragmatic indicator» *with respect to that sign*.
 - b. In other cases the fact of a sign's production in a given situation indicates things that do not contribute to the interpretation of the message intended by the sign producer. Examples are the inferences drawn on the basis of a person's linguistic competence, ethnic origin, physical or mental state of health etc. The drawing of an inference that does not contribute to the identification of the message intended in producing a sign is not a pragmatic process with respect to that sign. It has to be analyzed as a sign process in its own right: a non-communicative semiosis. And it is evident that in most

communication situations a vast number of non-communicative semioses take place in addition to the communication itself.

In conclusion I propose to call only those indicators and their messages «pragmatic» that contribute to the process of interpretation which connects the signified of a given sign with the message intended in its production. Concerning the examples discussed in this paragraph, the proposed criterion excludes the syntactic and lexical means of relevance attribution because they are themselves parts of the signifier. However, it leaves room for all those features of the speaker's behavior that are not necessary parts of the communicated sign (i.e. of the signifier manifested by it) but can be used to interpret it.

Let us now summarize the position arrived at by examining the four focal points of current pragmatic research on signifying communicative semioses: Since it relates sign vehicles to their interpreters, pragmatics studies the *interpretant behavior* of interpreters. In the case of coded intentional signs, the interpretant can be divided into encoding or decoding behavior on one hand and situation-dependent inferencing on the other. The latter, which connects a sign's signified with the message intended by its producer, may be called «a *pragmatic process*» in the narrow sense.

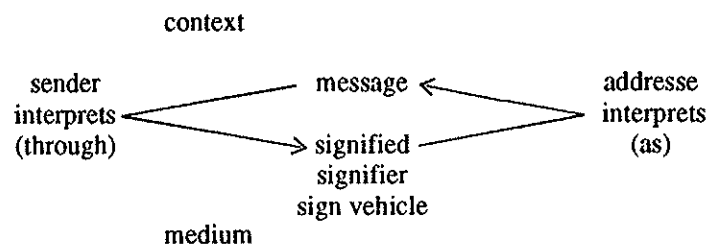


Figure 3: Pragmatic processes in the narrow sense.

The principles of inference that guide this process may be called «*pragmatic principles*».

If the sign studied is a complex sign, partial signs which are especially relevant for this pragmatic process may be called «*pragmatic signs*» (with the caveat of § 3.2).

The knowledge which is drawn upon in addition to the coded information given through the signifier of the sign studied may be called «*pragmatic information*».

Other signals and indicators which contribute to the process of interpreting a given sign may be called «*pragmatic signals*» and «*pragmatic indicators*» with respect to that sign.

The messages of such signals and indicators may be called «*pragmatic messages*».

4. Strategies of pragmatic research

The analysis so far has shown that the semiotician has two theoretical instruments available in his research into sign meaning. One is code theory; the other is the set of pragmatic principles (cf. § 3.1). This raises the question of how these instruments should be applied in the description of actual semioses within semiotic fieldwork.

4.1. Code-maximalism versus code-minimalism

Suppose you are in a foreign country and you want to study its traffic signs. You know which sign posts carry traffic signs and you have isolated signs which show the form of a white passenger car facing you on a blue ground. But there is variation in the signs with respect to their overall size (small and big versions of what otherwise seems to be the same sign type), their color (dark versus light blue) and the pictograms used (front versus side views; realistic versus highly schematized forms of passenger cars). What are the criteria for you to decide whether these differences signify or not? Or in Morris's terms: How do you know which of these sign vehicles belong to the same sign family? (1946:19f. = 1971:96).

If you cannot ask anyone directly because you do not speak their language, you will have to observe the participants in the traffic, compare situations with signs that differ in the relevant respects and find out whether these differences matter in the behavior of the people. If they matter, these signs are manifestations of different signifiers. If they do not matter, the signs are all manifestations of the same sign type and the differences in size, color, and form are mere variants of some more abstract signifier, to be disregarded in the semantic description of the code. This procedure and conclusion are an application of the commutation test developed by Hjelmslev (1943:14 and 1947 = 1973:143ff.) and refined by Prieto (1966: chap.5), which serves to define the signifier by finding out which variation in the sign form changes the signified.

The problem can also take the opposite form: You find the pictogram of a passenger car on a number of traffic signs which differ with respect to the other signs that occur on them. On the blue sign which has a white «p» in addition to the car pictogram, people read the car pictogram as standing for passenger cars. They take the sign as saying: «Parking is allowed here only for passenger cars». On the sign which has a circular red frame and shows a black car pictogram, people read the car pictogram as standing for motor vehicles in general including trucks. They take the sign as saying: «Entering this street is prohibited for motor vehicles». Here we have variation in the message correlated with tokens of the same signifier. What should we conclude concerning the signified? There are three options:

- (a) The car pictogram is ambiguous; it is a signifier with two different signifieds, which come into play in different contexts.

- (b) The car pictogram is not ambiguous; it always signifies passenger cars, but the interpreters are expected to generalize from passenger cars to all motor vehicles when they read the no-entry sign.
- (c) The car pictogram is not ambiguous; it signifies motor vehicles, and the interpreters are expected to specialize motor vehicles into passenger cars when they read the parking sign.

Option (a) is that of a *code-maximalist*. He tries to incorporate as much as possible into the code component in his description of the sign system. He may agree that a code with ambiguous signs is not optimal and may hypothesize that there will be a change in the future which introduces two types of pictograms for motor vehicles, one signifying motor vehicles in general, the other one signifying only passenger cars.

Options (b) and (c) are those of *code-minimalists*. They try to make as few assumptions about codes as possible and attribute the differences in the people's behavior to their reasoning on the basis of pragmatic principles.

In option (b) they must explain why one would not want to delete the semantic feature /for passengers/ when the signified /motor vehicles for passengers/ occurs in the cotext of «Entry prohibited». They could hypothesize the traffic participants reasoning as follows: «If entering the street is forbidden for passenger cars it will also be forbidden for trucks since the sign is intended to minimize molestation by traffic and trucks are even more of a molestation than passenger cars». Such reasoning cannot take place in the case of the parking sign because here the difference between cars and trucks has the opposite consequence: «Parked trucks are a more serious obstacle to city life than parked passenger cars and if parking is allowed for passenger cars, it need not be allowed for trucks. Therefore reinterpretation occurs only in the no-entry sign and in the parking sign the car pictogram stands for what it signifies».

In option (c), code-minimalists must explain why one would want to add the content feature /for passengers/ to /motor vehicles/ in the cotext of «Parking allowed». Such an explanation seems to be harder than that sketched for (b) above, which can be used as an argument in favor of solution (b).

4.2. Signification-maximalism versus signification-minimalism

Options (b) and (c) show that code minimalists have to decide whether it is better to correlate a given signifier with a rich signified (such as /motor vehicle for passengers/) and devise pragmatic procedures that delete certain of its semantic features on special occasions or whether it is better to assume only a minimal signified and devise pragmatic procedures that add certain content features on special occasions. The first of these two code-minimalist strategies is called «*signification-maximalism*» and the second «*signification-minimalism*». (For an application of these concepts to the description of verbal signs such as sentence connectives in natural languages cf. Posner 1980:180ff. General guidelines for the researcher to decide

which parts of the message to attribute to the signified and which to situation-specific reasoning are also given in Grice 1975 and discussed in Levinson 1983:114ff.).

Maximalist semiotic descriptions differ from minimalist ones in their psycho-semiotic consequences. If most of the relevant message is coded, it will be recoverable from memory and need not be constructed on the spot. The consequence is reliable functioning of the communication but lack of flexibility. If little of the relevant message is coded, the interpreter's memory will not be overburdened, but his reasoning capacity will be occupied in the situation concerned. The message will not become available independently of the communication situation and will be less stereotyped. As a consequence there will be less reliable functioning but more flexibility.

4.3. Radical pragmatism

Now code-maximalism and code-minimalism (with the subcases of signification-maximalism and signification-minimalism) are rather moderate positions with respect to the question what pragmatics can achieve. They assume the working of codes as well as of pragmatic inferences and disagree only when it comes to the question how big their share is in the process of interpretation. This is why pragmatists of this position are accused of half-heartedness by the more *radical pragmatists*, who do not want to assume any entities such as signifieds in communication (cf. Stachowiak 1986: vol. 1, XXVIII ff.). For them communication does not function on the basis of signifiers and signifieds but because the participants remember how previous communication with similar signs worked. According to them it is not a code that guides our production and comprehension of communicative signs but our personal histories of communication. Written codifications such as the legal codes of traffic signs and the grammars used in the teaching of foreign languages are external prescriptive or descriptive devices; they cannot be used to explain what goes on in the interpreter during the processes of sign production and comprehension. It is the memory of previous communication (including teaching situations) plus situation-specific reasoning that is claimed to achieve all that is required in communication.

Such a position has rarely been adopted by linguists (cf., e.g., Brown 1974 and Rollin 1976), but it determines much of the research conducted in ethnomethodology (Garfinkel 1967 and 1972, Cicourel 1973, Bergmann 1981), language acquisition (Vygotskij 1964 and Wertsch 1981), discourse hermeneutics (Bakhtin 1981), dialogue logic (Lorenzen and Lorenz 1978) and philosophical action theory (Wittgenstein 1953, Savigny 1969, Beckermann 1977, Meggle 1977 and 1979).

For radical pragmatists, who tend to link their position with that of American Pragmatism (cf. Morris 1970, Scheffler 1974, Meltzer et al. 1975), pragmatics is not one of three branches of semiotics but a basic discipline which can also serve to explicate the core notions of syntactics and semantics, as well as of psychology and of sociology: Signifiers are regarded as sign families whose members may change from communication to communication, signifieds as habitual interpretations, psycho-

logical attitudes are seen as results of the internalization of communicative roles, social conventions as habitualized practices of communication. Even the forms of logical inference are founded on strategies for winning dialogical arguments.

Behind such controversies about the scope of pragmatic explanations lies another important question: What should be the *direction of explanation* in pragmatics? Morris already claimed in 1938 (1938:34ff. = 1971:47ff.) that pragmatic processes have psychological and sociological components and a physiological basis. Acts of inference are mental acts, conversational maxims are social conventions and the changes of state in the interpreter effected by a pragmatic process has a physiological aspect. Should one use the methods of physiology, psychology, sociology to explain the mechanisms at work in the interpretation of signs or should one use pragmatic mechanisms to explain the physiological, psychological, and sociological facts?

The first direction of research is called physiopragmatics, psychopragmatics, and sociopragmatics, respectively; it has to be distinguished from the pragmatics of physical, mental, and social processes advocated by pragmaticists. In practice, however, a distinction between these two directions of research is possible only insofar as there are methods available that grant independent access to the physiological, psychological, sociological, and pragmatic aspects of the interpretation process. And to meet this requirement seems difficult in many cases, if not principally impossible. The conclusion is that we should be tolerant and allow both directions of explanation, but insist that the methodological basis is specified each time.

5. The pragmatics of non-communicative and non-signifying semioses

The discussion in §§ 3 and 4 of this article concentrated on pragmatic processes in the narrow sense (see Fig. 3), i.e. on the interpretation of signifying communicative signs. Thus it might seem that pragmatics studies only semioses that involve communication and signification. What about the other types of semiosis characterized in § 1? Are they outside the scope of pragmatics? Let us examine the cases one after the other.

5.1. Codeless communicative signs

Communication presupposes senders and addressees who are capable of having higher level intentions and beliefs. Codeless communication takes place if there is such a sender and such an addressee but they do not have any history of communication in common and cannot rely on any shared sign system. Situations of this type can be observed when

- humans enter a foreign culture where the forms of life and the corresponding «language games» are very different from what they are used to;
- humans meet primates of other species and want to overcome dangerous situations by communication;

- humans intend to communicate messages to each other that seem inexpressible with the codes they have shared so far (think of intimate interaction between lovers which they experience as an exciting adventure because they lack prior means of expression for what they want to convey).

Communication without a code rarely occurs for a longer time; if it is successful, it invariably leads to the establishment of sign conventions between the communicators and often this is its primary purpose. But it would be wrong to project existing sign conventions back into the situations from which they originate.

Even where there is a code used in communication, we have to account for the fact that often new signifiers are introduced without explicit definitions or old signifiers are given new meanings which are comprehended without inquiry and tacitly added to the other signifieds of these signs. Code change often takes place in this way.

The examples given illustrate closely related but different cases: Sender and addressee must make a joint effort to achieve tacit agreement about either

- (1) a new signified for a given signifier,
- (2) a new signifier for a given signified,
- (3) a message for a sign without any signifier and signified intervening.

This effort must be made without using a metacode.

In cases (1) and (2) the addressee can take parts of a given code into account and base his inferences on shared knowledge about them. This is excluded in (3), which therefore is the most difficult case. Here the addressee has to find out which part of the sender's behavior is intended as a sign and infer the intended message directly on the basis of the available non-communicative signals and indicators. If he succeeds, he does so by making assumptions on the purpose of the communication and the principles of action followed by the sender. Thus it seems that the general strategies used in achieving agreement about the message of an uncoded sign do not differ from those used within pragmatic processes in the narrow sense as discussed in §§ 3 and 4.

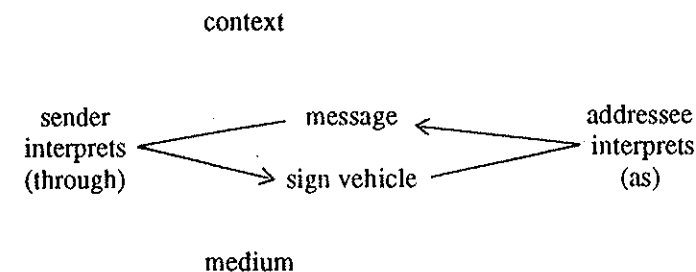


Figure 4: The interpretation of codeless communicative signs.

5.2. Codeless non-communicative signs

If we leave sign production for manipulatory purposes aside, non-communicative semiosis is restricted to natural signals and indicators. Slightly modifying the examples discussed in § 1, we can assume that indication occurs, e.g., in the following cases:

- The fact that the sun is shining indicates to someone that there are shadows under the trees.
- The fact that there is a shadow under a given tree indicates to someone that the sun is shining.
- The fact that pedestrians cross the main street indicates to a driver in the side street that there is no fast traffic on the main street.

Here not only signifiers and signifieds are lacking, but there are also no senders. Interpretation is a matter of the recipient only, and he has to reason without recourse to a sender's purpose or principles of action. Nevertheless his reasoning is not totally without basis. He can again rely on other signals and indicators and also take into account his knowledge of natural laws and social habits.

Semioticians have tried to classify the types of inferences available in codeless semioses, e.g., by distinguishing

- the inference from a manifest cause to a non-manifest effect (sun → shadow),
- the inference from a manifest effect to a non-manifest cause (shadow → sun),
- the inference from a given behavior to the presence of a constellation of circumstances in which it is possible.

When such reasoning is repeated in similar situations, it may become habitual, i.e. knowledge-based inference is replaced by code-based comprehension (decoding). But this does not allow us to assume that the code was there in the beginning.

If one examines the interpretive reasoning of the recipient in codeless indication, it seems that all types of inference involved can also occur in the interpretation of communication. Thus we may conclude that the set of inference patterns used in the interpretation of codeless natural indicators is a partial set of those applied in the case of communicative signs.

Signal behavior as discussed in § 1 requires special consideration. In the example of a living being for whom a shadow under a tree functions as a signal to move into it, we excluded mediating beliefs. If such a semiosis takes place, it can only happen on the basis of a tendency to move away from bright light which is either innate or an acquired behavior that was automatized. In both cases we speak of codes. Therefore simple signals are no cases of codeless signs.

The result about codeless indicators thus holds for codeless natural signs in general. In the format of Fig. 2, the interpretation of codeless natural signs takes the form of Fig. 5.

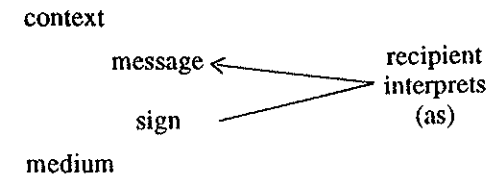


Figure 5: The interpretation of codeless natural signs.

5.3. Coded natural signs

Whether a code is an innate mechanism or an acquired system of rules, it introduces intermediate steps in the interpretation process that give it more stability and reliability. This is evident in simple natural signals. A human eye that winks when it is irritated (innate response), or a thoughtless driver who puts his foot on the brake when the brake lights flash in the car immediately in front of him (automatized acquired response), they both perform predictable reactions. These result from the respective stimulus being received as a signifier which is correlated with a signified that determines a message designed for the situation: The eye must not be moved but covered by the eye-lid; the driver must not steer his car past the front car but only use the brake. The alternative reactions might be more adequate in the situations but they do not happen because the stimulus functions as a signal and not as an indicator.

Coded natural indicators leave more room for variation in the subsequent behavior of the recipient, since they do not directly determine actions but beliefs. An example is the trapper who has learned to distinguish among a great many types of animal traces. The differences in size, form, and depth of imprint enable him to distinguish at first sight which kind of animal was moving where when and with what speed. He knows this without having to go through time-consuming reasoning because the system of animal traces has become a code for him which he follows automatically.

But even though there is a code in function which correlates signifiers with signifieds, there are additional processes necessary for the trapper to cope with a given situation. What is required in the first place is the reception of a rugged ground as a sign matter, which carries signifiers. And when this has happened and the signifiers were identified and decoded into signifieds, the task is not finished: Animals' traces are indexical signs; even when their signified is known, one only knows what they indicate precisely when one knows where they occurred, when, on what kind of soil, and in which type of weather. Taking these circumstances into account and drawing inferences on the basis of them is a typical process of interpretation.

In the format of Fig. 2, the functioning of coded natural signals and indicators take the form of Fig. 6.

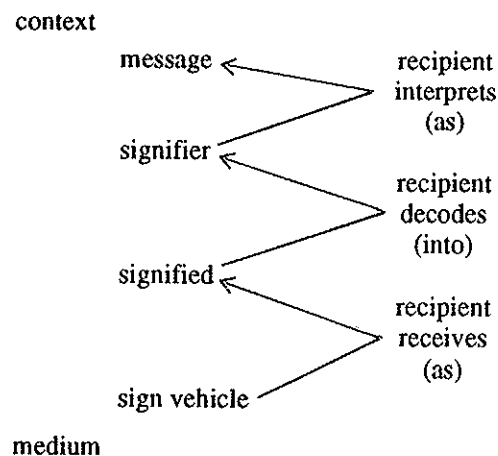


Figure 6: The interpretation of coded natural signs.

In conclusion we can say that non-signifying and non-communicative semioses pose problems for the recipient that are not different in type from those posed by communicative and signifying signs. Even where there is no reasoning involved, as in natural signals, the sign must be recognized as a signifier and the signified must be transformed into a message in addition to the decoding process. That these additional processes cannot be taken for granted is shown by errors that tend to happen.

What is different from communicative semioses, however, is that there is no procedure for correcting errors except for redundancy, which requires performing the reception of the same signifier in more than one sign vehicle.

6. Morris and the Saussurian tradition

The main point of this article was to examine the Morrisian characterization of the subject matter of pragmatics by applying it to the various types of semiosis. The concepts I used in the analysis of semioses were based not on the work of Morris (1938 and 1946) but on that of the Saussurian tradition, including Saussure (1916), Hjelmslev (1943 and 1947) and Prieto (1966 and 1975). Thus it may be fitting to formulate the central result of this article explicitly in the terminology of this tradition.

Hjelmslev distinguishes between

- content matter,
- content form,
- expression form,
- expression matter

in a way that is analogous to my distinction between

- message,
- signified,
- signifier,
- sign vehicle.

As I argued in the preceding section, not all four components of semiosis are present in all types of semiosis, but there is no semiosis without expression matter (sign vehicles) and content matter (messages). This finding can be described by stating that the process leading the sign producer from content matter to expression matter can leave out certain steps, and the same is true for the process leading the recipient from expression matter (sign vehicles) to content matter (messages). In the format of Fig. 2, the alternative processes involved can be presented as in Fig. 7.

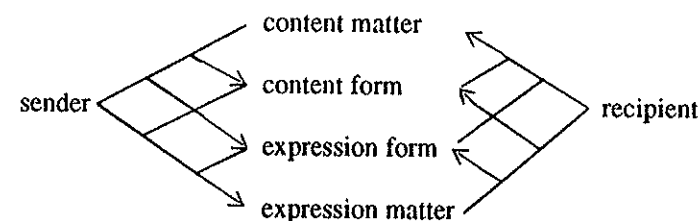


Figure 7: The set of possible pragmatic processes.

Fig. 7 can be read as a flow diagram: the arrows leading from one component to another signify processes which take one component as input and the other as output. All these processes are pragmatic processes in the wide sense. The possible ways in which they establish a connection between expression matter and content matter is the subject matter of pragmatics.

That it is possible to describe the input and output of pragmatic processes with the terminology of the Saussurian tradition should not divert our attention from the fact that it was Morris who first characterized pragmatic processes and who introduced pragmatics as a branch of semiotics. However, it can make us aware of the wide range of ideas that the Morrisian approach shares with that of the Saussurian tradition. A theoretical synthesis has proven less difficult than dogmatic adherents of the two schools of thought tend to claim. This should be emphasized without any attempt at assimilating the different empirical methodologies of the two schools: behaviorism and mentalism (cf. Posner 1987:48, n. 12). Note, however, that it is exactly this difference which current research is attempting to overcome within the framework of cognitive science.

How then should Morris's contribution to pragmatics be assessed fifty years after he began publishing it? My analysis has made it clear beyond a doubt that semiotics

and the sign-oriented academic disciplines would have taken a different course in the 20th Century without Morris.

He systematized semiotics in a way both precise enough to provide a firm theoretical framework for the empirical study of signs occurring in all media and on all levels of biological and cultural evolution and open enough to allow generations of scholars to integrate the results of their research.

However, this research also led to the discovery and correction of some basic errors in Morris's approach to pragmatics:

1. His 1938 publication confused signification with designation; the modes of signifying were reduced to the designative one and non-designative signifieds were wrongly taken to be interpretants (cf. § 3.4 above).
2. His 1946 publication reduced intention to purposive action; this prevented Morris from accounting for the intricate interplay of intentions and beliefs in communication (cf. § 1.4 above).
3. Both his 1946 and 1964 publications assimilated the signified («significatum» or «signification», respectively) to the message of a sign process, even though they distinguished the signifier («sign family») from the sign vehicle; this prevented Morris (like Peirce) from adequately analyzing the use of codes in indirect communication (cf. § 1.2 above).
4. In none of his works did Morris provide adequate distinctions between pragmatic relations, pragmatic processes, pragmatic information, and pragmatic messages; this lack of differentiation made the epistemological status of pragmatic research appear unclear at first (cf. § 3 above).

Morris's approach proved flexible enough to absorb the required corrections. In this way, Morris's semiotics has continued to have an impact on semiotic research. It is as strong today as ever.

Bibliography

- Apel, K. O. (1974),
«Zur Idee einer transzendentalen Sprachpragmatik». In J. Simon (ed.), *Aspekte und Probleme der Sprachphilosophie*. Freiburg i.B.: Alber: 282-326.
- Austin, J. L. (1962),
How to Do Things with Words. Oxford: Clarendon Press.
- Bach, K. and R. M. Harnish (1979),
Linguistic Communication and Speech Acts. Cambridge, Mass.: The MIT Press.
- Bakhtin, M. (1981),
The Dialogic Imagination. Austin: University of Texas Press.
- Bar-Hillel, Y.
(1954), «Indexical Expressions». *Mind* 63: 359-379 (Reprinted in Bar-Hillel 1970:69-89).

- (1970), *Aspects of Language*. Amsterdam: North-Holland.
- (1971), «Out of the Pragmatic Wastebasket». *Linguistic Inquiry* 2: 401-407.
- (ed.) (1971), *Pragmatics of Natural Language*. Dordrecht: Reidel.
- Barthes, R. (1973),
Le plaisir du texte. Paris: Seuil. English translation: *The Pleasure of the Text*. New York: Hill and Wang 1977.
- Bates, E. (1976),
Language and Context: The Acquisition of Pragmatics. New York: Academic Press.
- Baumann, R. and J. Sherzer (eds.) (1974),
Explorations in the Ethnography of Speaking. Cambridge, England: Cambridge University Press.
- Bean, A. (1978),
Symbolic and Pragmatic Semantics. Chicago: University of Chicago Press.
- Beckermann, A. (ed.) (1977),
Analytische Handlungstheorie II: Handlungserklärungen. Frankfurt: Suhrkamp.
- Bennett, J. (1976),
Linguistic Behavior. Cambridge, England: Cambridge University Press.
- Berelson, B. (1952),
Content Analysis in Communication Research. Glencoe: Free Press.
- Berendonner, A. (1981),
Éléments de pragmatique linguistique. Paris: Minuit.
- Bergmann, J. (1981),
«Ethnomethodologische Konversationsanalyse». In P. Schroeder und H. Steger (eds.) (1981), *Dialogforschung. Jahrbuch 1980 des Instituts für Deutsche Sprache*. Düsseldorf: Schwann: 9-51.
- Bessler, H. (1970),
Aussagenanalyse. Bielefeld: Bertelsmann.
- Betti, E. (1955),
Teoria generale della interpretazione. Vol. 1-2. Istituto di Teoria della Interpretazione presso le Università di Roma e di Camerino. Milano: Giuffrè.
- Blackburn, S. (ed.) (1975),
Meaning, Reference, and Necessity. Cambridge: Cambridge University Press.
- Bleicher, J. (1980),
Contemporary Hermeneutics. Hermeneutics as Method, Philosophy, and Critique. London: Routledge and Kegan Paul.
- Booth, W. C. (1961),
The Rhetoric of Fiction. Chicago: The University of Chicago Press.
- Brown, C. H. (1974),
Wittgensteinian Linguistics. The Hague and Paris: Mouton.
- Carnap, R. (1939),
Foundations of Logic and Mathematics. Chicago: Chicago University Press.

- Carnap, R.
 (1942), *Introduction to Semantics*. Cambridge, Mass.: Harvard University Press.
 (1954), *Einführung in die symbolische Logik, mit besonderer Berücksichtigung ihrer Anwendungen*. Wien: Springer. English translation by W. H. Meyer and J. Wilkinson, *Introduction to Symbolic Logic and its Applications*. New York: Dover 1958.
 (1955), «On Some Concepts of Pragmatics». *Philosophical Studies* 6:89-91.
- Chatman, S. (1978),
Story and Discourse: Narrative Structure in Fiction and Film. Ithaca: Cornell University Press.
- Cicourel, A. V. (1973),
Cognitive Sociology. Language and Meaning in Social Interaction. Harmondsworth: Penguin.
- Clark, H. and P. Lucy (1975),
 «Understanding What is Meant from What is Said. A Study in Conversationally Conveyed Requests». *Journal of Verbal Learning and Verbal Behavior* 14:56-72.
- Cole, P. (ed.)
 (1978), *Syntax and Semantics 9: Pragmatics*. New York: Academic Press.
 (1981), *Radical Pragmatics*. New York: Academic Press.
- Cole, P. and J. L. Morgan (eds.) (1975),
Syntax and Semantics 3: Speech Acts. New York: Academic Press.
- Cresswell, M. (1973),
Logics and Languages. London: Methuen.
- Culler, J.
 (1981), *The Pursuit of Signs: Semiotics, Literature, Deconstruction*. Ithaca: Cornell University Press.
 (1982), *On Deconstruction. Theory and Criticism after Structuralism*. Ithaca: Cornell University Press.
- Davidson, D. and G. Harman (eds.) (1972),
Semantics of Natural Language. Dordrecht: Reidel.
- Deledalle, G. (1979),
Théorie et pratique du signe. Paris: Payot.
- Dijk, T. van (ed.) (1976),
Pragmatics of Language and Literature. Amsterdam: North-Holland.
- Dretske, F. J. (1981),
Knowledge and the Flow of Information. Cambridge, Mass.: Bradford.
- Ducrot, O.
 (1972), *Dire et ne pas dire*. Paris: Hermann.
 (1980), *Les mots du discours*. Paris: Minuit.
- Eco, U. (1979),
The Role of the Reader. Explorations in the Semiotics of Texts. Bloomington and London: Indiana University Press.

- Etl, S. (1984),
Anleitungen zu schriftlicher Kommunikation. Briefsteller von 1880 bis 1980. Tübingen: Niemeyer.
- Facione, P. A. (1971),
The Theory of Meaning as Intention. Ann Arbor, Michigan: University Microfilms.
- Ferrara, A. (1985),
 «Pragmatics». In T. A. van Dijk (ed.), *Handbook of Discourse Analysis II*: 137-157. London and New York: Academic Press.
- Fillmore, C. J.
 (1971), «Towards a Theory of Deixis». *The PCCLLU Papers* (Department of Linguistics, University of Hawaii) 3,4: 219-241.
 (1981), «Pragmatics and the Description of Discourse». In Cole 1981: 143-166.
- Fodor, J. D. (1977),
Semantics: Theories of Meaning in Generative Grammar. New York: Crowell.
- Furberg, M. (1971),
Saying and Meaning. Oxford: Blackwell.
- Gadamer, H.-G. (1960),
Wahrheit und Methode. Grundzüge einer philosophischen Hermeneutik. Tübingen: Mohr.
- Garfinkel, H.
 (1967), *Studies in Ethnomethodology*. Englewood Cliffs, N. J.: Prentice-Hall.
 (1972), «Remarks on Ethnomethodology». In Gumperz & Hymes 1972:309-324.
- Gazdar, G. (1979),
Pragmatics: Implicature, Presupposition, Logical Form. New York: Academic Press.
- Goldman, A. I. (1970),
A Theory of Human Action. Englewood Cliffs, N. J.: Prentice-Hall.
- Gordon, D. and G. Lakoff (1971),
 «Conversational Postulates». *Papers from the Seventh Regional Meeting of the Chicago Linguistic Society*: 63-84 (Reprinted in Cole & Morgan 1975:83-106).
- Granger, G. (1976),
 «Syntaxe, sémantique, pragmatique». *Revue Internationale de Philosophie* 30: 376-410.
- Greimas, A. J. and J. Courtés (1979),
Sémiotique. Dictionnaire raisonné de la théorie du langage. Paris: Hachette.
- Grice, H. P.
 (1957), «Meaning». *Philosophical Review* 67 (Reprinted in Strawson 1971:39-48).
 (1968), «Utterer's Meaning, Sentence Meaning, and Word-Meaning». *Foundations of Language* 4: 1-18.
 (1975), «Logic and Conversation». In Cole & Morgan 1975: 41-58.
 (1978), «Further Notes on Logic and Conversation». In Cole 1978: 113-128.

- (1981), «Presupposition and Conversational Implicature». In Cole 1981:183-198.
- Gumperz, J. J. and D. H. Hymes (eds.) (1972),
Directions in Sociolinguistics. New York: Holt, Rinehart and Winston.
- Herrmann, Th. (1972),
Sprechen und Situation. Berlin, Heidelberg, and New York: Springer.
- Hjeltmslev, L.
 (1943), *Omkring sprogteoriens grundlaeggelse*. Copenhagen: Munksgaard. English translation by F. J. Whitfield: *Prolegomena to a Theory of Language*. Madison, Wisc.: The University of Wisconsin Press 1963.
- (1947), «The Basic Structure of Language». In L. Hjeltmslev (1973), *Essais Linguistiques II*. Copenhagen: Nordisk Sprog- og Kulturforlag: 119-153.
- Hörmann, H. (1976),
Meinen und Verstehen. Grundzüge einer psychologischen Semantik. Frankfurt: Suhrkamp. English translation by B. A. Jankowski: *To Mean — To Understand*. New York: Spring 1981.
- Iser, W. (1972),
Der implizite Leser. Munich: Fink. English translation: *The Implied Reader*. Baltimore: Johns Hopkins Press.
- Jakobson, R. (1960),
 «Linguistics and Poetics». In: T. A. Sebeok (ed.), *Style in Language*. Cambridge, Mass.: The MIT Press: 350-377.
- Janik, D. (1973),
Die Kommunikationsstruktur des Erzählwerks. Ein semiologisches Modell. Bebenhausen: Rotsch.
- Johansen, J. D. (1989),
 «Zeichen, Text, Semiose und Kontext: Hjeltmslev und Peirce». *Zeitschrift für Semiotik* 11: 339-352.
- Kaplan, A. (1943),
 «Content Analysis and the Theory of Signs». *Philosophy of Science* 10: 230-247.
- Kaplan, A. and H. D. Lasswell (1942),
 «The Politically Significant Content of the Press: Coding Procedures». *Journalism Quarterly* 19,1.
- Kasher, A.
 (1976), «Conversational Maxims and Rationality». In A. Kasher (ed.), *Language in Focus: Foundations, Methods, and Systems*. Dordrecht: Reidel: 197-216.
- (1979), «What is a Theory of Use?» In A. Margalit (ed.), *Meaning and Use*. Dordrecht: Reidel: 37-55.
- (1981), «Pragmatics, Semiotics, and Pragmaticism». In A. Lange-Seidl (ed.), *Zeichenkonstitution*. 2 vols. Berlin and New York: de Gruyter: I 53-60.
- Katz, J. J. (1977),
Propositional Structure and Illocutionary Force. New York: Crowell.

- Kiefer, F. (1978),
 «Zur Rolle der Pragmatik in der linguistischen Beschreibung». *Die neueren Sprachen* 27: 254-268.
- Klibansky, R. (1974),
Contemporary Philosophy. Florence: La Nuova Italia.
- Koj, L. (1981),
 «Logical Pragmatics». In W. Marciszewski (ed.), *Dictionary of Logic as Applied to the Study of Language*. The Hague: Nijhoff: 255-267.
- Krampen, M. (1982),
Icons of the Road. The Hague and Paris: Mouton.
- Krysinski, W. (1977),
 «The Narrator as a Sayer of the Author». *Strumenti critici* 11: 32-33, 44-89.
- Labov, W. and D. Fanshel (1977),
Therapeutic Discourse: Psychotherapy as Conversation. New York: Academic Press.
- Leech, G. N. (1983),
Principles of Pragmatics. London and New York: Longman.
- Leech, G. N. and M. H. Short (1981),
Style in Fiction. A Linguistic Introduction to English Fictional Prose. London and New York: Longman.
- Levinson, S. C. (1983),
Pragmatics. Cambridge, England: Cambridge University Press.
- Lewis, D. (1969),
Convention. Cambridge, Mass.: The MIT Press.
- Link, H. (1976),
Rezeptionsforschung. Eine Einführung in Methoden und Probleme. Stuttgart: Kohlhammer. 2nd edition 1980.
- Lorenzen, P. and K. Lorenz (1978),
Dialogische Logik. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Lyons, J. (1977),
Semantics. 2 vols. Cambridge, England: Cambridge University Press.
- Man, P. de (1979),
Allegories of Reading. Providence, R. I.: Yale University Press.
- Martin, R. M. (1959),
Toward a Systematic Pragmatics. Amsterdam: North-Holland.
- Mayoral, J. A. (ed.) (1987),
Pragmatica de la Comunicación Literaria. Madrid: Arco.
- Mead, G. H. (1938),
The Philosophy of the Act. Ed. with introduction by Ch. W. Morris in cooperation with J.M. Brewster, A. M. Dunham, and D. L. Miller. Chicago and London: The University of Chicago Press.

- Meggie, G. (ed.)
 (1977), *Analytische Handlungstheorie I: Handlungsbeschreibungen*. Frankfurt: Suhrkamp.
 (1979), *Handlung, Kommunikation, Bedeutung*. Frankfurt: Suhrkamp.
- Meggie, G. (1981),
Grundbegriffe der Kommunikation. Berlin and New York: de Gruyter.
- Meltzer, B. N., J. W. Petras and L. T. Reynolds (eds.) (1975),
Symbolic Interactionism: Genesis, Varieties, and Criticism. London and Boston: Routledge and Kegan Paul.
- Montague, R.
 (1968), «Pragmatics». In Klibansky 1974: 102-121.
 (1970), «Pragmatics and Intensional Logic». *Synthese* 22:68-94 (Reprinted in Montague 1974:119-147).
 (1974), *Formal Philosophy: Selected Papers*. ed. R. H. Thomason. New Haven: Yale University Press.
- Morris, Ch. W.
 (1938), *Foundations of the Theory of Signs*. Chicago: Chicago University Press.
 (1939), «Aesthetics and the Theory of Signs». *Erkenntnis. Journal of Unified Science* 8: 131-150.
 (1946), *Signs, Language, and Behavior*. New York: Prentice-Hall. 2nd edition Braziller 1955.
 (1964), *Signification and Significance*. Cambridge, Mass.: The MIT Press.
 (1970), *The Pragmatic Movement in American Philosophy*. New York: Prentice-Hall.
 (1971), *Writings on the General Theory of Signs*. The Hague: Mouton.
- Nuyts, J. and J. Verschueren (eds.) (1987),
A Comprehensive Bibliography of Pragmatics. 4 vols. Amsterdam: Benjamin.
- Ochs, E. and B. B. Schieffelin (eds.) (1979),
Developmental Pragmatics. New York: Academic Press.
- Oller, J. W. (1972),
 «On the Relation between Syntax, Semantics, and Pragmatics». *Linguistics* 83: 43-55.
- Pagnini, M. (1980),
Pragmatica della letteratura. Palermo: Sellerio. English translation: *The Pragmatics of Literature*. Bloomington and Indianapolis: Indiana University Press 1987.
- Parret, H.
 (1980), «Les stratégies pragmatiques». *Communications* 32: 50-73.
 (1981), «The Problem of the Delimitation of Semantics and Pragmatics: Round Table». *Quaderni di Semantica* 1: 97-134.
 (1982), «Nouveaux éléments de pragmatique intégrée». In: *Philosophie et Langage: Annales de l'Institut de Philosophie et de Sciences Morales*. Brussels: Editions de l'Université de Bruxelles: 61-75.

- (1983), *Semiotics and Pragmatics. An Evaluative Comparison of Conceptual Frameworks*. Amsterdam: Benjamin.
- Parret, H. and M. Sbisà (eds.) (1981),
Possibilities and Limitations of Pragmatics. Amsterdam: Benjamins.
- Peirce, C. S. (1931-66),
Collected Papers. 8 vols., ed. Ch. Hartshorne, P. Weiss and A. W. Burks. Cambridge, Mass.: Harvard University Press.
- Peirce, C. S. (1982ff.),
Writings of Charles S. Peirce. A Chronological Edition. Ed. M. Fisch et al. Bloomington: Indiana University Press.
- Posner, R.
 (1972), *Theorie des Kommentierens. Eine Grundlagenstudie zur Semantik und Pragmatik*. Frankfurt: Athenäum. 2nd edition Wiesbaden: Athenäum 1980.
 (1980), «Semantics and Pragmatics of Sentence Connectives in Natural Languages». In Searle, Kiefer & Bierwisch 1980:169-204.
 (1982), *Rational Discourse and Poetic Communication*. Methods of Linguistic, Literary, and Philosophical Analysis. Berlin and New York: Mouton.
 (1985), «Nonverbale Zeichen in öffentlicher Kommunikation». *Zeitschrift für Semiotik* 7: 235-272.
 (1986a), «Charles William Morris: A Summary of His Thought». In T. A. Sebeok (ed.), *Encyclopedic Dictionary of Semiotics*. Berlin and New York: Mouton de Gruyter: vol. 1, 565-571.
 (1986b), «Syntactics». In T. A. Sebeok (ed.), *Encyclopedic Dictionary of Semiotics*. Berlin and New York: Mouton de Gruyter: vol. 2, 1042-1061.
 (1987), «Charles Morris and the Behavioral Foundations of Semiotics». In: M. Krampen et al. (eds.), *Classics of Semiotics*. New York and London: Plenum: 23-57.
 (1989), «What is Culture? Toward a Semiotic Explication of Anthropological Concepts». In: W. A. Koch (ed.), *The Nature of Culture*. Bochum: Brockmeyer: 240-295.
- Prieto, L. J.
 (1966), *Messages et signaux*. Paris: Presses Universitaires de France.
 (1975), *Pertinence et pratique*. Paris: Minuit.
- Reichenbach, H. (1947),
Elements of Symbolic Logic. New York: Macmillan.
- Ricoeur, P.
 (1965), *History and Truth*. Evanston: North-Western University Press.
 (1969), *Le conflit des interprétations. Essais d'herméneutique*. Paris: Seuil. English translation: *The Conflict of Interpretations. Essays in Hermeneutics*. Evanston: North-Western University Press 1974.

- Rogers, A., B. Wall and J. P. Murphy (eds.) (1977),
Proceedings of the Texas Conference on Performatives, Presuppositions, and Implicatures. Washington: Center for Applied Linguistics.
- Rollin, B. E. (1976),
Natural and Conventional Meaning: An Examination of the Distinction. The Hague and Paris: Mouton.
- Rorty, R. (1982),
Consequences of Pragmatism. Minneapolis: University of Minnesota Press.
- Sadock, J. M. (1978),
 «On Testing for Conversational Implicature». In Cole 1978: 281-298.
- Saussure, F. de (1916),
Cours de linguistique générale, ed. C. Bally, A. Sechehaye, and A. Riedlinger. Lausanne and Paris: Payot. English translation by W. Baslein: *Course in General Linguistics*. New York: Philosophical Library 1959.
- Savigny, E.v.
 (1969), *Philosophie der normalen Sprache*. Frankfurt: Suhrkamp. 2nd edition 1974.
 (1980), *Die Signalsprache der Autofahrer*. München: Deutscher Taschenbuch Verlag.
 (1983), *Zum Begriff der Sprache: Konvention, Bedeutung, Zeichen*. Stuttgart: Reclam.
- Sayward, C. (1974),
 «The Received Distinction between Pragmatics, Semantics, and Syntax». *Foundations of Language* 11: 97-104.
- Scheffler, I. (1974),
Four Pragmatists. London: Routledge and Kegan Paul.
- Schlieben-Lange, B. (1975),
Linguistische Pragmatik. Stuttgart: Kohlhammer.
- Schmid, W. P. (1972),
 «Die pragmatische Komponente in der Grammatik». *Akademie der Wissenschaften und der Literatur. Abhandlungen der geistes- und sozialwissenschaftlichen Klasse* 9: 407-424.
- Schmidt, S. J. (ed.) (1974-1976),
Pragmatik — Pragmatics. 2 volumes. Munich: Fink.
- Schrekenberger, W. (1978),
Rhetorische Semiotik. Freiburg i. B. and Munich: Alber.
- Searle, J. R.
 (1969), *Speech Acts*. Cambridge, England: Cambridge University Press.
 (1975), «Indirect Speech Acts». In Cole & Morgan 1975: 59-82. (Reprinted in Searle 1979: 30-57).
 (1979), *Expression and Meaning*. Cambridge: Cambridge University Press.

- (1983), *Intentionality. An Essay in the Philosophy of Mind*. Cambridge, England: Cambridge University Press.
- Searle, J. R., F. Kiefer, and M. Bierwisch (eds.) (1980),
Speech Act Theory and Pragmatics. Dordrecht: Reidel.
- Searle, J. R. and D. Vanderveken (1985),
Foundations of Illocutionary Logic. Cambridge, England: Cambridge University Press.
- Segre, C. (1985),
Avviamento all'analisi del testo letterario. Turin: Einaudi. English translation: *Introduction to the Analysis of the Literary Text*. Bloomington: Indiana University Press 1988.
- Smythe, W. E. (1990),
 «Wie sind Symbole zu interpretieren? Repräsentation bei Frege und Peirce». *Zeitschrift für Semiotik* 12: 47-62.
- Sperber, D. and D. Wilson (1986),
Relevance: Communication and Cognition. Oxford: Blackwell.
- Stachowiak, H. (1986),
Pragmatics: A Handbook of Pragmatic Thought. Hamburg: Meiner.
- Stalnaker, R. C. (1972),
 «Pragmatics». In Davidson & Harman 1972: 380-397.
- Stalnaker, R. C. (1984),
Inquiry. Cambridge, Mass.: The MIT Press.
- Stanzel, F. K. (1964),
Typische Formen des Romans. Göttingen: Vandenhoeck and Ruprecht.
- Stickel, G. (ed.) (1984),
Pragmatik in der Grammatik. Düsseldorf: Schwann.
- Strawson, P. F. (1964),
 «Intention and Convention in Speech Acts». *Philosophical Review* 73: 439-460.
- Thomason, R. H. (1977),
 «Where Pragmatics Fits in». In Rogers, Wall & Murphy 1977: 161-166.
- Vanderveken, D. (1981),
 «A Strong Completeness Theorem for Pragmatics». *Zeitschrift für mathematische Logik und Grundlagen der Mathematik* 27: 151-160.
- Verschueren, J. F. (ed.)
 (1978), *Pragmatics: an Annotated Bibliography*. Amsterdam: Benjamins.
- Verschueren, J.
 (1981), «The Pragmatics of Text Acts». *Journal of Literary Semantics* 10: 10-19.
 (1987), *Pragmatics as a Theory of Linguistic Adaptation*. Antwerp: IPrA Working Document.
- Verschueren, J. and M. Bertuccelli-Papi (eds.) (1987),
The Pragmatic Perspective. Amsterdam: Benjamins.

- Vygotskij, L. S. (1964),
Denken und Sprechen. Berlin: Akademie-Verlag.
- Waal, F. de (1982),
Chimpanzee Politics. London: Cape.
- Walker, R. (1975),
 «Conversational Implicatures». In Blackburn 1975:133-181.
- Werth, P. (ed.) (1981),
Conversation and Discourse. London: Croom Helm.
- Wertsch, J. V. (ed.) (1981),
The Concept of Activity in Soviet Psychology. Armonk, N. Y.: Sharpe.
- Wittgenstein, L. (1953),
Philosophische Untersuchungen, ed. G. Anscombe and R. Rhees. Oxford: Basil Blackwell.
- Wunderlich, D. (ed.)
 (1972), «Pragmatik, Sprechsituation, Deixis». *Zeitschrift für Literaturwissenschaft und Linguistik* 1: 153-190.
 (1972), *Linguistische Pragmatik*. Frankfurt: Athenäum.