

From pragmatic philosophy to behavioral semiotics:

Charles W. Morris after Charles S. Peirce*

SUSAN PETRILLI

Introductory remarks

Pragmatic philosophy is native to the United States and was officially introduced in a public lecture entitled 'Philosophical conceptions and practical results' delivered by William James (1842-1910) in 1898(1). However, the originator of American pragmatism was Charles S. Peirce (1839-1914) who published an original nucleus of three writings on the topic in 1868 in Journal of Speculative Philosophy (cf. CP 5.213-263, 264-317, 318-357), subsequently developed in a series of six articles published in Popular Science Monthly between 1877-78 under the general title 'Illustrations of the logic of science' (cf. CP 5.358-387, 5.388-410, 2.645-660, 2. 669-693, 6. 395-427, 2.619-644)(2). Peirce himself dated the birth of pragmatism back to the meetings held by the 'Metaphysical Club' between the end of 1871 and the beginning of 1872 in Cambridge (Mass.)(3).

Pragmatism re-evaluates the importance of action in cognitive processes keeping account of discoveries in various fields, above all in psychology, sociology, and biology with particular reference to the work of Charles Darwin (1809-1882). The influence of Darwinian biology is obvious in Peirce's essay 'Fixation of belief' (1877), where he states that logicity in regard to practical matters may result from the action of natural selection (cf. CP 5.366). Peirce was trained and worked as a physical scientist and privileged the scientific experimental method which he employed and developed in his research. Pragmatism for Peirce, says C. Morris (cf. 1970: 20), is essentially the proposal to adopt the pragmatic maxim in philosophy, variously formulated throughout his writings (cf. CP 5.402, 5.9, 5.412), so that philosophy may gain the progressive and cumulative character of empirical science.

In the pragmatic perspective, mind (or spirit or thought) is not a substance as in Cartesian dualism, nor a process or an act as understood by idealism, nor a set of relations as in classical empiricism, but a function or activity exercised by verbal and nonverbal signs. Therefore, as

underlined by Morris in his 1932 book, Six Theories of Mind, given that mind and sign or symbolic processes are interrelated and even identify with each other, a theory of signs and verbal language is necessary for an adequate understanding of the workings of the mind. This book offers a survey of different theories in American philosophy on the connection between mind and world, and frames Charles Morris's (1901-1979)(4) own relation to American pragmatism with specific reference to Peirce, James, John Dewey [1859-1952], and to behaviorism during the years of his intellectual formation.

More than as a comprehensive philosophy, pragmatism at its origin proposes itself as a method to ascertain 'How to make our ideas clear', as recites the title of one of Peirce's papers (1878). Here he describes meaning in terms of the practical verifiability of the truth of an assertion, arising from our conception of the sensible effects of things. For a clear understanding of the object of our conception we must have an understanding of its effects and eventual practical bearings (cf. CP 5. 401-402). James develops this aspect of the theory of meaning into a theory of truth. He interprets pragmatism in terms of instrumentality and has knowledge depend on the needs of action and emotions. For James, that which has satisfying practical consequences is true, which led him to emphasize the practical value of religious faith, the will to believe, the reasons of the heart (cf. The Will to Believe, 1897, and Pragmatism, 1907, in James 1975-1988). Ferdinand C. S. Schiller (1864-1937) (cf. 1907) oriented his own approach in James's direction asserting the relativity of knowledge to personal or social utility. Dewey also worked the problem of meaning and knowledge into his own version of pragmatism, which he denominated 'experimentalism' or 'instrumentalism'. In Italy, pragmatism was developed along Peircean lines by Giovanni Vailati (1863-1909) and Mario Calderoni (1879-1914), and along Jamesian lines by Giovanni Papini (1881-1956) and Giuseppe Prezzolini (1882-1982).

Peirce returned to the question of pragmatism in a set of seven lectures delivered at Harvard, by initiative of James (cf. CP 5.14-40, 5.41-65, 5.66-92, 5.93-119, 5.120-150, 5.151-179, 5.180-212). In these lectures he identifies pragmatism with the logic of abduction and the theory of inquiry, implicitly, therefore, with logic and semiotics.

In his Monist articles of 1905 (CP 5.411-437, 5.438-463, 4.530-572), Peirce took a distance from pragmatism as conceived by James and Schiller, and coined the substitute term 'pragmaticism' to mark the difference (CP 5.414-415). He rejected the idea of 'Doing' as 'the Be-all and the End-all of life' (CP 5. 429). Unlike vulgar pragmatism, meaning is conceived here in terms of a general law of conduct independently from the particular circumstances of action. Peirce worked at a theory of meaning that was general and communal.

Morris may be considered as one of the main continuators of pragmatism (after Dewey, Mead and Clarence I. Lewis [1883-1964]), understood as a set of doctrines and methods originally elaborated by Peirce and James. A second generation pragmatist, Morris recovered and relaunched this philosophical trend at a time when neopositivism was dominating in America, a movement to which he contributed himself by participating with the Unity of Science Movement. As emerges from Logical Positivism, Pragmatism and Scientific Empiricism, of 1937, and his two essays of 1938, 'Scientific empiricism' and 'Peirce, Mead and pragmatism' (the first published in International Encyclopedia of Unified Science, the second in Philosophical Review), year in which his groundbreaking contribution to the science of signs, Foundations of the Theory of Signs, also appeared, Morris's semiotics was significantly influenced by Peirce's pragmatism or pragmaticism.

In 'Peirce, Mead and pragmatism', Morris underlines the affinity between Peirce and George H. Mead (1863-1931) or between the former's original pragmatism and the more recent version of the latter developed above all in terms of social behaviorism. Points in common include: importance attributed to the theory of signs; inseparability of thought and semiosis; and of thought and action; importance attributed to finalism, chance and creativity in the mind-world relationship. The main difference, instead, is between what Morris calls Peirce's metaphysical approach and Mead's contextual and situational approach.

In The Pragmatic Movement in American Philosophy, his book of 1970, Morris makes a global reconsideration of the development of pragmatism in the U.S.A. with a special focus on the basic ideas characterizing this movement, which he does not fail to contextualize in historical terms as well though this is not his main concern. For what concerns our own special interest in this paper, Morris's own relation to pragmatism also emerges in retrospect offering us a fuller understanding of

his own collocation with respect to this movement. In a note to the last section in chapter II on pragmatic semiotic and its behavioral orientation, he makes the following statement which he had already repeated on various occasions:

My own work in Signs, Language, and Behavior, supplemented by the later study Signification and Significance, might be regarded as a way to organize and to extend the contributions to semiotic by the various pragmatist philosophers. It was not done, however, with any such goal explicitly in mind. My own work started from Mead and not from Peirce; the influence of Dewey, Lewis, Peirce (and Rudolf Carnap), came later, and in that order. (Morris 1970: 47)

Behavioristic semiotics and pragmaticist semiotics: Morris and Peirce

Morris described semiotics as a ‘science of behavior’ referring to a ‘science’ or ‘discipline’ yet to be developed, or ‘field’, as he preferred to call it, and not to the philosophical-psychological trend that already existed known as behaviorism. Morris pointed out that his version of behaviorism derived mainly from George H. Mead, Edward Tolman and Clark L. Hull, while the term ‘behavioristics’ to name the science or field he was delineating was adopted from Otto Neurath. These scholars worked at a general theory of behavior, or ‘behavioristics’, as says Morris, intended to describe the behavior of both men and rats, while accounting at once for their differences. This was a far cry from other behaviorists who simply applied to the study of men the tenets of psychology as developed in the study of rats (as Morris had in fact been wrongly accused of by one of his reviewers).

In his paper of 1948, ‘Signs about signs about signs’, Morris explains his relationship with Peirce regarding the behavioral sciences. He declares that his position in Signs, Language and Behavior, 1946, that is, the idea of studying signs in the context of ‘behavioristics’, did not originate from Peirce but from Mead. Indeed, from this viewpoint Signs, Language and Behavior may be considered as a development of Mead’s book, Mind, Self, and Society: ‘I never heard Mead in lecture or conversation refer to Peirce. Only later did I work earnestly at Peirce, Ogden and Richards, Russell, and Carnap, and still later at Tolman and Hull. All of these persons influenced in various ways the formulation of SLB’ (Morris 1971[1948]: 445). All the same, Morris explains that

in historical perspective Peirce was a modeling influence on Signs, language and behavior, for though its orientation did not derive from Peirce, it was in effect ‘an attempt to carry out resolutely’ his approach to semiotic (Morris 1971[1948]: 445).

In the appendix to Signs, Language and Behavior Morris dedicates a paragraph to Peirce’s contribution to semiotics (1971[1946]: 337-340). He observes that Peirce connected sign-processes with processes involving mediation or ‘thirdness’, indeed he equated them, just as he connected sign processes and mental processes in a relation of identification. From this point of view, there is an obvious discrepancy between Peirce’s triadic approach and the approach adopted by behaviorism when based on two-term relations between stimuli and responses, unless it is recognized that the stimulus-response relation is mediated in turn by a third factor with a ‘reinforcing’ function.

On one hand Morris searched for sign-processes in the wide class of mediation processes; on the other, he was convinced that mediation processes did not always involve signs. He formulated this restriction on the basis of the claim that sign-processes are mediation processes in which the mediation factor is an interpretant, and the interpretant is not always present. It is our belief that this so-called ‘restriction’ or, better, ‘specification’, is in line with the Peircean perspective (cf. Morris 1971[1946]: 338).

Another aspect of Peirce’s semiotics evidenced by Morris concerns the fact that, as anticipated above, sign-processes and mental processes identify with each other, therefore sign-processes are not restricted to behavioral or actional situations alone. At the same time, Peirce’s specification as formulated, for example, in ‘Prolegomena to an apology for pragmatism’, 1906, is also important: ‘thought’, and therefore semiosis, ‘is not necessarily connected with a brain. It appears in the work of bees, of crystals, and throughout the purely physical world’ (CP 4.551).

Peirce’s definition of sign in terms of mind was considered as a limit by Morris who consequently describes his approach as an example of ‘idealistic metaphysics’. Says Peirce in a manuscript of 1903, ‘A sign is a representamen of which some interpretant is a cognition of a mind’ (CP 2.242). But Peirce did not provide a criterion for determining when the mind or thought intervenes, being the condition for determining when something is or is not a sign. And while in

‘Questions concerning certain faculties claimed for man’ (1868), Peirce stated that ‘every thought is a sign’ (CP 5.253), so that thoughts and signs identify to the extent that thought is not possible if not in signs, in ‘Some consequences of four incapacities’, a paper published in the same year, he stated that thinking never occurs without the presence of something which acts as a sign, where signs instead emerge as an instrument of thought (cf. CP 5.283).

Lastly, Morris significantly rejected Peirce’s definition of the sign, of all signs, as giving rise to other signs. That signs are continuously translated or interpreted in a subsequent sign cannot be used as a defining criterion, for this involves a form of circularity wherewith a sign is defined as something which generates a sign which generates another sign, etc. Morris’s comment is the following: ‘Signs, at least at the human level, do frequently generate a series of sign-processes, but I see no reason why this fact about signs should be incorporated into the definition of ‘sign’ itself’ (Morris 1971[1946]: 339).

The aspect Morris found most interesting about Peirce’s work (in spite of what he believed were his mentalistic limitations) is his emphasis on behavior. Peirce maintained that to determine the meaning of a sign we must identify the habits of behavior it produces, which corresponds to Morris’s own orientation. In Morris’s view, Peirce had the merit of rejecting old Cartesian mentalism and replacing it with the concept of habits of behavior and, therefore, of directing semiotics toward a more adequate account of sign-processes.

Another merit according to Morris is Peirce’s refusal to establish a distinct separation between human sign processes and nonhuman animal sign processes.

Morris drew two fundamental lessons from Peirce’s studies on signs: firstly, it is not necessary for a theory to belong to some psychological or philosophical behavioral trend to achieve important results in semiotics; secondly, semiotics must not be grounded in a mentalistic order to achieve the status of science, but rather in behavioristics understood as a general theory of behavior, including sign behavior.

Morris's orientation as regards behavioristics and biology emerges clearly through confrontation with Peirce. Peirce dealt with problems which could not be ignored in semiotics, and underlined the importance of terminological issues for methodology. Morris too was critical of what he considered as uncertain and ambiguous terms (such as the mentalistic) and constructed his own terminology from a science that studies the behavior of human and nonhuman animal life objectively, that is, biology. Consequently, he returned to Peirce with the intention of moving beyond him.

Morris rejected critics like Bentley who did not appreciate his efforts to continue and develop Peirce's ideas. Bentley analyzed Morris's relationship to Peirce through Dewey's critical reading of Foundations of the Theory of Signs. As reported by Morris in his 1948 paper, Dewey accused him of having 'inverted Peirce's position' as regards the terms 'interpreter' and 'interpretant' (1971[1948]: 445), to which Morris replied, as reported above, that though the orientation of Signs, language and behavior did not derive from Peirce, the position expressed in it is in effect an attempt to carry out resolutely the latter's approach to semiotic.

In replying to Bentley, Morris was also replying to Dewey who accused him of falsifying Peirce. According to Morris, Dewey did not understand the connection established by Peirce between the concepts of 'interpreter' and 'interpretant'. Dewey considered the sign-interpretant relation as a relation in a sign system prescinding from the sign-interpretation relation and, therefore, from the role of the interpreter (an organism for Morris) when something functions as a sign. There is no sign without an interpretant or an interpreter, for the interpretant is the effect of a sign on an interpreter. Indeed, given that the interpreter does not subsist as such if not as a modification ensuing from the effect of a sign in an open chain of interpretants, the interpreter is also an interpretant and, therefore, a sign. The correspondence between man and sign, interpreter and interpretant is explained by Peirce in 'Some consequences of four incapacities', and does not imply that one of the two concepts forming these pairs can be eliminated for each term evidences different aspects of semiosis.

Another important observation made by Morris is that Peirce used the term 'interpretant' with different meanings: in fact, he distinguished between 'immediate interpretant', 'dynamical

interpretant' and 'logical final interpretant'. Dewey's critique of Morris was determined by his misunderstanding of the different ways Peirce's interpretant may be understood, despite Morris's attempt to reduce ambiguity by introducing the term significatum (designatum in Foundations) alongside it. Dewey employed the term 'interpretant' with the same meaning Morris attributed to significatum, without realizing that for the latter 'interpretant' indicated the effect of a sign on an interpreter. Morris also pointed out that Dewey himself in other contexts in fact underlined this aspect of the concept of sign. And to this end he cites a passage from Logic where Dewey speaks of a preparatory disposition to act in a certain way in relation to the sign.

Morris's discussion of the theses advanced by Dewey and Bentley concerning his relation to Peirce indicates just how important this relation and the continuity between Peircean semiotics and his own was to him. We might even hypothesize that Morrisian semiotics decided on the necessity of a biological basis as a means of reinforcing such continuity. Apart from Morris's critique of what he considered as mentalistic and metaphysical in Peirce's work, there are no substantial differences in the general orientation of Morris's behavioristics and Peirce's pragmatism.

Morris united pragmatism and logical empiricism in a doctrine he initially named scientific empiricism in accordance with the project for unified science as ideated by logical positivism (cf. Morris 1937). And it was in this perspective that he outlined his behavioristics, which was also influenced by Mead author of 'A behavioristic account of the significant symbol', 1922.

Though we are not immediately concerned with Morris's interpretation of Peirce in the present paper, it is important to underline that while accepting Mead's behaviorism (or pragmatism) Morris identified several points in common between his own approach and Peirce's. Also, Morris's pragmatism is closer to Peirce's than to James's (with whom all the same he was indebted as he recognizes in his article 'William James today', 1942).

Morris distinguished his own specific formulation of behaviorism, or behavioristics, from the physicalist thesis of the Unity of Science Movement preferring a biological framework. This proved particularly significant for his critique of the tendency toward dogmatism and reductionism

characteristic of the physicalist project. His biological perspective was also important in determining the boundaries of semiosis which he extended and at once circumscribed to the world of organisms(5).

Pragmatic philosophy in the United States, more than the voice of its historic occasion

As anticipated above, Morris's book of 1970, The Pragmatic Movement in American Philosophy, is interesting for at least two reasons:

firstly, it presents a survey of the basic ideas informing the development of pragmatism in the U.S.A. and does so in historical perspective. In fact, Morris dedicates this study primarily to the thoughts of four American philosophers whom he identifies as forming the original nucleus and propelling force of this movement – Peirce, James, Dewey, and Mead;

secondly, by implication it presents an overview, contextualization and interpretive key for a retrospective reading of the development of Morris's own life's work as a semiotician and philosopher relating to this particular movement.

In line with his predecessors and coherently with his own method of inquiry, in his analysis of the factors occasioning the development of American pragmatic philosophy, in this book of 1970 Morris distinguishes between the problematic and the unproblematic. Every specific problem to be analyzed occurs in a context where certain features – objects, meanings and beliefs – are unproblematic, and therefore taken for granted in attempts to solve the problem. What is problematic in one context may become unproblematic in another context and viceversa. Morris had already used the same method when in his efforts to delineate signs to talk about a signs, that is, a general theory of signs, he distinguished between analyzed signs, the object of study, and unanalyzed signs, the unproblematic terminological apparatus employed to study that object, which he drew from the language of biology (cf. 1971[1948]: 435). Now he identifies four main features of the pragmatists' unproblematic which provided the occasion for the development of pragmatic philosophy: 1) scientific method; 2) philosophical empiricism; 3) evolutionary biology; 4) the humanist democratic ideal (for the pragmatists freedom and democracy were subject to

scientific inquiry). These four features form the context and framework for the solution to philosophical problems, they combine differently to influence all the major pragmatists in varying degrees, and account for both the unity and diversity characterizing the American pragmatic movement: e pluribus unum is the motto for the American nation which Morris evokes and transfers to its most characteristic philosophy. In fact, the American pragmatists are at once distinguished by important differences in personality, in characteristic problems, and even in proposed solutions, while they unite to form a single and unique philosophical movement. Common themes which characterize pragmatic philosophy as summarized by Morris and which he develops throughout his own research, include: a behavioral semiotic; a semiotically interpreted logic; an epistemology oriented around the study of inquiry; an axiology conceived as the study of preferential behavior (that is, of prizing and appraising); a view of experience as an integral part of the cosmos; and a semiosical theory of mind (cf. Morris 1970: 142-143).

Morris makes a point of underlining the distinction between pragmatism, the practical and action. Peirce favored the term 'pragmatism' which he developed from Kant's use of the term 'pragmatisch' in Critique of Pure Reason to express a 'relation to some definite purpose'. For Peirce pragmatism is concerned with the way 'rational cognition', or, knowledge, relates to 'rational purpose', or, human action or conduct (cf. CP 5.412). It is neither concerned with 'practicalism', that is, with the practical, nor with different types of practices. In Morris's description (1970: 10) pragmatism is focused primarily upon one aspect of human behavior: 'intelligent action, that is, purposive or goal-seeking behavior as influenced by reflection'. This is an aspect he most develops in Signs, language and behavior which is specifically dedicated to the inextricable interrelation between signs and human conduct. For Peirce rational purpose is 'self-controlled conduct', that is, 'conduct controlled by adequate deliberation'. Pragmatism, or as Peirce preferred, pragmaticism, was concerned then with the relation between 'deliberate conduct' and 'the intellectual purport of symbols' (cf. CP 8.322, 5.442). Therefore, intelligent, purposive behavior, a distinctive and important part of human behavior, is the aspect privileged by American pragmatism which makes it unique among other modern philosophies. Morris comments that the focus on intelligent purposive behavior explains various other characteristics of the pragmatic movement including the stress on the kind of signs that occur in reflective inquiry.

Following a tradition as old as the Stoics, Morris embraces a broad conception of philosophy as containing ‘a consideration of methods of inquiry (methodology, including theory of signs), a doctrine of the nature of value, such as ethical and aesthetical values (axiology), and a picture of man and the world (cosmology); and to the end of demonstrating the philosophical status of the pragmatic movement in America he structures this book of 1970 accordingly.

The distinctive trait of the pragmatists’ inquiry into the nature of meaning is the belief that there is an intrinsic connection between meaning and action. If it is granted that meaning comes in signs, then the connection between meaning and action (or behavior) implies that semiotics, the general study of signs, should be developed as an actional or behavioral theory. However, Morris believes that the American pragmatists did not work out a comprehensive theory of meaning, and that not even Peirce proposed a comprehensive formulation of the nature of meaning and of the intrinsic relation of meaning to action. Consequently, on Morris’s account, no fully worked out behaviorally-oriented semiotics was ever developed by the pragmatists. To this we might comment that Morris’s own research, particularly as formulated in Signs, Language and Behavior and in Signification and Significance, is an attempt to fulfill precisely this goal, even if he does not say so explicitly, consequently bringing American pragmatism to its full development. His description of the pragmatic movement in America, such as the following statement which expresses the situation in a nutshell, may in fact be applied to the general orientation of his own research:

A behavioral semiotic might then be considered as the foundation of pragmatism, and pragmatism regarded as a philosophy that attempts to deal with the traditional problems of philosophy on this foundation. In this way some precision could be given to the term ‘pragmatism’, namely, pragmatism would be philosophy erected upon the basis of a behavioral semiotic. (Morris 1970: 16-17)

As we have seen, Morris dedicated a large part of his research and writings to a study founded on a behavioral semiotics, of man’s intelligent, purposive or goal-oriented behavior, committed to controlling his future in the direction of his values. However, he wished to reach a comprehensive understanding of man and of his relations to the world, of man in the totality of his interests and actions, as we have also stated of Peirce, so that while he analyzed the signs of

knowledge and of reflective inquiry, the signs of rational thought and behavior, he also emphasized the importance of nonrational, even antirational factors of behavior. Also, in the context of his value theory (axiology), largely developed as a theory of preferential behavior, Morris evidenced other types and value-orientations, for example, the Buddhist personality ideal, beyond the 'Promethean' or 'pioneer' type of personality favored by the pragmatists – under this aspect remaining closer to Peirce and James than to Dewey and Mead.

Morris aimed at developing a global approach to man and his signs which led to his interest for all types of signs, in addition to the rational and goal-seeking, the signs of the irrational, the signs of mysticism, man-cosmos symbols, malfunctioning signs, pathological signs, the signs of social alienation, the signs of mental illness. And, indeed, in addition to the books and articles discussed in this paper, still others – including, Paths of Life, 1942, The Open Self, 1948, as well as his poetry, or what Sebeok calls his 'wisdom literature', collected in the volumes Festival, 1966, and Image, 1976 – contribute to highlighting the comprehensiveness of Morris's behavioral semiotics as developed in the light of his pragmatic philosophy.

Sign, interpretation and goal-oriented behavior

Although Morris was in accord with Peirce's description of semiosis as the 'action of a sign' (CP 5.473), he limited his concept of action to behavior directed toward a goal. This approach implies the presence of a subject, an organism, its goal-oriented behavior and a goal-object, that is, a 'final object' outside semiosis.

In Morris's example (cf. 1971[1946]: 83), the sound of a buzzer is a sign for a dog trained to seek food when the buzzer has sounded or some time after. In this situation semiosis is the action of the buzzer which provokes the action of seeking food, or, as in the case of Pavlov's dog, which acts on its glands causing it to salivate. But for this to occur there must be a preceding semiosis, that through which the dog interprets a certain noise as the sound of a buzzer. This 'simple' perception is already an interpretation in itself and, therefore, semiosis. A sound, a noise hits the ear in a certain way and the first action it provokes is the interpretation which identifies that noise as a particular sound connected with the need for food. The first inference: the noise interpreted as the

buzzer sound, or as ‘that certain sound’; the second: ‘therefore there is food’; only the third, the reaction that consists in directing attention to seeking food is finalized or goal-seeking behavior.

Certain ants which nourish themselves with droplets of honeydew secreted by aphids (myrmecophilous) on vibrating their antennas against the rear end of the latter, can actually begin ‘milking’ the aphids (Linneus called them the ant’s cows) thanks to a (mistaken) identification of a sign (cf. Sebeok 1979: 13; 1986: 144). The ant exchanges the hind end of an aphid’s abdomen which acts as an icon (or better effigy), for the head of another ant, which sparks off behavior involving the intraspecific sharing of food between giver and acceptor: this leads to the secretion of food on the basis of a misunderstanding.

In our terminology, the action of a sign must first provoke a response or interpretation that identifies a given sign and only subsequently respond to it through goal-seeking behavior. For a person another person’s wet raincoat may be a sign. Semiosis occurs on the basis of an inferential interpretation: ‘therefore, it’s raining’; which precedes the response of picking up an umbrella to attain the goal of leaving the house without getting wet.

Morris’s second example: the driver must accomplish a series of previous semioses before being able to complete his goal-seeking behavior directed toward arriving at a given town; before responding to the information that the road is blocked and, therefore, turning off on a side-road. In other words, before reaching the decision to deviate his course, thereby enacting a semiotic chain with which he reacts to the informer’s words as though he had actually encountered the obstacle blocking his route, the driver must have first accomplished the following semioses: interpret the vocal sounds emitted by the informer as words of a language he recognizes given that he identifies its phonemes and monemes; formulate the conclusion that the informer is informing him to the effect that ‘the road is blocked’; that this is exactly what the informer is saying with reference to the route the driver is moving along, and not something else; that the informer is trustworthy so that what he says may be interpreted as being true (which involves other semioses and other inferences); and even before stopping to listen to the informer, the driver must accomplish such interpretations as the following: ‘this is a person’, ‘his gestures mean ‘stop’’, ‘his stop signs are turned to the driver in question’, etc.

We may conclude that as ‘sign activity’, semiosis already occurs when we perceive a stimulus and identify it (which involves the risk of error): perception and identification are reactions to the sign, therefore, they are interpretants (identification interpretants) which precede interpretation of that sign at the level of ‘answering comprehension’ – according to our examples, the action of food-seeking or turning off onto another road.

Morris forestalls the objection that his definition of action as goal-oriented behavior presupposes the subject, its behavior, the goal-object, etc. outside semiosis, by maintaining that ‘perception’ is a very vague and ambiguous term: it precedes sign processes just as it may be considered a sign process itself. Consequently, a definition of sign (similarly to all semiotic terminology) would not be well founded on a theory of perception. Furthermore, not all response-sequences provoked by a stimulus-object constitute sign behavior: ‘A person reaching for a glass of water is not prepared to act in a certain way because of a sign, but simply is acting in a certain way to an object ... The glass of water may of course itself become a sign’, for example, ‘a sign of a certain person’s kindness’ (Morris 1971[1946]: 135).

No doubt we may agree with Morris if his observations are understood in the sense that any behavior, including perceptive behavior, may be sign behavior, as he admitted in Foundations of the Theory of Signs where he clearly states that nothing is a sign in itself but can become a sign in given processes and on given conditions. But in Signs, Language, and Behavior Morris maintains the opposite: ‘the semiotician, however, must avoid making all response-sequences cases of sign-behavior if he seeks to formulate a behavioral criterion for signs in terms of response-sequences’ (Morris 1971[1946]: 135). And we must also observe that Morris is referring both to sign behavior as well as to non-sign behavior, to ‘responses’, forgetting the (questionable) distinction which he himself had established between ‘reactions’ and ‘responses’. On our part, we believe that the action of reaching for a glass of water is the consequence of responding to a sign, or, better, to various signs of a cultural order, as well as the perceptive interpretation of the object in question.

According to Morris the object acting as a sign is already given as a sign to a subject who must simply respond to it. According to Peirce, the object is a ‘dynamical object’, something that provokes a process through which it gradually manifests itself as an object, beginning from its

initial manifestation as a 'ground'. The latter is completely undetermined and as such susceptible to multiple determinations; it is ambiguous to the point of requiring an initial more or less elaborate semiosis of disambiguation.

We have not yet said anything about goal-oriented behavior, about having a need and identifying an object able to satisfy it, which also involves preliminary semiosis: the driver interprets his desire, obligation or convenience to direct himself toward a given destination, decides that it is best to go by car, that a given route and not another is the best one to follow, etc. Also, for the dog to seek food it must feel 'the signs of hunger'. How such signs are produced is a question that leads back to the 'biological basis' of semiosis where certain parts of the organism behave as the interpreters, through certain interpretants, of certain sign interpreted at a level which is no longer the macrobiological.

Hunger is a subjective sensation that signals the request for food by the organism when its tissues are impoverished of nutritional substances. More precisely: adenosine monophosphate, or cyclic AMP omnipresent in biological regulation in most organisms, signals a nutritional crisis, in other words, that the carbon-source has been exhausted. Thomas A. Sebeok, who under certain aspects may be considered as one of Morris's most original successors, underlines the double function of AMP, that is, the endocrine and endosemiotic:

[...] and cyclic AMP [may be] taken as a sign significantly substituting for something else – aliquid stat pro aliquo. There is a genuine triadic relation here involving mediation, not reducible to a combination of dyadic relations between pairs of objects, in a word, semiosis. (Sebeok 1979: 23)

Morris in Rossi-Landi's interpretation

As regards goal-oriented behavior, the Italian scholar and Morris expert Ferruccio Rossi-Landi (1921-1985) observed in his critique of Signs, Language, and Behavior that Morris's position presupposes a distinction between behavior and goal-oriented behavior. The examples above refer to organisms oriented toward something: the dog seeks food, the driver moves toward a certain destination. But is there such a thing as behavior that is not oriented? And if we establish a

hierarchy in oriented behavior (getting into the car, pressing the accelerator, choosing a certain road and not another, etc.) are we not avoiding issues of a teleonomic order concerning what the dog is oriented toward, in the last analysis, on satisfying its needs, what that man heading for a given town is oriented toward, 'or worse still', says Rossi-Landi, 'what is mankind oriented toward?', what are animals oriented toward'. Says Rossi-Landi:

When all other specifications are lacking, we're far from knowing what mankind and animals usually do; nothing enables us to distinguish between goal-oriented and non oriented behavior as such. Or again: we may speak of goal-oriented behavior concerning behavior from the viewpoint of a goal that has already been reached; but nothing in behavior as such tells us whether it tends toward a or goal or not, unless it is specific behavior which we recognize through comparison. There exist goals, but not the goal. And on introducing the notion of goal Morris may have been influenced by a contradiction typical of a certain kind of pragmatism, ontologization of the goal as such. The notion itself on which the notion of sign behavior should rest would not seem to be founded. (Rossi-Landi 1975a[1953]: 71, Eng. trans. our own)

Rossi-Landi first made such comments in a monograph of 1953 entitled Charles Morris, republished in 1975 as Charles Morris e la semiotica novecentesca (Charles Morris and twentieth century semiotics) with the addition of a paper of 1975, 'Segni su di un maestro dei segni' (originally published in English as 'Signs about a master of signs', now in Rossi-Landi 1992b: 17-57). In the paragraphs entitled 'Semiotics as a biological science in SLB' and 'Sign-behavior vs. Behavior-as-communication', in addition to underlining the biological foundations of Morrisian semiotics, Rossi-Landi returns to the problem of the distinction between goal-seeking behavior and other kinds of behavior used as a criterion to establish when something is a sign. In this context he concludes that it is not possible to distinguish between sign-behavior tout court and non-sign-behavior tout court, and even maintains that all behavior is sign behavior: 'Here we are not only discussing Morris's thought, but the thing itself. The thesis is that any behavior communicates something and that, conversely, nothing can be communicated if not by means of some piece of behavior' (Rossi-Landi 1992b: 31). According to Rossi-Landi, no animal, whether human or

nonhuman, may be conceived as behaving without communicating. And if it is communicating this implies that behavior is sign behavior.

A limit in Rossi-Landi's position as it is formulated in this context (though not in his other writings) is his identification of semiosis with communication. We now know that semiosis is not limited to communication understood in a strict sense, but that semiosis is also modeling: in other words, through semiosis we interpret, model and produce sense for the construction of new possible worlds. The distinction proposed by Sebeok (cf. 1986, 1991b) between 'language' as a modeling device and 'speech' as oriented toward communication, with the specification that the former is antecedent to the latter, invalidates Rossi-Landi's prejudicial limitation. Furthermore, on establishing his criteria for the characterization of 'language', Morris too distinguishes between the concepts of 'language' and 'communication' with noteworthy advantages for the characterization of both.

More interesting is Rossi-Landi's thesis that behavior is semiotic because it is always part of a program (cf. Rossi-Landi 1992b: 31-32). 'Today we know', says Rossi-Landi, 'that all behavior is always programmed – that is, based on codes' (Rossi-Landi 1992b: 34), his reference being both to verbal and nonverbal behavior. Subsequently, he asked himself whether such developments took value and credibility away from Morris's basic intuitions. And his reply is the following:

I would say no; indeed, I would say the contrary. It was Morris who joined in such an intimate way, and for the first time systematically, the general notion of behavior with the general notion of the sign. Let us say, rather, that he started off in a direction which was even more fruitful than he himself imagined or was able to foresee. The joining of the two notions contained enormous potential. Circumstances had only to permit the very first developments – and the whole panorama of the human and life sciences began to change. Morris's limits must be seen historically. (Rossi-Landi 1992b: 34-35)

Signs and values

In Signification and Significance, of 1964, Morris systematically relates sign theory and value theory, thereby consolidating the close connection between semiotics and axiology. He underlines the vague and ambiguous nature of meaning which is commonly used to cover (at least) intention, signification, and value and shows that the nature of meaning can only be adequately understood in the light of a developed semiotics and not vice versa.

With reference to the relation between sign theory and value theory we may distinguish between so-called 'interpretation semiotics' (a current counting such exponents as Peirce, Victoria Welby, Morris, Mikhail Bakhtin, Rossi-Landi) and 'identification semiotics' or 'equal exchange semiotics'.

In his early writings Rossi-Landi had already evidenced the relation in decodification semiotics between the sign model it proposed (of Saussurean derivation) and economic value theory. This connection between linguistics and economics, or semiotics and economics, promised a fuller understanding of the disciplines in question as well as of their interrelations (cf. Rossi-Landi 1975b). Saussure referred specifically to economic value as conceived by Marginalistic Political Economy of the School of Lausanne and, therefore, to equal exchange value. This led to a sign model based on equal exchange between signifiant and signifié and more broadly between langue and parole. On the contrary, Rossi Landi (cf. 1998[1961], 1992[1968]) criticized the Saussurian approach, underlining the limits of linguistic theory based on equal exchange value theory, and did so by appealing to historico-dialectical materialism, the Marxian critique of exchange value, and by developing categories from Peirce, Voloshinov(-Bakhtin) (author of the 1929 volume, Marxism and the Philosophy of Language) as well as from Morris.

In the introduction to his 1954 Italian translation of Morris's book of 1938, Rossi-Landi states that after his Foundations, Morris's research developed in two different directions. One consists in elaborating the notion of sign and a general sign theory; the other deals with the problem of value (cf. Morris 1938c, It. trans. 1999: 62). In Signification and Significance, Morris at last unites these two areas of his research: he had worked on values almost as much as he had worked on signs, and rejected the idea that the mere fact of working on signs gave one the right to judge about values. And, in fact, he had dedicated a large part of his work specifically to value theory, in

particular to the problem of ethical and aesthetic value judgments, as in Varieties of Human Value, his book of 1956.

Morris opens Signification and Significance by analyzing the various senses in which the expression 'to have meaning' may be understood: that is, as having a given linguistic meaning, a given signification, its semantic meaning, on the one hand, and as having value, of being significant, its evaluative meaning, on the other. The term 'meaning' is doubled into 'signification', the object of semiotics, and 'significance', the object of axiology. To consider signs and values together meant to deal with the problem of the relation between semiotics and axiology insofar as they concern different aspects of the same process, human behavior. And by evidencing the ambiguous nature of the term 'meaning' Morris's work testifies to the semiotic consistency of human signifying and behavioral processes:

That there are close relations between the terms 'signification' and 'significance' is evident. In many languages there is a term like the English term 'meaning' which has two poles: that which something signifies and the values or significance of what is signified. Thus if we ask what the meaning of life is, we may be asking a question about the signification of the term 'life', or about the value or significance of living or both. The fact that such terms as 'meaning' are so widespread in many languages (with the polarity mentioned) suggests that there is a basic relation between what we shall distinguish as signification and significance. (Morris 1964a: vii)

Morris believed that the conjunction between signs and values, semiotics and axiology was an area that had not yet received adequate attention, and observed that Peirce too was concerned with semiotics more in its logico-cognitive aspects than in relation to axiological issues. In truth, Peirce's writings (cf. his 1923 volume, Chance, Love, and Logic) did not fail to deal with the problem of values. In line with his pragmatism his cognitive semiotics cannot be separated from man's social behavior and from the totality of his interests. For Peirce the problem of knowledge necessarily involved orientations and issues of an evaluative order, and consequently his so-called 'cognitive semiotics' is attentive to the ethical-pragmatic or evaluative-operative dimension of signs.

As a global sign science, semiotics must focus upon all aspects of semiosis without ignoring what is understood by the terms ‘signification’ and ‘significance’. We suggest the term ‘teleosemiotics’ (cf. Petrilli 1998b) for that tendency to push beyond the neutral descriptive and cognitive limits of the sign science, though the term ‘semiotics’ is adequate if understood as the general study of signs. In relation to human signs, teleosemiotics contributes to a global understanding of human beings in the entirety of their relations to themselves, to the world, and to others. Therefore, with respect to ‘semiotics’, the term ‘teleosemiotics’ has the advantage of highlighting that particular orientation in sign studies that is not purely descriptive, that does not claim to be neutral. From the viewpoint of theory of knowledge, teleosemiotics evidences the axiological dimension of sign processes beyond, or, better, in conjunction with the strictly logical-cognitive aspects.

From the viewpoint of the relation between signs and values, other authors in addition to Peirce (Welby, Ogden, Richards, Bakhtin, Vailati, Rossi-Landi) may be read in a similar key. Victoria Welby (1837-1912) oriented her research on signs and meaning so strongly in the direction of value theory and the problem of significance that she coined the neologism ‘significs’ which she preferred to both ‘semantics’ and ‘semiotics’.

But to return to Morris: how did he connect the threads of his two lines of research on signs and values, more commonly divided between the competencies of semioticians and of philosophers? In Signification and Significance he introduces a few terminological innovations regarding the components of semiosis, of which he lists five:

- Sign or sign vehicle, the object acting as a stimulus for sign behavior;
- Interpreter, any organism acted upon by the sign vehicle. This extension of the concept of interpreter to include any organism whatever, and, therefore, any type of sign behavior beyond the human, implies extending semiotics beyond the social behavior of man and, therefore, beyond the limits established by Saussurean sémiologie. This orientation in semiotic studies is developed specially by Sebeok inventor of ‘zoosemiotics’, ‘biosemiotics’ and ‘global semiotics’ (cf. References).

- Interpretant, the disposition to respond to a certain type of object as the result of a sign stimulus.
- Signification, the object to which the interpreter responds through an interpretant, that is, the signified object which as such, specifies Morris, cannot function simultaneously as a stimulus. Here, signification replaces what Morris variously calls denotatum (1938) and significatum (1946), while the concepts of interpreter and interpretant remain constant. That the object of signification cannot function as a stimulus does not mean, explains Morris, that what gives itself to direct experience cannot be signified. The point is that only a part of an object can be perceived directly; and this is the part that functions as the stimulus or sign vehicle. The part not fully perceived functions, instead, as the signified object, the object of signification. We say that ‘this is a desk’ on the basis of our limited experience of the object in question, that part which is perceived directly and interpreted as a sign of the fact that we are dealing with a desk on the basis of the hypothesis (implying the risk of error) that there exist parts we do not actually see – the back of the desk, its underside, the drawers, etc.
- Context, the set of circumstances in which semiosis takes place.

Another important specification in this section dedicated to identifying the fundamental components of semiosis concerns, though not directly, the role of definition in the cognitive process. Morris did not intend to define the sign, but to establish the situations in which something may be recognized as a sign. This operational or pragmatic attitude toward the cognitive object demystifies the role generally assigned to definition. It is not a question of defining the object as a condition of its knowability, but of identifying situations in which we deal with signs. Authors like Welby and Vailati, who criticized excessive trust in the cognitive import of definition, had already worked in a similar sense. Vailati observed that definition did not necessarily testify to our knowledge about something as evidenced by our difficulty in defining precisely that which we know best: think of the difficulties involved in defining such words as ‘hot’, ‘cold’, ‘black’, etc. (Petrilli 1988: 47-56; 1990b: 339-340; 1998a: 173-219; Ponzio-Petrilli 1998).

In line with his plan to theorize the connection between the value and sign dimensions of behavior, Morris subdivides signification into designative, prescriptive, and appraisive signification,

respectively exemplified with the words 'black', 'ought', and 'good'; and he subdivides action, following Mead, into perceptual, manipulatory, and consummatory action, where these three types of action and signification correspond to each other in the order indicated.

The study of action is inevitable when passing from sign theory to value theory, if values are considered in relation to action and preferential behavior and not as absolute, independent entities. Value is studied by Morris in terms of a 'value situation' which involves both social and individual values, and is regarded as any situation in which preferential behavior occurs. As such a value situation is inherently relational.

Values are described as objectively relative properties, that is, they are properties of objects (in a wide sense of this term) relative to preferential behavior. Morris classifies them as object, operative, and conceived values in correspondence with the tripartition of signification and action.

The term 'value' is used in different contexts to signify different aspects of value situations, that is, situations involving preferential behavior. Morris discusses three usages which he considers as basic. 'Object value' is applied to objects and as such is objectively relative, it comes into play in perceptual action. 'Operative value' signifies the direction of preferential behavior, it holds wherever there is a direction of preference at choice points as regards objects and behavior and is correlated to manipulatory action. 'Conceived value' concerns preferential behavior as accorded to a signified object or situation. Ideally it guides our effective choices and corresponds to consummatory action. Morris specifies that object and operative values do not necessarily involve signs, that is, an object of signification, while, on the contrary, conceived values can only exist as signified values and, therefore, they necessarily do involve signs.

Moreover, Morris identified three dimensions of value: detachment, dominance, dependence, which correspond, respectively, to the classification of action into perceptual, manipulatory, and consummatory action, and of signification into designative, prescriptive, and appraisive signification.

Morris's theoretical horizon is far more complex and articulate than we have reported in this paper in which we have simply traced its outlines. However, what we do wish to underline is the fact that his studies on the relation of signs and values identify correspondences between notions established in the context of sign theory, action analysis (Mead) and value theory.

It is a question of reading the correspondences that relate the two faces of the same process, as though we were looking at the correspondences in writing on the two different sides of the same sheet of paper. Morris's research concerns a fact of communication: communication between the order of signs and the order of values, and, therefore, among the practitioners of the disciplinary fields concerned with such aspects of behavior.

We may claim then that Morris's pragmatic conception of meaning led to his focus not only on signs but also on values. His book of 1964, Signification and Significance, in which he continued his work on values and signs, consolidating the connection between semiotics and axiology, had already been preceded by his volume of 1942, Paths of Life and another of 1948, The Open Self. In these works he focussed on the preferential behavior of humankind describing the 'fundamental choices' operated in different cultures. Morris's Varieties of Human Value was published in 1956 and also collects the results of his experimental research on values up to then. Moreover, the whole course of Morris's research confirms his approach to semiotics as an 'interdisciplinary enterprise' (Morris 1956: 1) focussed on signs in all their forms and manifestations – human and non-human animals, normal and pathological signs, linguistic and nonlinguistic signs, personal and social signs.

Syntactics, semantics, and pragmatics

Morris (1938c) divided semiotics into the three branches of syntactics, semantics and pragmatics, a tripartition he reintroduced into modern semiotics, but which has its historical origins in the artes dicendi, that is, grammar, dialectic and rhetoric, forming the so-called trivium taught in Medieval European schools. Morris's trichotomy is related to Peirce's, who distinguished between speculative grammar, critical logic (previously dialectic) and methodetic (previously rhetoric) (cf. CP 1.191ff and 2.93). Thus Peirce reinterpreted the artes dicendi as branches of semiotics and

systematized these as disciplines that treat signs as Firstness, Secondness, and Thirdness, respectively (cf. Roland Posner, 'Semiotics and its presentation in this Handbook', in Posner et al., Semiotik/Semiotics, 1997-1998: 4; from now on S/S). In this sense, semiotics consists of three subdisciplines: 'speculative grammar', which gives us a physiognomy of forms, a classification of the function and form of all signs; 'critic', the study of the classification and validity of arguments (divided into three parts: the logic of abduction, induction and deduction); and 'methodeutic', the study of methods for attaining truth (for all these aspects see Roland Posner and Klaus Robering, Art. 2, 'Syntactics', 14-83; Robering, Art. 3, 'Semantik', 83-219; Posner, Art. 4, 'Pragmatics', 219-246; and on Peircean categories in the light of the history of western semiotics in the Middle Ages, cf. Stephen F. Brown, Art. 52, 'Sign conceptions in logic in the Latin Middle Ages', 1036-1046; and Markus H. Wörner, Art. 53, 'Zeichenkonzeptionen in der Grammatik, Rhetorik und Poetik des lateinischen Mittelalters' [Sign conceptions in grammar, rhetoric, and poetics in the Latin Middle Ages], 1046-1060), in S/S, 1). Pragmatism, which is based on the thesis that the meaning of a sign can be explicated by considering its practical consequences as the response of an interpretant, is a methodeutic theory in Peirce's sense (cf. Helmut Pape, Art. 100, 'Peirce and his followers', in S/S, 2: 2020).

Moreover, as Posner notes, in addition to being related to Peirce, Morris's trichotomy also refers to three leading philosophical movements of his time, Logical Positivism or Logical Empiricism (cf. Rainer Hegselmann, Art. 106, 'Der logic Empirismus', in S/S, 2: 2146-2161), Empiricism, and Pragmatism. Logical Positivism studies the formal structure of the language of the sciences (Carnap's logical syntax), Empiricism studies the objects of research and their relations to the language of the sciences, and Pragmatism studies the procedures and conventions governing communication among scientists. Thus, in Morris's view, syntactics could employ the methods and results of Logical Positivism, while semantics and pragmatics those of Empiricism and Pragmatism, respectively. On the whole, Morris's trichotomy is fundamentally the result of two main influences: logico-empiricism and behaviorism, on the one hand, and the pragmatic philosophy of Mead and Peirce, on the other (cf. Morris 1970).

In Morris's description syntactics, semantics, and pragmatics, the three branches of semiotic correspond respectively to the three dimensions of semiosis, the syntactical, the semantical and the pragmatic, its objects of analysis (on the relation between the branches – of semiotic – and the dimensions – of semiosis – see Dieter Münch and Posner, Art. 113, 'Morris, seine Vorgänger und Nachfolger', in S/S, 1: 2208). Distinguishing between semiotic and semiosis in Foundations Morris states that, 'semiotic as a science makes use of special signs to state facts about signs; it is a language to talk about signs' (Morris 1971[1938]: 23). And, indeed, one of the primary tasks he set himself was to establish a sign system to talk about signs. Morris was aware that pragmatics should not be separated from semiotics, nor therefore the pragmatical dimension of semiosis from the syntactical and semantical dimensions. However, as opportunely observed by Posner, this not does justify speaking of 'Morris's pragmatically unified semiotics', nor stating that semiotics and pragmatics identify with each other, as observed by Posner.

According to a tradition that goes back to Michel Bréal's sémantique (cf. Bréal 1897) understood as 'the science of significations', meaning is generally associated with the semantical dimension of semiosis. On the contrary, however, meaning is present in all three dimensions including the syntactical and pragmatical and to state that it belongs uniquely to the semantical is the result of a misunderstanding. When Morris claims that syntactics deals with relations among signs, this does not exclude that it involves meaning, which too is part of the relation among signs. Similarly, as much as pragmatics focuses on the relation of signs to interpreters, as says Morris, it too deals with signs and therefore with meanings (cf. Rossi-Landi 1994[1972] which includes his paper of 1967, 'Sul modo in cui è stata fraintesa la semiotica estetica di Charles Morris's). That Morris also focused on the semantical dimension of semiosis distinguished his own approach both from Carnap's (1934) syntacticism as well as from behaviorism according to the approach elaborated by the structuralist Leonard Bloomfield (1933). In his effort to avoid 'mentalism' and to keep faith to the behavioristic approach to language, the latter was rather skeptical of semantics. The unfortunate consequence of Bloomfield's approach was that semantic issues were long neglected by American structuralists (see entry 'Structuralism', in Bouissac 1998: 598-601; from now on ES).

The sign-vehicle, that is, the object that functions as a sign, relates to a designatum and eventually a denotatum. This relation concerns the semantical dimension of semiosis. However, the sign is also the relation to an interpreter, which in response to the sign produces an interpretant. This is the pragmatical dimension of semiosis. Moreover, the sign must necessarily relate to other sign-vehicles, this being the syntactical dimension of semiosis. The sign involves all three dimensions of semiosis always. And, indeed, only for the sake of analysis is it possible to distinguish between the relation of the sign-vehicle to the designatum (and eventually the denotatum), the relation of the sign-vehicle to other sign-vehicles, and the relation of the sign-vehicle to the interpreter which is such only if endowed with an interpretant. According to Morris's formulation of 1946 (1971[1946]: 365ff), pragmatics studies the effects of signs; semantics studies the significations of signs; syntactics studies the way in which signs are combined to form compound signs.

To restrict meaning to the semantical dimension of semiosis instead of tracing it throughout all three dimensions is to reduce the sign totality to one of its parts only, in the case of semantics to the relation of designation and denotation. Similarly, the relation of the sign to other signs does not only concern the syntactical dimension in a strict sense to the exclusion of the pragmatical and the semantical. Just as the relation of the interpreter to other interpreters does not uniquely concern the pragmatical dimension to the exclusion of the syntactical and the semantical. Each time there is semiosis and, therefore, a sign, all three dimensions are involved and are the object of semiotics.

Syntactics and syntax

In linguistics phonology, syntax (in the strict sense) and the morphology of natural language are all part of syntactics. Therefore, syntactics includes both morphology and syntax, a position which also finds confirmation in Thomas A. Sebeok's concept of syntax (see our discussion in Petrilli and Ponzio 2002a and 2002b). Most interesting are the observations made by Posner and Robering on the distinction between syntactics and syntax as stated in Article 2, 'Syntactics' in Semiotik/Semiotics (see reference above) in which they deal with signifiers, that is, Morris's 'sign vehicles', covering the syntactical aspects of signs, their formal aspects, relations and combinations, including texts, pieces of music, pictures, industrial artifacts, etc.:

In many contexts, the Carnapian identification of syntactics with syntax (cf. Carnap 1934 and 1939) is highly misleading. Only in sign systems which do not require a distinction between morphology and syntax is it unproblematic to equate syntactics with syntax. This is the case in sign systems such as numerals and in most of formal languages constructed in logic so far. (Posner and Robering, Art. 2, 'Syntactics', in S/S, 1: 21)

Posner and Robering distinguish among three aspects of syntactics which are indeed all present in Morris 1938c (cf. Morris 1971[1938]: 13ff, 23ff, 28f respectively): syntactics₁ the study of formal aspects of signs; syntactics₂, the study of relations of signs; syntactics₃, the study of how signs of various classes are combined to form complex signs.

Syntactics₁ studies sign forms (cf. the entries by Peter Groves, 'Distinctive features', 199-201; 'Markedness', 385-387; 'Pertinences', 479-481; and the entry by Paul Bouissac, 'Phoneme', 481-482, all in ES. For example: in phonology, syntactics₁ includes phonemes, but excludes physical phonetics; in musicology it includes tonemics, rhythmemics and dynamemics, but excludes physical acoustics (cf. Posner and Robering, 'Syntactics', in S/S, 1: 15-21); in machine semiotics, we may add, it includes matteremes, objectemes, utensils, mechanisms and automated machines (cf. 549), but excludes 'nonsign bodily residues' (see Petrilli and Ponzio 2002b).

Syntactics₂ (as syntagmatics) studies syntagmatic relations among signs, that is, relations occurring within an actually produced sign complex; furthermore (as paradigmatics) it also studies paradigmatic relations, that is, relations among signs in a sign system, comparing given sign forms with virtual ones (cf. Posner and Robering, 'Syntactics', in S/S, 1: 17-21).

Syntactics₃ is the study of combination rules to form complex signs. A branch of syntactics is the study of combination rules in a sign system called 'string code'. The latter includes, among other natural languages, writing systems, vestmental codes, culinary codes, and traffic signs (cf. Posner and Robering, 'Syntactics', in S/S, 1: 23). An example of syntactics₃, says Posner, is Chomsky's transformational grammar which studies rules of transformation from 'deep structures' to 'surface structures' (cf. Posner and Robering, 'Syntactics', in S/S, 1: 33-37).

This distinction (introduced in Chomsky 1965), as well as the previous one between 'nuclear' and 'non-nuclear sentences' (Chomsky 1957), is connected with a very questionable conception of language and knowledge and with an equally questionable method of analysis (for a critique of Chomskyian linguistics, whose limits emerge very clearly in the light of a Peircean and Morrisian approach to the study of signs, cf. Ponzio 1973, amplified French. ed. 1992b; 1997: 313-320; 2001). Chomsky's theoretical framework is lacking in those methodological features characteristic of a scientific sign theory as listed, for example, in the above mentioned articles on semiotic method included in Semiotik/Semiotics (see above). Chomsky sees no alternative to vulgar linguistic behaviorism (such as Skinner's), other than appealing to the rationalistic philosophy of the seventeenth century, and taking sides with mentalism and innatism. That the Chomskyan conception of language remains tied to the classical alternatives between consciousness and experience, rationalism and empiricism is not without negative consequences for a theory of language, even with respect to such a specialized branch as syntax. In this sense Chomsky's approach is alien to both Kantian criticism and along the same lines, to the conceptions of Edmund Husserl, Peirce, Ernst Cassirer, Maurice Merleau-Ponty, Morris, etc. (see §2, 'Kants Lehre vom Zeichen', in Art. 74, Adelhard Scheffczyk, 'Sign conceptions in general philosophy from the 19th century to the present', in S/S, 2: 1430-1431).

Unlike Chomsky's dichotomy between linguistic competence and experience, in modern conceptions after Kant experience is described as a series of interpretive operations. These include inferential processes of the abductive type (Peirce) through which the subject completes, organizes, and associates data which are always more or less fragmentary, partial, and discrete. Experience is these operations as such is innovative and qualitatively superior by comparison with the limited nature of eventual input. After all, experience coincides with competence. What Chomsky (1986) baptized 'Plato's problem' is a consequence of the false dichotomy between competence and experience as well as of the ensuing conception of experience as a passive state of the subject.

Morris's concept of syntactics as well as the notion of syntax which belongs to it are connected with semantics and pragmatics. On the contrary, Chomsky's syntax – as well as his

phonology and semantics (morphology) – belongs to syntactics equated with syntax, as in Carnap, and separated from semantics and pragmatics.

Moreover, Chomsky confuses levels of analysis, mistaking the description of the objects of analysis for the construction of the models of analysis. In this sense, Chomsky's linguistics is a unigradual linguistic theory which, unlike Rossi-Land's (1998[1961]) 'methodics of common speech' (see Ponzio 1988 and 1990a) or Shaumyan's (1970[1965]) bigradual theory of generative grammar, fails to distinguish between the genotypical level and the phenotypical level. This is a serious limit in the hypothetical-deductive method, or more properly, recalling the Peircean concept of 'abducion', in the abductive method.

Chomsky's error is no different from that made by the Oxonian school of analytical philosophy which claimed to describe ordinary, daily, or colloquial language in general while, in reality, it was describing the characteristics of a single natural language, that is, English. Such confusion between two levels, the general and abstract level of language and the particular and concrete level of a given language at a given moment in its historical development, is recurrent – and not only in the Oxonian conception or in more recent analyses of language inspired by the latter. Chomskyan generative grammar, too, mistakes the specific characteristics of a language – yet again English – for the universal structures of human language. The untranslatability of sentences used by Chomsky as examples of his analyses is symptomatic of the problem at hand. The transformational model proposed by Chomsky confuses elements which in fact belong to two different degrees of abstraction, ideal language and natural language.

Thus Chomskyan grammar with its methodologic suppositions and dualism between competence and experience and between deep structures and surface structures, would not seem to offer a suitable example of syntactics³ as understood by Posner and in accord with Morris's approach to semiotics. Elsewhere (Ponzio 1990a, 1997, 2001) we have proposed, as a branch of syntactics which studies combination rules applied to verbal form complexes, an 'interpretive linguistic theory' able to 'generate' (in Chomsky's sense) an utterance in terms of its relation to another utterance that interprets it, an utterance that acts as interpretant. In fact, all utterances are engendered, that is, produced, identified and characterized by their interpretants. According to this

approach, the interpretant of a 'sentence' (the dead cell of linguistic system) or, as we prefer, 'utterance' (the live cell of discourse) is not a deep structure grounded in underlying elementary sequences, but another verbal sign. An interpretant identifying an utterance or any verbal sign whatever is simply 'unexpressed' until the conditions are realized for its expression, explicitation'. We have introduced the expression 'identification interpretant' (cf. Ponzio 1990a) for this type of interpretant which

a) identifies the verbal sign in its phonemic or graphic features;

b) identifies the verbal sign in its semantic content;

c) identifies the morphological and syntactic physiognomy of the verbal sign.

Given that the three dimensions of semiosis (syntactical, semantical and pragmatical) are inseparable, the interpretant engendered by an utterance or any verbal sign whatever is not only an identification interpretant. It is also an 'answering comprehension interpretant' which has a special focus on the pragmatical dimension of signs. Without the interpretant of answering comprehension, it is difficult or even impossible to recognize the sign at the level of phonemic or graphemic configuration, morphological and syntactic structure, as well as semantic content.

Just as we have highlighted the presence of syntactics in all aspects of signs, in the same way we must underline that the question of meaning (i.e., of the relation between interpreted and interpretant) is also present at the level of identification of the units composing words, phrases, utterances and texts.

Semantics: referent as designatum and denotatum

Concerning the semantic dimension we wish to remember the important contribution made by Morris to sign theory in relation to the issue of the referent (Art. 3, by Robering, 'Semantik', in S/S, Vol. 1, deals with the signified, and in particular, with the conventional meaning of signs and the problem of denotation, while Art. 4, by Posner, 'Pragmatics', in S/S, Vol. 1, deals with sign users and with the circumstances of sign use in communication as well as in other types of semiosis). At a

given moment in the recent history of semiotics referential semantics was contrasted to nonreferential semantics. The starting point of the debate was Ogden and Richards's famous but often deviating triangle with its distinction between the three apexes denominated 'symbol', 'thought or reference' and 'referent'. Under the influence, among other things, of Saussure's binary conception of sign as the relation of a signifiant to a signifié, meaning was described as the relation of a 'symbol' to 'thought or reference' (see §3.1.1, 'Semantik', in Article 101 on 'Saussure and his followers', in S/S, 2: 2053-2054). Thus the question under debate became whether or not the 'referent' should be eliminated from this triangle. Supporters of nonreferential semantics included Stephen Ullmann (1951, 1962) and Umberto Eco (1975). Subsequently, Eco (1984) became aware of the need to recover the concept of referent and did so implicitly by resorting to the Jakobsonian concept of renvoi.

In any case, if we accept Morris's distinction between designatum and denotatum the question of the referent and its misunderstandings are easily solved. This distinction was originally proposed by Morris in his 1938 book, Foundations, it is taken up again with terminological variants in his book of 1946, Signs, Language, and Behavior and again in subsequent writings. However, his position as described in 1938 remains the most convincing.

'Where what is referred to actually exists as referred to the object of reference is a denotatum', says Morris (1971[1938]: 20). For example, if the sign 'unicorn' refers to its object considering it as existent in the world of mythology, that sign has a denotatum since unicorns do exist in mythology. On the contrary, if the sign 'unicorn' refers to its object considering it as existent in the world of zoology, that sign does not have a denotatum since unicorns do not exist in zoology. In this case the sign has a designatum (Morris 1938c), or a significatum, as Morris (1946) was later to call it (see below), but it does not have a denotatum. 'It thus becomes clear that, while every sign has a designatum, not every sign has a denotatum' (1971[1938]: 20). By using Morris's distinction between designatum and denotatum misunderstandings in regard to the referent can in fact be avoided.

In the triangular diagram of the sign as proposed by Ogden and Richards (1923) the referent is always foreseen and forms one of the three apexes. On the contrary, in other semantic theories,

the referent is eliminated altogether on the basis of the fact that what the sign refers to does not always exist in the terms referred to by the sign. In this case the designatum is obviously not taken into account. On the contrary, as has been amply demonstrated (Ponzio 1985, 1990a, 1993b, 1994, 1997b), the sign has a referent always, or in Morris's terminology, a designatum, and if this referent exists in the terms referred to by the sign, it also has a denotatum. Indeed, the object of reference, referent, or Object in Peirce's sign triad, is a component of semiosis. In Ponzio 1990a (33-36) we proposed to consider the referent as an implicit interpretant. In other words, the referent of a sign is another sign to which the former refers implicitly. Once explicited, the referent changes position and becomes an interpretant with an explicative function; while the sign which had a referent, i.e., the sign with implicit meaning, becomes an interpreted.

What is called by Gottlob Frege (1892) 'Bedeutung' is the referent, i.e., an implicit interpretant. For example, 'Venus' is a referent or implicit interpretant in the expressions, 'The morning star', 'The evening star', 'The luminous point that shines in the sky at sunset'; and, instead, an explicit interpretant or, in Frege's terminology, 'Sinn', in the sentence, 'The luminous point that shines in the sky at sunset is called Venus'. With respect to 'Venus', transformed from referent or implicit interpretant into explicit interpretant in the examples above, 'one of the planets in the solar system' is an implicit interpretant, or referent, which if explicated becomes an explicit interpretant with another implicit interpretant or referent, such as, for example, 'the second planet from the Sun', and so forth. Any sign at all, however explicative it may be, always leaves given parts of its interpretive route unsaid. In the example above, the interpretive route of 'planet', which makes it an interpretant of 'Venus', is implied. However, the word 'planet' has yet other implicit interpretants, i.e., other referents, and so it goes on. Therefore, 'sense' in Frege's famous distinction between Sinn and Bedeutung is a particular way of referring to the referent (die Art des Gegebenseins des Bezeichneten'), that is to say, it is an explicit interpretant, respect to which the referent is an implicit interpretant. §3.1.3, 'The beginnings of logical semantics', Art. 76, Denis Vernant, 'Sign conceptions in logic from the 19th century to the present', in S/S, 2: 1494-1496, discusses the implications in semantics of Frege's reflection beginning with the distinction between Sinn and Bedeutung. On this distinction, see also §2, 'Freges linguistische Wende der Sinnanalyse', in Art. 102 by Pirmin Stekeler-Weithofer, 'Frege and his followers', in S/S, 2: 2077-2082; and in the

same article, §5, 'Textinterne Designation und externe Referenz', 2089; and §5.1, 'Die drei Bereiche von Gegenständen', where the author confronts Frege's conception of the referent with the Morrisian distinction between 'designatum' and 'denotatum' (cf. in S/S, 2: 2089).

Referent (object), interpretant, and interpreted (representamen, sign vehicle) are, therefore, three different functions carried out by the sign. A referent is an implicit part of an interpretive route that the explicit part (interpretant) refers to. The impossibility of expliciting all interpretants of a sign given that they are infinite in number (Peirce's 'infinite semiosis') causes every sign to have a referent (implicit interpretant) just as it has meaning (explicit interpretant). Meanings (and therefore signs) without a referent do not exist. Consequently, that the referent, or object of reference, is a component of semiosis, means that the referent is not external to sign reality, even if as a 'dynamical object' it is external to a current semiosis. It is not possible to refer to something without this something becoming part of an interpretive route, i. e., without it being an implicit interpretant or interpreted. Referents are not external to the network of signs.

The referent is a denotatum if it exists in the sense of 'exist' as referred to by the sign; it is a designatum if it does not exist in the sense of 'exist' as referred to by the sign. The sign always has a referent, in certain cases only as a designatum, in others also as a denotatum.

As anticipated, in Signs, Language, and Behavior, Morris maintains the distinction between denotatum and designatum with the introduction of a terminological variation – the term 'designatum' is replaced with the term 'significatum'. In the words of Morris: 'Those conditions which are such that whatever fulfills them is a denotatum will be called a significatum of the sign' (Morris 1971[1946]: 94). The sign or sign-vehicle, as Morris says, may be said to signify a significatum. To signify, to have signification and to have a significatum may be interpreted as synonyms. In his description of the conditions which allow for something to function as a sign, the significatum, similarly to the designatum with which it identifies, is differentiated from the denotatum. All signs have a significatum and therefore signify, but not all signs denote. The significatum expresses the conditions under which a sign can have a denotatum and therefore will denote. Therefore, if the conditions obtain such that a sign denotes, the sign is endowed both with significatum and denotatum. The significatum of the buzzer (sign) which attracts the attention of

Pavlov's famous dog (interpreter) is that something edible is available; the food found by the dog which enables it to respond in a certain way (interpretant) as provoked by the sign, is the denotatum. To the dog's great disappointment, however, the latter may actually not exist!

As stated above, in Foundations (Chp. II) Morris uses the term designatum instead of significatum. Every sign insofar as it is a sign has a designatum, but not every sign has a denotatum, because not every sign refers to something that actually exists in the terms referred to: instead, where what is referred to (significatum or designatum) actually exists in the terms referred to, the object of reference is a denotatum. In other words, the designatum or significatum is what the sign or sign-vehicle refers to. It is a set of qualities forming a class or type of objects or events to which the interpreter reacts independently of the fact that what is referred to actually exists (denotatum) according to the existence value attributed to it by the sign.

In Signification and Significance (1964), Morris replaces the term 'significatum' with 'signification' while the term 'denotatum' is dropped altogether. Here, signification replaces what Morris variously called denotatum/ designatum (1938c) and significatum (1946). That the object of signification cannot function as a stimulus does not mean that what gives itself to direct experience cannot be signified. The point is that only a part of an object can be perceived directly; and this is the part that functions as the stimulus or sign vehicle. The part not fully perceived functions, instead, as the signified object, the object of signification. We say that 'this is a desk' on the basis of our limited experience of the object in question, that part which is perceived directly and interpreted as a sign of the fact that we are dealing with a desk on the basis of the hypothesis (implying the risk of error) that there exist parts we do not actually see – the back of the desk, its underside, the drawers, etc.

Pragmatics

In Foundations Morris establishes a correspondence between the three branches of semiotics and three orientations in philosophy: 'formalism' or 'symbolic logic' which is related to syntax; 'empiricism' which is related to semantics; and pragmatism to pragmatics. According to Morris, although 'pragmatics' derives specifically from 'pragmatism', as a specifically semiotic term it

receives a new signification. Chapter V entitled 'Pragmatics' in Morris 1938c opens with the following statement:

The term 'pragmatics' has obviously been coined with reference to the term 'pragmatism'. It is a plausible view that the permanent significance of pragmatism lies in the fact that it has directed attention more closely to the relation of signs to their users than had previously been done and has assessed more profoundly than ever before the relevance of this relation in understanding intellectual activities. The term 'pragmatics' helps to signalize the significance of the achievements of Peirce, James, Dewey, and Mead within the field of semiotic. At the same time, 'pragmatics' as a specifically semiotic term must receive its own formulation. By 'pragmatics' is designated the science of the relation of signs to their interpreters. 'Pragmatics' must then be distinguished from 'pragmatism', and 'pragmatical' from 'pragmatic'. (1971[1938]: 43)

Morris defined pragmatics as the study of the relations of sign vehicles to interpreters or more simply as 'the relations of signs to their users' (1938c). Unlike Rudolf Carnap (1939) who restricted the field of pragmatics to verbal signs only to include nonlinguistic signs much later (1955), Morris's conception of pragmatics concerns both verbal and nonverbal signs. John L. Austin (1962) and John Searle (1969) also limited their interest in the pragmatical dimension to verbal signs. On the contrary, Morris goes so far as to include the ethic and esthetic dimensions as well. Morris's interest in the relation of signs to values is closely connected with pragmatics which deals with the relation of signs to interpreters. Speech act theory (cf. the entry, 'Speech act theory', by Alec Machoul in ES: 591-592) 'is both distinct from and to some degree competitive with theories of significatory and systemic difference proposed by the semiotician' (in ES: 591). In our opinion, the substantial difference between speech act theory and Peircean or Morrisian semiotics is that the former fails to consider two factors in the pragmatic dimension of meaning which, on the contrary, must not be neglected: interpretation and alterity. In other words, speech act theory does not account for the interpretant of answering comprehension. This is a consequence of the fact that the concept of verbal sign (in Austin and Searle) lacks a semiotic foundation.

In his Appendix to Signs, Language and Behavior Morris includes a paragraph on Peirce's contribution to semiotics (1971: 337-340). The aspect Morris found most interesting about Peirce's

work (in spite of what he described as his mentalistic limitations) was his emphasis on behavior. Peirce maintained that to determine the meaning of a sign we must identify the habits of behavior it produces, and this, in fact, is a position which resounds in Morris's own orientation. In Morris's view, Peirce had the merit of rejecting Cartesian mentalism and replacing it with the concept of habits of behavior and, therefore, of directing semiotics towards a more adequate account of sign-processes.

In Posner's formulation of the 'necessary and sufficient conditions for something to be a semiosis', A interprets B as representing C.; where A is the interpreter, B is some object, property, relation, event, etc., and C is the meaning that A assigns to B. In a Peircean perspective we prefer the formulation that A is an Interpretant used by some interpreter (a responsive 'somebody') to relate B, the Representamen, to C, the Object.

To stress either the 'interpreter' factor or the 'interpretant' factor is not indifferent. Should the interpretant be stressed, pragmatics as a branch of semiotics and the pragmatical dimension of semiosis may be related together with the other branches of semiotics and dimensions of semiosis to Peirce's trichotomy of representamen (syntactics / syntactical), object (semantics /semantical) and interpretant (pragmatics /pragmatical).

As stated, Morris defines pragmatics as the study of the relation of signs (sign vehicles, representamina) to interpreters or sign users. In referring to another element with respect to Peirce's sign trichotomy, this definition may induce one to erroneously think that the pragmatical relation is external to the sign. On the contrary, however, the pragmatical relation belongs to the sign trichotomic relation as a pivotal condition of semiosis, which is, in Morris's words, the 'action of sign'. Of course, there is no sign without an interpretant and consequently an interpreter, for the interpretant is the effect of a sign on an interpreter. Yet, given that the interpreter does not subsist as such if not as a modification ensuing from the effect of a sign in an open chain of interpretants, the interpreter is also an interpretant and, therefore, a sign. In 'Some Consequences of Four Incapacities' (1868b), Peirce explains the correspondence between man and sign, interpreter and interpretant; but that there is a correspondence does not imply that one of the two concepts forming these pairs can be eliminated for each term evidences different aspects of semiosis.

Semiosis in its wholeness comprises both ‘interpreter’ and interpretant, concepts which from a terminological viewpoint remain constant throughout all of Morris’s writings, together with the other factors, mentioned above, such as sign or sign vehicle, signification, context, etc.

Stressing the interpretant rather than the interpreter, pragmatics concerns the interpretant which does not merely identify the interpreted, thereby acting as an ‘identification interpretant’, but responds and takes a stand towards it. This is what we have called the interpretant of answering comprehension which, unlike the identification interpretant, is specific to a sign interpreting its actual sense. Sign interpretation in terms of answering comprehension opens to interpretive trajectories connected with sense, advancing towards signness or semioticity beyond signality. Rather than use the term ‘meaning’ in relation to interpretants whose task it is to identify interpreteds, or ‘sense’ for interpretants whose task is not limited to merely identifying the interpreted, we may distinguish between two zones of meaning, that of signality (the object of syntactics) and that of signness (the object of pragmatics).

As anticipated, the interpretant relative to the signal and to signality is the identification interpretant (cf. Ponzio 1985; Ponzio 1990b; Ponzio 1994, 1997); instead, the interpretant specific to the sign, that which interprets its actual sense has been called respondent or answering comprehension interpretant. This interpretant or this dimension of the interpretant concerns the pragmatical dimension of the sign, that is, the sign as such. The relation between interpreted and respondent comprehension interpretant depends on the models, habits and customs of the world in which the interpreted-interpretant relation is situated. The interpretant of answering comprehension is the conclusion of a line of reasoning in an inferential process with a dialogic structure. Pragmatics deals with the relation between the sign vehicle or ‘representamen’, the interpreted and the interpretant in its full sign nature, that is, as the interpretant of answering comprehension.

Notes

1. Held at G.H.Howinson’s Berkeley Philosophical Union.

2. In his search for the origins, Peirce considered Nicholas St. John Green as the ‘grandfather’ of pragmatism (implicitly reserving the title of ‘father’ to himself). The latter, in turn, evoked the Scotchman, Alexander Bain, author of Emotions and Will (1859), urging the importance of applying his definition of belief as ‘that upon which a man is prepared to act’ (CP 5.12).
3. These took place either in Peirce’s study or in James’s and benefitted from the participation of scientists, theologians and lawyers (cf. CP 5.12).
4. Charles Morris (Denver, Colorado, 1901-Gainesville, Florida, 1979) began his studies in engineering, biology, psychology and philosophy. After having finished his science degree in 1922, he completed a PhD in philosophy at the University of Chicago in 1925, where he taught from 1931 to 1958.
5. Morris’s semiotics offers a general description of sign as embracing all that belongs to the world of life. Consequently he wished to develop an approach to semiotics that could deal with all types of signs, and to this end constructed his terminology within a distinctly biological framework as is particularly evident in his book of 1946, Signs, Language and Behavior.

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