
THE FOUNDATIONS OF MODERN SEMIOTIC: CHARLES PEIRCE AND CHARLES MORRIS¹

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ABSTRACT

The contemporary use of the term "semiotic" derives from the theory articulated by Charles Morris, who in turn acquired it from C. S. Peirce, the founder of modern semiotic. Peirce's semiotic is based upon his criticism of Cartesian nominalism with its emphasis on individual intuition as the basis for knowledge. Peirce argued for semiosis or triadic mediation as the sole source and end of cognition, as opposed to unmediated knowledge. Morris attempted to synthesize pragmatism with logical positivism to produce a new "science of science" to be termed semiotic. The result of Morris's attempted synthesis was a philosophy that combined the basic assumptions of logical positivism with a deceptive admixture of Peirce's semiotic vocabulary, and systematically reintroduced the very Cartesian intuitionism to which Peirce's semiotic is opposed.

The emerging field of studies known as semiotics is presently a welter of intellectual perspectives and tongues. Although the current lack of consensus as to what constitutes semiotics may be a sign of its vitality and broad scope, it is also quite possible that it symbolizes a Tower of Babel, a community of practitioners without a common language and understanding of a shared premiss. About the only thing a student entering the field can be sure of is that its practitioners share a common concern with the role of signs and symbols in whatever happens to be the object of study. Yet beyond this common denominator lies innumerable and often irreconcilable ideas concerning how signs and symbols should be studied, and even what constitutes a sign or symbol. Semiotic, or sign theory, has come to serve for many as an all-inclusive term, subsuming such diverse enter-

prises as semiology, cybernetics, hermeneutics, and so forth; yet the contemporary use of the term "semiotic" derives from the highly influential theory articulated by Charles Morris, who in turn acquired it from C. S. Peirce, the founder of modern semiotic.

The term *semiotic* was first used in modern times by John Locke, who mentioned it near the end of his masterwork, *An Essay Concerning Human Understanding*. Locke only suggested a division of science in which semiotic would form the third of three sections, and would be identified with logic. It was first used as a term denoting a specific and detailed theory by Peirce, who spent the greater portion of his life working out his semiotic, which for him was a normative theory of logic. This theory is at the heart of Peirce's philosophy, and he considered pragmatism, which he founded, to form one area within its domain. For various historical reasons Peirce was not widely known (even less understood) as a philosopher during his lifetime. Despite an enormous output of published articles covering a host of topics—as if a whole community rather than a single man had written them—Peirce never had a book of his philosophical writings accepted for publication during his lifetime, although he wrote more than one. His *Collected Papers* did not appear until the early 1930s, twenty years after his death. Surely one of the ironies of modern sign theory is that the major work of both of its founders, Charles Peirce and Ferdinand de Saussure, was published posthumously.

One chronic problem in understanding Peirce's semiotic is that his interpreters have largely misunderstood his work, because it goes against the grain of modern thought. Peirce considered himself a student of the medieval schoolmen, especially the scholastic realist Duns Scotus, and he attempted to renovate scholastic realism to accord with a modern scientific framework. As the central tenets of twentieth-century philosophy, and, indeed, the whole culture of modernism itself in the arts and sciences, have been called into question in recent years, the clouds of obscurity surrounding Peirce have begun to dissipate, and he has reemerged as an original thinker of contemporary significance. We are beginning to see how thoroughly contemporary Peirce actually was, how he not only anticipated and contributed to many developments in present philosophy, but how much of his thinking on the nature of science and philosophy "leapt over" the guiding ideas of twentieth-century thought, and only now are beginning to be appreciated.

In tracing the foundations of modern semiotic we hope to show that Peirce's legacy has had an important influence on semiotic, but one that has been subject to serious distortion, resulting in widespread miscon-

ceptions that have created barriers to understanding his theory of signs. Semiotic, originally based on a criticism of Cartesian nominalism and foundationalism, we shall argue, has been turned completely around into its nominalistic opposite through the work of Charles Morris. Morris undertook to synthesize some of the principal philosophical movements of his time in a new "science of science" based on the study of scientific method as a sign system. The branches of this metascience were to be "syntactics," "semantics," and "pragmatics"; or the study of science as a language, as a knowledge of objects, and as a type of activity. The first two of these branches were drawn from the interests of the logical positivists and the third from the pragmatists.

Morris acknowledged that pragmatism might appear to be incompatible with logical empiricism, but he argued that an adequate understanding of science must take account of "the psychological, methodological, and sociological aspects of scientific practice" (Morris 1938a:72). However, Morris himself did not successfully reconcile or even fully grasp the profound differences in point of view between logical positivism and pragmatism, differences that go to the very roots of modern semiotic. The result is that his work has tended to obscure rather than to clarify certain fundamental assumptions of contemporary semiotic. A thorough examination of the foundations of modern semiotic with especially careful attention to the arguments of the pragmatists is now required. By examining Peirce's arguments for semiosis, and comparing his ideas with those of Morris, we can see that the Peircean semiotic is not only based on quite different premisses from those commonly associated with it, but that it forms a radical critique of much that now goes by the name of semiotics.

THE FOUNDATIONS OF PEIRCE'S SEMIOTIC

Peirce laid the foundations of his semiotic in a series of articles that appeared in the *Journal of Speculative Philosophy* in 1868. The theme of these articles was the inadequacy of the Cartesian account of science. The alternative that took shape in Peirce's criticism, although not yet named, was semiotic.

Peirce summarized his objections to Cartesianism in these four points (CP 5.265):

1. We have no power of Introspection, but all knowledge of the internal world is derived by hypothetical reasoning from our knowledge of external facts.
2. We have no power of Intuition, but every cognition is determined logically by previous cognitions.

3. We have no power of thinking without signs.
4. We have no conception of the absolutely incognizable.

Let us take the second point first. Descartes began with skepticism, claiming that no science could be secure until its foundations were established beyond all possibility of doubt. He observed that contemporary science was not so founded. To remedy this he proposed to doubt everything until some principle proved itself to be indubitable and thereby provided the basis for a new, secure, and genuine science.

Peirce's denial that we have the power of intuition is a denial of the Cartesian skepticism. By "intuition" Peirce meant a cognition completely undetermined by any prior cognition, or what amounts to nearly the same thing, a premiss not itself a conclusion, an absolutely first premiss.

Descartes offered his philosophy as an alternative to scholastic logic. The schoolman's picture of science was one of a chain of syllogisms, the first premiss of any one of which was justified as the conclusion of a prior syllogism whose premisses were, in turn, themselves justified as the conclusion of still prior syllogisms, and so on. At the very beginning of this chain of syllogisms stood the unconditioned first premisses of all scholastic science: divine revelations and the testimonies of authorities. Descartes's innovation consisted in attempting to replace authority with reason. He undertook to found science upon a principle that would rationally justify itself and therefore stand as more than a tenet of faith.

But scholasticism and Cartesianism share the assumption that science is justified by the infallibility of its first premisses. Peirce argued against this assumption. He concluded that science is justified not by its starting point, but by the continuing activity of science itself. Truth is not something that has to be established once and for all in order for science to be able to begin. It is rather the guiding ideal of the scientific enterprise.

Peirce's alternative to both scholasticism and Cartesianism is that inquiry always takes place against a background of premisses taken on faith. These premisses are not infallible, for inquiry eventually might reveal them to be false. But nevertheless, every inquiry is conditioned by certain preconceptions that it does not even occur to us to doubt. In the course of our inquiries we either come to revise our original premisses or we do not. If we do revise them, these new opinions function as the premisses of our continued investigations until we are forced, in turn, to revise them, and so on. If at some point we achieve opinions that we would never be forced to revise, then we have reached the goal of our inquiry, the truth of the matter. For truth is just that opinion that no

course of investigation, no matter how prolonged, would ever lead us to revise. Science, thus, is a process of self-correcting inquiry. It is the capacity of inquiry to correct itself, rather than the infallibility of fundamental premisses, which guarantees the validity of science.

Further, in asserting that science cannot begin without establishing its principles beyond all possibility of doubt, Descartes made a claim that cannot itself be scientifically justified. Modern science recognizes only one justification for admitting an hypothesis: that it helps to explain observed facts. Now by definition intuition is cognition completely undetermined by prior cognition. It is the starting point of reason, the ultimate given. An intuition is itself inexplicable, for it is the ground upon which all explanations are constructed. But this claim in favor of the power of intuition is itself only a hypothesis in the science of logic. Like any hypothesis it is justified only insofar as it helps to explain the observed facts. But it is no explanation of any fact to assert that it is utterly inexplicable. Therefore the supposition that we possess the power for intuition is inadmissible.

The schoolmen understood more clearly than Descartes all that is involved in the notion of unconditioned premisses: either the unconditioned can be explained or it cannot. But explanation only consists in putting forward the conditions that justify belief. Therefore the unconditioned cannot be explained. To assert that certain premisses are unconditioned is just to assert that they must be taken on faith. Thus faith was the acknowledged foundation stone of scholastic reasoning.

Descartes tried to reform the scholastic logic by introducing the notion of a rationally justified, but nevertheless unconditioned premiss, an intuition. Peirce argued that such a thing is impossible. Reasoned justification consists in setting forth the conditions that account for what otherwise would be unaccountable. Therefore the only genuine alternative to scholasticism is that there is no absolutely first premiss.² This is Peirce's position. Every explanation is capable of explanation. There is nothing reasonable that is exempt on principle from reasoned inquiry.

Finally, discovering an indubitable is a much more difficult matter in Peirce's eyes than it is in Descartes's. Descartes seemed to suggest that all we need to do in order to grasp the indubitable is clear our minds of prejudice by an act of will, and proceed to accept anything of which we are then clearly and distinctly convinced. Peirce had greater appreciation for the ways in which our experience is conditioned by an immensely complicated web of cultural and historical prejudices. This cultural background is not to be dispelled by fiat. Although prejudice can be over-

come, and we are not doomed to the arbitrary opinions of the society or class or group from which we happen to come, we cannot free ourselves from prejudice by abstract good intentions. We must engage in a never-ending criticism of beliefs actually held, and continually attempt to replace our critical assumptions with ever more justified beliefs. Everyone starts out from prejudices that it does not occur to him or her to doubt. But experience constantly forces us to revise these beliefs in favor of others. Science is the systematic effort to bring prejudice to trial in the court of experience. A genuinely indubitable opinion is not achieved through facile skepticism. Nor, on the other hand, is any given belief, however sacred, entirely exempt from scrutiny. Truth is the goal to be realized, the ideal end of inquiry.

Peirce's first object to Cartesianism was to the claim that we have a power of introspection. Descartes had argued that science must be founded upon intuition, premisses that justify themselves. But the only perfectly self-justifying premiss that Descartes thought he had discovered was "I think, therefore I am." Thus Descartes concluded that science ultimately must rely upon intuitive individual self-consciousness, that is, upon introspection.

Peirce's objection was based on a number of grounds. In the first place investigations in what we nowadays call developmental psychology contradict the claim that our awareness of self is a primary datum. On the contrary, the notion of self seems to be developed relatively late, certainly much later than the child's general powers of thought. In the second place, the Cartesian view makes science depend upon a single strand of reasoning. Science should be rather "... a cable whose fibers may be ever so slender provided they are sufficiently numerous and intimately connected" (*CP* 5.265). Although a conclusion cannot be more certain than all of the premisses that support it, it can easily be more certain than any one of those premisses taken individually. However, it is Peirce's final objection that goes to the heart of the matter:

... to make single individuals absolute judges of truth is most pernicious ... We individually cannot reasonably hope to attain the ultimate philosophy which we pursue; we can only seek it, therefore, for the *community* of philosophers (*CP* 5.265).

Just as an opinion of the moment always must be subject to revision in the course of future inquiry, so any individual opinion must be subject to the criticism of the community, not any particular community, but the community at large, unbounded in time or place.

Once again the question is best understood when viewed against the background of scholasticism. The great debates of the thirteenth century concerned the issue of nominalism and realism. On one hand, the realists held that "universals," or generals, were real. For instance "Man," in general, is real. On the other hand, the nominalists held that "Man" is merely a name, a sign, which we use to describe individual existing persons generally. "Man" in general is merely a concept. Only existing individuals are real.

Nowadays, if the whole debate is not dismissed as irrelevant, the tendency is to regard nominalism as the only position that could be held by anyone with any sense. Peirce said that this is because we fail to appreciate the subtlety that realism achieved in the philosophy of a great thinker like Duns Scotus. Sophisticated realists did not hold that universals exist in such a way that one might, for instance, meet "Man in general" walking down the street. They admitted that all generals are signs, or thoughts. What they did hold was that the mere fact that something is a sign does not necessarily mean that it is unreal. "Man" is a real general because, although every man is an individual man, there is nevertheless also a human character present generally in men, but yet not dependent on any one man. Therefore the question of nominalism and realism comes down to this: Is the object truly represented in a sign real? The nominalist admits that all signs are general, but denies that any general is real. Consequently the nominalist denies that what a sign represents is real. On the other hand the realist admits that all generals are signs, but also holds that *some* generals are real. Consequently, the realist allows that what a sign represents *may* be real.

Cartesianism is a nominalism. It holds that our conceptions can be brought to the level of science by making sure that they conform to the character of objects as they exist in the world apart from its relation to mind. The adequacy of our knowledge must finally depend upon the valid apprehension of these objects. For the apprehension to be valid the individual inquirer must examine the contents of his consciousness carefully and make sure that there are no vague notions or prejudices affecting his understanding.

Peirce argued that modern science requires a renovated realism (and one quite different from the "naive realism" of modern philosophy). Reality is not something altogether independent of mind; rather, it is just that belief the truth of which is not dependent on what you or I or any individual in particular thinks it to be. Scientific objectivity as Peirce conceived it is not the result of a successful apprehension of an object

otherwise out of consciousness, but the product of the continuous scrutiny of preconceptions by the scientific community. Whatever conception the community would agree upon in the long run is the truth, and its object is real. Agreement may take generations to achieve, and no individual or group of individuals can ever be certain of having reached it once and for all. Nevertheless it is the ultimate concern of the community, whatever that may be, and not individual objects as they may be supposed to exist apart from any conceptions of them, that defines objectivity.

Peirce took up the question of the relation of objects to consciousness in his fourth objection to Cartesianism, that the absolutely incognizable is absolutely inconceivable. He remarked:

That upon Cartesian principles the very realities of things can never be known in the least, most competent persons must long ago have been convinced. (*CP* 5.310)

Peirce evidently had in mind the whole dialectic of modern philosophy that culminated in Kant's explicit recognition that the thing-in-itself cannot properly be known to science. That dialectic can be said to have begun with modern philosophy's rejection of scholastic realism in favor of nominalism. From this point of view the logic underlying the development of Cartesian philosophy can be summarized this way:

- Only particulars are real. Universals are mere inventions of the mind.
- Nevertheless it must be admitted that universality is an ineluctable aspect of all scientific thought.
- Therefore science can grasp only its own inventions. It cannot lay hold of the real as it is in itself.

But on the other hand, the Cartesian claims that if science is to be possible at all, we must have some power of immediately knowing particulars. Science is knowing things as they really are, and things as they really are, are particulars. Thus the Cartesian comes to insist that we have a conception of what is, properly speaking, incognizable.

Peirce replied that, rather than hold fast to paradox, the Cartesian had better reexamine his premisses, especially the nominalistic assumption that only particulars are real. According to Peirce science can only base itself on the recognition that some universals are real after all. The best argument for scholastic realism is that if it is not true, science is impossible.

The first precept of the Cartesian method was that science should accept only those concepts that are clear and distinct. But a concept was supposed to be clear if after attending to it without prejudice or haste we

still found ourselves unable to doubt it. This was a standard adequate to a philosophy that was mostly concerned to replace traditional authority with the authority of individual consciousness. In contrast Peirce aimed to replace individual authority with the objectivity of the scientific community. This requires in its turn a revised standard of clarity, which Peirce does indeed propose in a logical principle still widely misunderstood more than a century after it first appeared! It is the doctrine of pragmatism, which asserts that:

... if one can define accurately all the conceivable experimental phenomena which the affirmation or denial of a concept could imply, one will have therein a complete definition of the concept and *there is absolutely nothing more in it.* (CP 5.412)

In other words, a clear conception is one that permits us to design an experiment bearing on that conception's truth or falsity.³ If we knew all of the experiments that ever could be relevant to a given concept, our conception would be absolutely clear.

Now by this standard we can have no conception whatsoever of the absolutely incognizable. Such a conception is completely unclear, because it is completely untestable. Thus, in contrast to Descartes, Peirce concluded that:

Over against any cognition there is an unknown but knowable reality; but over against all possible cognition, there is only the self-contradictory. In short, *cognizability* (in its widest sense) and *being* are not merely metaphysically the same, but are synonymous terms. (CP 5.257)

To sum up the discussion thus far, Peirce asserted that Cartesianism mistakenly tried to base science upon the principles of intuition, introspection, and our ability somehow to know what is admittedly incognizable. Peirce's alternative makes reasoned knowledge depend instead upon such features as the continuity of inquiry, publicity, and the testability of hypotheses.

The third of Peirce's objections to Cartesianism we shall examine is the one that opens the door of semiotic: "All thought is of the nature of a sign." From Descartes's own point of view the great problem was how the substances *res cogitans* and *res extensa*, soul and body, could have anything to do with each other. Peirce suggested that this problem is the logical consequence of Cartesian assumptions about the nature of science. Descartes first assumed immediate self-consciousness. We are supposed to know ourselves not through hypothetical reasoning from known facts.

but by virtue of a special faculty. In the second place Descartes supposed that the object as it really is, is completely unrelated to mind. Thus it could only be known by means of an "intuition," or cognition completely undetermined by any prior cognition. The inevitable conclusion from these premisses is that we have no grounds for supposing that self-consciousness is in any way related to objects at all. We appear to be locked into our own consciousness. The Kantian philosophy simply acknowledged that science could never know things-in-themselves and proceeded to try to salvage the objective validity of science by other means.

Peirce's position is more radical. In broad outline he argued that science does not consist in bringing together substances supposed to be immediate. Science is rather a continuous process from which certain elements may be prescinded, but which nevertheless always manifests a mediated unity. Thus the Cartesian question becomes not one of how to synthesize the immediate, but one of how to analyze the mediate. Only when the underlying assumptions of Cartesianism are reformed can we understand how science can know the real world.

The key to the solution of the Cartesian question is Peirce's understanding of mediation. There is mediation when a first is to a second by means of a medium, or third. An unbounded complex of mediums is a continuum. Science, by which Peirce, of course, meant not merely laboratories and test tubes but reason in the classical sense as well, is a great continuum in which each inquirer, and indeed in which each idea, stands to others through the medium of continued inquiry.

Another way of saying this is that all thought is of the nature of a sign, for by definition a sign is the medium through which one thing is represented to something else, which sign itself may be represented then to other things by means of further signs and so on. Inquiry is this continuing process of sign interpreting sign. From this point of view Peirce's criticism is that the Cartesian philosophy, instead of recognizing that the sign process itself is fundamental, makes inquiry depend upon elements which by their very nature cannot themselves be the object of inquiry, "in short [upon] something resulting from mediation itself not susceptible of mediation" (CP 5.265). In contrast, Peirce insists that all thought is an aspect of semiosis.

In Peirce's semiotic the unmediated substances of Cartesianism are transformed into "presciss" elements of the mediating sign process. Instead of a self of which we are conscious through a special power of introspection, a sign is said to have a *ground*. Like the Cartesian ego, the *ground* is immediate consciousness, abstracted from all relation. Unlike

the Cartesian ego, however, the *ground* is not an object of immediate cognition. It is, rather, the element of immediate consciousness *in* the cognition of the object, "the thought itself, or at least what the thought is thought to be in the subsequent thought" (CP 5.286).

Similarly the *object* is like the Cartesian object, the other-than-self, but we do not know the *object* through immediate relation, but only through its representation in other thoughts.

Let us suppose, for example, that Toussaint is thought of, and first thought of as a *negro*, but not distinctly as a man. If this distinctness is afterwards added, it is through the thought that a *negro* is a *man*; that is to say, the subsequent thought, *man*, refers to the outward thing by being predicated of that previous thought, *negro*, which has been had of that thing. If we afterwards think of Toussaint as a general, then we think that this negro, this man, was a general. And so in every case the subsequent thought denotes what was thought in the previous thought. (CP 5.285)

Finally, the relation of *ground* and *object* is not immediately posited, but is rather represented to mind through a mediating representation, or *interpretant*. Indeed, "mind," as it is used here, is to be understood as nothing but semiosis, the continuing interpretation of interpretations.

Therefore, all thought and science is in signs, and all signs are inferences. In the words of Max Fisch (1978:36):

Every thought continues another and is continued by still another. There are no uninferred premisses and no inference-terminating conclusions. Inferring is the sole act of cognitive mind. No cognition is adequately or accurately described as a two-term or dyadic relation between a knowing mind and an object known, whether that be an intuited first principle or a sense-datum, a "first impression of sense" (CP 5.291). . . . The sign theory of cognition thus entails rejection not only of Cartesian rationalism but also of British empiricism.

Signs, and not intuition, are the very foundation of Peirce's semiotic. When we turn to Charles Morris, who perhaps more than any other person was responsible for the actual spread of semiotic, a quite different view emerges.

FOUNDATIONS OF THE THEORY OF CHARLES MORRIS

I feel very strongly, just as you do, that philosophy is entering upon one of the most important synthetic periods in its history. The entire condition of our civilization makes it almost inevitable that philosophy

will assume a more commanding position in both the practical and theoretical aspects of life,—provided that philosophers are able to sense the nature of their task and develop a point of view large enough to meet the new demands. Past philosophy is dead; the new child is only now being born. (Morris 1927)

Charles Morris first came to appreciate the importance of the philosophical issue of signs while a student of George Herbert Mead at the University of Chicago. From Mead he learned to view meaning in terms of experimental consequences. But Morris also was influenced by the logical positivists, and especially by one of the leaders of the Vienna Circle, Rudolph Carnap. The logical positivists argued that the meaning of language must depend upon the existence of one or another sort of basic statement, the truth or falseness of which ultimately could be verified. Morris saw logical positivism not only as a continuation of the pragmatic movement, but also as a way of saying clearly what the pragmatists had only said vaguely (Morris 1938a:67).⁴

Morris's semiotic was an attempt to synthesize these two influences. In our view it failed because Morris was not fully aware of the profound differences between pragmatism and logical positivism (for example, Morris 1964:33; 1970:148). Specifically Morris most fundamentally failed to grasp the full import of the fact that the Vienna circle had tried to found science upon "certain fundamental concepts" and "elementary experiences," and then to erect a "constructional system" (see Carnap 1967), whereas Peirce had sharply criticized the Cartesian assumption that science must be based on indubitable foundations. In contrast to the logical positivists, as well as to Descartes, Peirce's "foundation" was continuing inquiry, the self-corrective process of interpretation. The validity of scientific inquiry in its turn is determined by reality itself, understood not as some primary sense datum, but as the belief that the community of inquirers is destined to reach in the long run. There is no infallible foundation of science because experience may show what we think infallible to be wrong. The logical positivists' search for the ultimate sense datum, for example, only showed us how fallible our conception of the ultimate is. The result of Morris's attempted synthesis was a philosophy that combined the basic assumptions of logical positivism with a deceptive admixture of pragmatistic vocabulary.

Morris, imbued with the logical positivist's desire to purify language, saw semiotic as the means toward facilitating immediate knowledge:

... it has become clear to many persons today that man—including scientific man—must free himself from the web of words which he has spun and that language—including scientific language—is greatly in need of purification, simplification, and systematization. The theory of signs is a useful instrument for such a debabelization [*sic*]. (Morris 1938b:3)

Presumably Morris himself was to lay the foundations for the new purity in his pivotal *Foundations of the Theory of Signs*, the first complete monograph in the *International Encyclopedia of Unified Science*. This work not only influenced many linguists and philosophers, but laid the groundwork of contemporary semiotic (we are not including here the developments of semiology, which are outside the scope of this paper). However, the contemporary reader familiar with Peirce cannot help but be struck by Morris's considerable unacknowledged debt to Peirce, and Morris's even greater failure to grasp what Peirce fundamentally tried to achieve.

Morris borrows many of Peirce's key technical terms in this monograph, and makes use of some concepts derived from Peirce; but the only explicit mention of Peirce's influence appears when Morris misuses Peirce's "sinsign-legisign" distinction. Morris owned the first six volumes of Peirce's *Collected Papers*, published in the early 1930s. He was also a colleague of Charles Hartshorne at the University of Chicago, one of the editors of the papers. But Morris does not state why he chooses to use the term *semiotic* for the science of signs, or *semiosis* for the sign process. It could be that he was influenced by John Locke, who, as mentioned, introduced the word near the end of *An Essay Concerning Human Understanding*; but Morris also could have used Ferdinand de Saussure's *semiology*. A monograph on the foundations of semiotic might well have drawn attention to the founders of semiotic (not to mention the foundational terms), but it appears that only twenty-five years after the encyclopedia monograph, in his 1964 book, *Signification and Significance*, Morris finally mentioned Peirce as the one responsible for the modern usage of *semiotic*. The earlier monograph gives the impression that Morris himself was the founder.

Like Peirce but unlike many others, Morris analyzed semiosis triadically (although his definition also introduced an obscure fourth "factor").

This process, in a tradition which goes back to the Greeks, has commonly been regarded as involving three (or four) factors: that which acts as a sign, that which the sign refers to, and that effect

On some interpreter in virtue of which the thing in question is a sign to that interpreter. These three components in semiosis may be called, respectively, the *sign vehicle*, the *designatum*, and the *interpretant*; the *interpreter* may be included as a fourth factor. These terms make explicit the factors left undesignated in the common statement that a sign refers to something for someone. (Morris 1938b:3)

The last statement, “. . . a sign refers to something for someone,” which Morris implied was the vague language of the older tradition, was actually a paraphrase of one of Peirce’s definitions of a sign: “. . . something which stands to someone for something in some respect or capacity . . .” (*CP* 2.228). Morris suggested that this triadic definition of signs was common, but it was not. Signs usually were defined dyadically as something which stands for something else. Likewise, the term “interpretant” is Peirce’s. In the place of Peirce’s first two elements of a sign, the ground and its object, stand Morris’s terms *sign vehicle* and *designatum*. Morris defined the *sign vehicle* as “that which acts as a sign,” whereas “that which the sign refers to,” whether actual or not, is the *designatum*. Those designata that actually exist Morris termed *denotata*. The denotatum seems to correspond to what Peirce called the *dynamical object*, and the designatum to the *immediate object*, except that Peirce argued that the sign object is an element prescinded from the sign process and therefore can be known only as it is represented to be in further signs, and not immediately.

Concerning the sign vehicle Morris said:

In any specific case of semiosis the sign vehicle is, of course, a definite particular, a *sinsign*; its “universality,” its being a *legisign*, consists only in the fact, statable in the metalanguage, that it is one member of a class of objects capable of performing the same sign function. (Morris 1938b:50)

Here is one of the basic differences between Morris’s and Peirce’s theories of signs. For Peirce, the “ground” element of the “ground-object-interpretant” relation is the immediate quality of self-consciousness *in the sign*. The object (or designatum-denotatum) is the relative other in the sign, and would correspond roughly, in Morris’s usage, to *sinsign*. But Peirce’s *qualisign-sinsign-legisign* distinction belongs in a systematic science of semiotic in which a sign is related to its own ground or inherent quality through quality (*qualisign*), existence (*sinsign*), or law (*legisign*). Another way of saying this is that it is *quality* that makes a sign a *qualisign*, *sinsign*, or *legisign*, and that in the latter two cases it is a quality of existence and a

quality of law that constitute a sinsign and legisign respectively. But in Morris's positivistic view there is no room for quality, positive possibility, or vagueness, in short, for that which is essential in Peirce's semiotic. For Morris there are only universals and particulars, and "universals" belong only to the metalanguage (Morris 1938b:50, 51). Thus Morris's position is directly opposed to that of Peirce, and indeed to those of Mead and Dewey as well. The point of the pragmatists is that generality is real, that it is *in* nature and *in* experience, and that even "thing-language," as opposed to metalanguage, must make use of "universals," because the object of a sign is not given apart from semiosis, but only in and through semiosis. For the pragmatists there are, strictly speaking, no "things" in Morris's sense at all, that is, no *designata* that are not signs, for we have no power of intuition. In other words Morris failed to understand that pragmatism is a renovated scholastic realism. He remained a nominalist.

Morris's emphasis on the distinction of universal and particular (or legisign and sinsign, type and token) is similar to Ferdinand de Saussure's distinction between *langue*, the language system, which is universal, and *parole*, the utterance, which is particular and which derives its meaning from *langue* (Saussure 1966). And both of these accounts completely oppose Peirce's discussions of legisigns and sinsigns, types and tokens; for in Peirce's view all signs are general. Even individual, actual "speech acts," although concrete, carry a universal significance. For instance, when a particular crucifix symbolizes Christianity, the crucifix's inherent qualities (its iconic element) and its physical characteristics (its indexical element), although involved in, emerge only through the symbol, and thus are aspects of the sign's general significance. Similarly an indexical sign, such as a thermometer, which signifies only by virtue of an immediate factual relation to its object, nevertheless conveys a meaning that is general, the temperature.

The theories of Morris and Saussure also completely ignore that dimension of Peirce's semiotic that deals with the communication of qualitative possibility (see Rochberg-Halton 1982a; 1982b). Peirce's discussions (see CP 2; 4.537) of *qualisign* and *tone* (in the tone-token-type division) as well as of *iconic* and *rhematic* signs, revealed an aspect of "firstness" or qualitative immediacy in semiosis, which nominalistic theories, such as those of Morris and Saussure, cannot include.

Morris also borrowed, without acknowledgement, Peirce's trichotomy of *icon*, *index*, and *symbol*. Perhaps he believed that no acknowledgement was necessary, that terms should take precedence over the person who

introduced them. But even if this were so, the fact that Morris radically changed the meaning of Peirce's carefully considered terminology (*CP* 2.219f; Ketner 1981), as well as the fact that Morris's monograph was, after all, supposed to deal with foundations, should have led to some discussion of the original significance of the terms. Morris "introduced" the trichotomy of signs in his discussion of semantics, perhaps because he thought this distinction had to do with the relation of a sign to its object:

In general, an indexical sign designates what it directs attention to. An indexical sign does not characterize what it denotes . . . and need not be similar to what it denotes. A characterizing sign characterizes that which it can denote. Such a sign may do this by exhibiting in itself the properties an object must have to be denoted by it, and in this case the characterizing sign is an *icon*; if this is not so, the characterizing sign may be called a *symbol* . . . A "concept may be regarded as a semantical rule determining the use of characterizing signs (Morris 1938b:24).

Morris's use of "indexical sign" retained Peirce's emphasis on denotation through immediate factual relation of sign and object, in which the object compels the interpretation, but once again Morris's use of the term throughout the text betrayed his nominalistic assumptions that denotation lies outside the sign process, and that meaning depends upon intuition rather than semiosis. This is in sharp contrast to Peirce's view that, although denotation is an aspect of all signification, sign and object are not immediately given entities but abstract elements of a sign continuum. Also in sharp contrast to Peirce, Morris continually defines key concepts by means of one another, a strange practice for someone who purports to be freeing man from the "web of words" he has spun. For instance, it is not clear how "designates" is to be distinguished from "characterizes," for, on one hand, "'Designates' is a semantical term, since it is a characterizing sign designating a relation between a sign and an object" (Morris 1938b:22, 23); but on the other hand, in the passage just cited a "characterizing sign characterizes that which it can denote."⁵

Morris's definition of icon also seemed to represent Peirce's notion that an icon signifies its object by virtue of a common quality. Yet Morris's nominalism did not allow for qualitative possibility, which is the mode of relation of an icon to its object in Peirce's scheme (*CP* 2.276f). Morris's substitution of "properties" ("exhibiting in itself the properties an object must have to be denoted by it") made an icon signify through imputed character, in Morris's term, "values," rather than through shared

quality (Morris 1946b:81; 1964:70f), and thus missed the point of Peirce's theory of icons. In a later elaboration of his foundations of signs monograph, *Signs, Language, and Behavior*, Morris stated:

A portrait of a person is to a considerable extent iconic, but is not completely so since the painted canvas does not have the texture of the skin, or the capacities for speech and motion, which the person portrayed has. The motion picture is more iconic, but again not completely so. (Morris 1946b:23)

Morris fails to appreciate Peirce's crucial transformation of Descartes's concept of immediate self-consciousness into qualitative immediacy, a pre-scinded but real aspect of semiosis freed from Cartesian subjectivism. Consequently Morris distorts the icon, making it into a conventional sign of a peculiar nature rather than a properly qualitative sign. The notion of a "pure" icon becomes the notion of an exact physical duplicate, a clone. An object of visual art, which in Peirce's view would communicate by virtue of inherent quality, must, in Morris's view, reproduce itself in the viewer quite literally. A "pure" iconic representation, therefore, would not be representative at all. Iconicity becomes mere duplicity.

Peirce also remarked that a portrait may be regarded as an icon, saying that an icon:

... is a Sign whose significant virtue is due simply to its Quality . . . We say that the portrait of a person we have not seen is *convincing*. So far as, on the ground merely of what I see in it, I am led to form an idea of the person it represents, it is an Icon. (CP 2.92)

And Peirce, like Morris, also recognized that a portrait may not be a *pure* icon. However, his reasons for saying so are completely different from those that Morris gave. Peirce observed that we are influenced by knowing that the portrait is an effect, through the artist, of the original's appearance, and so may be interpreted as an indexical sign, and not only as an icon. Also, we may be influenced by knowing that portraits "have but the slightest resemblance to their originals, except in certain conventional respects, and after a conventional scale of values, etc." (CP 2.92), and so may be interpreted as symbols rather than as icons. The "pure" icon is thus by no means merely a sign having an absolutely determinate resemblance to its object. Instead it is a sign that signifies through internal quality rather than actual relation or conventional representation:

A possibility alone is an Icon purely by virtue of its quality; and its object can only be a Firstness. But a sign may be *iconic*, that is, may

represent its object mainly by its similarity, no matter what its mode of being. If a substantive be wanted, an iconic representamen may be termed a *hypoicon*. Any material image, as a painting, is largely conventional in its mode of representation; but in itself, without legend or label it may be called a *hypoicon*. (CP 2.276)

Morris's previously cited definition of symbol is that it is a characterizing sign that does not exhibit in itself the properties of the object it denotes, that is, is not iconic. Morris seemed to be emphasizing, as Peirce did, that a symbol is related to its object through convention. In his 1946 glossary Morris defined a symbol as, "A sign that is produced by its interpreter and that acts as a substitute for some other sign with which it is synonymous; all signs not symbols are signals . . ." (Morris 1946b:355). Again Morris's nominalism caused him to reinterpret Peirce's term and use it for a purpose quite different from the one Peirce intended. Instead of seeing a symbol as a sign "produced by its interpreter," Peirce proposed that a symbol is a rule that produces its interpretant: "A Symbol is a Representamen whose Representative character consists precisely in its being a rule that will determine its Interpretant" (CP 2.292).

For Morris the semantical rule for a symbol rests on a foundation of primitive terms that ultimately refers to definite "things" indicated by indexical signs (Morris 1938b: 24, 25). In other words, Morris thought that the possibility of meaning depended upon intuition. Peirce viewed a genuine symbol as a law, or "regularity of the indefinite future" (CP 2.293), whose meaning would consist in the practical consequences that an unlimited community of inquirers would conceive it to have in the long run, rather than a single interpreter's pointing at a "thing." For this reason a symbol is neither determinate (because it is a type, not a token) nor completely arbitrary—(because it is a convention that will cause future events to conform to it, see CP 2.292). Morris's misunderstanding of the symbol brings us back to the problem of the interpretation of the sign.

One of the biggest controversies surrounding Morris's semiotic is his use of Peirce's term "interpretant," and his own innovation, "interpreter." Morris defined the interpretant as "that effect on some interpreter in virtue of which the thing in question is a sign to that interpreter." His definition is unclear about whether "that effect" is itself a sign, as it is in Peirce's scheme, or whether it is something outside of signs, such as behavior. Although Peirce viewed conduct, or "behavior" as a kind of sign, that is, as general, Morris's discussions elsewhere in the text (for

example, concerning "behavioristics") suggest that he viewed behavior as something outside the sign continuum. In his view the interpreter is the organism or person who interprets the sign. Whereas the "takings-account-of" are interpretants, "the agents of the process are interpreters" (Morris 1938b:4). The notion that instead of the term "interpretant" Peirce could have been more clear by using "interpreter" is a misunderstanding rooted in nominalism. For Peirce the sign a man uses is the man himself (*CP* 5.314); thus, the fact that there is such a thing as an interpreter depends upon there being such a thing as an interpretant, not the other way around. Or as Peirce expressed it elsewhere, we should say not that the thought is in us, but that we are in thought.

As mentioned earlier, Morris's definition of the elements of a sign was ambiguous on the "interpretant-interpreter" relationship. He says that the common view of semiosis is that it involves three factors, but he equivocates, "or four," in parentheses. He adds that "These three components" may be called the sign vehicle, the designatum, and the interpretant, but after the semicolon he hedges, "the *interpreter* may be added as a fourth factor" (Morris 1938b:3). This ambiguity suggests that Morris set out from Peirce's tripartite conception of signs, but, failing to understand that for Peirce man himself is a kind of sign, introduced a fourth term, the interpreter, which to him seemed clearer and more concrete than "interpretant." This hypothesis finds some confirmation in the fact that Morris disregards his own definition and substitutes his fourth component, the interpreter, for the third component, the interpretant, which drops out of account completely: "In terms of the three correlates (sign vehicle, designatum, interpreter) of the triadic relation of semiosis, a number of other dyadic relations may be abstracted for study" (Morris 1938b:6). This sleight-of-hand brings him back to a triadic conception of sign, but one in which the interpretant has disappeared. Upon this magic rests the foundations of what Morris dubbed "pragmatics." Again, Morris's nominalism, his emphasis on a behavioral interpreter already given outside of the sign process, rather than an interpretant within it, his tendency to regard things as real and thoughts as mere concepts, diminished the scope of Peirce's semiotic.

SYNTACTICS, SEMANTICS, AND PRAGMATICS

Perhaps the most influential contribution of Charles Morris to contemporary semiotic is another threefold division of the science of signs into *syntactics*, *semantics*, and *pragmatics*. This division, also utilized by Morris's colleague Rudolph Carnap, has been accepted by many semio-

ticians, linguists, and philosophers. Morris claimed to have based this division on "dyadic relations" abstracted from the "three correlates (sign vehicle, designatum, interpreter) of the triadic relation of semiosis" (Morris 1938b:6). Thus syntactics is defined as "the formal relations of signs to one another" (p. 6), semantics as "the relations of signs to their designata and so to the objects which they may or do denote" (p. 21), and pragmatics as "the relation of signs to their interpreters" (p. 30). One wonders why Morris gives "dyadic relations" such prominence, since just two pages before advancing these definitions he had explained that all semiosis is triadic and mediate. Basing the division of signs thus on dyads seems to suggest that this division must itself be grouped outside of semiosis. But the basic argument Morris seems to be making by his division of semiotic is that the three divisions should correspond to the relations of a sign to its three elements: sign vehicle, designatum, and interpreter. Now this division also appears to be based on an unacknowledged debt to Peirce. By comparing Morris's divisions with Peirce's division of semiotic into *pure grammar*, *critical logic*, and *pure rhetoric*, one can see both the basis of Morris's divisions and the radical departures from that basis his theory makes.

In a manuscript written in 1897 Peirce proposed the following breakdown of semiotic and gave these reasons for making it.

In consequence of every representamen being thus connected with three things, the ground, the object, and the interpretant, the science of semiotic has three branches. The first is called by Duns Scotus *grammatica speculativa*. We may term it *pure grammar*. It has for its task to ascertain what must be true of the representamen used by every scientific intelligence in order that they may embody any *meaning*. The second is logic proper. It is the science of what is quasi-necessarily true of the representamina of any scientific intelligence in order that they may hold good of any *object*, that is, may be true. Or say, logic proper is the formal science of the conditions of the truth of representations. The third, in imitation of Kant's fashion of preserving old associations of words in finding nomenclature for new conceptions, I call *pure rhetoric*. Its task is to ascertain the laws by which in every scientific intelligence one sign gives birth to another, and especially one thought brings forth another (CP 2.229).

On the surface, it appears that pure grammar must correspond to Morris's syntactics, critical logic to Morris's semantics, and pure rhetoric to Morris's pragmatics. But a closer examination reveals that at every level Morris's nominalism creates a systematic inversion of Peirce's divisions.

Pure grammar, as that branch of semiotic that seeks to state the conditions under which a sign may have meaning, culminates in pragmatism, as the doctrine that attempts to explain how our ideas may be made clear. Because pragmatism is in the first branch of Peirce's semiotic, it would appear to be closer to Morris's syntactics than to his pragmatics. But the content of even these two sciences is radically different. In treating the "formal relations of signs to one another" Morris seems to be suggesting something akin to certain aspects of linguistics, which in Peirce's view is a "psychognostical" science (*CP* 7.385) rather than a branch of general semiotic. For Morris,

Syntactics is, then, the consideration of signs and sign combinations in so far as they are subject to syntactical rules. It is not interested in the individual properties of the sign vehicle or in any of their relations except syntactical ones, i.e., relations determined by syntactical rules. (Morris 1938b:14)

Critical logic, or Peirce's science of what must be the nature of signs if they are to represent their objects truly, seems to correspond to Morris's semantics. But again on closer inspection it can be seen that there are crucial differences between the Peircean conditions for truth and Morris's logical positivistic truth criteria. In Morris's semantics the object designated by the sign is not part of the sign process, but a "thing," which, in imitation of Carnap, may be represented in a "thing sentence": ". . . let us use the term '*thing sentence*, to designate any sentence whose designatum does not include signs . . ." (1938b:15). Truth is based thus on intuition rather than semiosis. Paradoxically, the insistence that science must be founded upon unquestionable objective knowledge, direct apprehension of "things," led Morris and the logical positivists to the same subjectivism for which Peirce had criticized Cartesianism (compare Dewey 1946:88f).

The third branch of Peirce's semiotic is "the doctrine of the general conditions of the reference of Symbols and other Signs to the Interpretants which they aim to determine . . ." (*CP* 2.93). Pure rhetoric is no mere "rhetorical device" in Peirce's scheme, not persuasion for the sake of persuasion, but persuasion as determined by the real. It is concerned with inductive validity, that is, what makes a conclusion valid. Peirce's own conclusion is an argument for reality as being that which an unlimited community of inquirers would eventually agree upon. The meaning of these inquirers or "interpreters" is general and is found in the conclusion they aim for, not in the particular instances of behavior they exhibit.

Pure rhetoric is not in the least concerned with who is doing the interpreting, but only that the interpreting signs (interpretants) would be valid. One can see how Morris, who substituted "interpreter" for Peirce's "interpretant" in an attempt to be more objective, could also "correct" Peirce's idea of the references of signs to their interpretants, with a division of semiotic (pragmatics) concerned with "the relations of signs to their users," or as he later reformulated it, with "the origins, uses, and effects of signs within the behavior in which they occur" (Morris 1946b: 219). One also can see why this move ultimately is subjectivistic, even solipsistic, because it has reference to particular individuals rather than to a normative conception of an unbounded community of inquirers. Morris says, for example:

To the degree that what is expected is found as expected the sign is confirmed. . . . In general, from the point of view of behavior, signs are "true" in so far as they correctly determine the expectations of their users, and so release more fully the behavior which is implicitly aroused in the expectation or interpretation. (Morris 1938b:33)

Morris's unusual statement describes well the ignorant person, who, free from the irritation of doubt and fallibility, seeks only the expected, and in "finding" it, learns nothing new. Morris reserves the issue of the actual objective truth of signs for the semantic level, while trying to account for the perspective of the sign "user" at the level of pragmatics. One can sympathize with the attempt to deal with the level of the "agent," but in defining the user as an individual organism instead of a fully socialized being existing in an objective web of goal-oriented signs, he moves far afield from pragmatism.

Dewey criticized Morris for his interpretation of pragmatism and interpretants in 1946, saying:

The misrepresentation in question consists in converting *Interpretant*, as used by Peirce, into a personal user or interpreter. To Peirce, "interpreter" if he used the word, would mean, *that which interprets*, thereby giving meaning to a linguistic sign. I do not believe that it is possible to exaggerate the scorn with which Peirce would treat the notion that *what* interprets a given linguistic sign can be left to the whim or caprice of those who happen to use it. But it does not follow from this fact that Peirce holds that the interpretant, that which interprets a linguistic sign, is an "object" in the sense of an existential "thing" (Dewey 1946:87).

Peirce did use the word “interpreter” on occasion, as a “sop to Cerberus,” an attempt to phrase his theory in a way his nominalistic audience could understand.⁶ But it is clear that the interpreter is an interpreting *sign*, as Dewey said, “that which interprets” (compare Morris’s replies, 1946a; 1971).

Morris’s use of the term “pragmatics” in fact has little to do with what Peirce meant by pragmatism. Peirce’s pragmatism would be in the first branch of semiotic, not the third, as mentioned. But more generally Morris does great violence to pragmatism by virtually defining “pragmatics” as expediency, viz., the relation of signs to their users, “within the behavior in which they occur,” regardless of the norms of continuing inquiry. For Peirce, the “final interpretant” is not particular instances of behavior, but is the embodiment of general, self-correcting habits, the fruition of semiosis, the growth of “concrete reasonableness”:

The deliberately formed, self-analyzing habit—self-analyzing because formed by the aid of analysis of the exercises that nourished it—is the living definition, the veritable and final logical interpretant (*CP* 5.491).

Despite some important differences between the pragmatisms of Peirce, James, Dewey, and Mead, the major American pragmatists were united in their opposition to the subjectivism that had been the heritage of the Cartesian philosophy. But in attempting to synthesize pragmatism and the nominalistic theories of logical positivism, Morris reintroduced the old Cartesian subjectivism in “pragmatics.”

In reply to Dewey’s article Morris said:

Professor Dewey’s discussion . . . of the relation of my monograph, *Foundations of the Theory of Signs*, to Peirce’s semiotic may have given to some of your readers the impression that my analysis claimed to be a presentation of Peirce’s views. This was not the case. The result may be that the central problem which bothered Dewey [the problem of the relation of a behaviorally oriented semiotic to the work of such “formal logicians” as Carnap] will be missed by his focusing of attention on the historical problem of how far my views do or do not agree with those of Peirce. . . . (Morris 1946a:196)

Morris the modernist, who proclaimed past philosophy dead, pretended that his theory was original by denying Peirce’s influence and relegating it to a mere “historical” question. He says that the question of Peirce’s influence is of little importance in itself, and that he need acknowledge

neither the original meanings of the Peircean framework he used, nor his own reasons for changing that framework while yet retaining much of its terminology. These are issues “merely historical.” Philosophy had to be begun anew by building not upon the efforts of the past, but upon an indubitable foundation of objective knowledge. The myth of intuition, that there can be a first sign or foundation not determined by previous signs, seems to have had Morris in its grasp, forcing him to deny his own foundations while purporting to explain them.

Language too had to be purified by rigorously excising whatever could not certify its legitimate birth from immediately verifiable facts. Of the analogous Cartesian undertaking to accept only those beliefs grounded in rationally indubitable premisses Peirce commented:

We must begin with all the prejudices which we actually have. . . . These prejudices are not to be dispelled by a maxim, for they are things which it does not occur to us *can* be questioned. Hence this initial skepticism will be a mere self-deception, and not real doubt; and no one who follows the Cartesian method will ever be satisfied until he has formally recovered all those beliefs which in form he has given up (*CP* 5.265).

In Morris’s case the pretense of complete renunciation of the past led to the suppression of all explicit acknowledgement not only of Peirce’s influence, but of Morris’s honest attempt to make pragmatism more rigorous as well. Paradoxically, the result was not a work of model clarity, free of all assumptions, but rather a monograph filled with hidden premisses, internal inconsistencies, obfuscation, and technical jargon that changed in meaning from one page to another. Morris attempted to lay the foundations for a brave new science of signs that would free man from the web of words, but the result of his Cartesian foundationalism has been the erection of The New Tower of Babel, which is contemporary semiotics.

To a great extent “semiotics” owes its current foundations to the magic of positivism, which, in positing that the true objects of knowledge lie outside knowledge and signs, that the firm foundation for all cognition and reason is incognizable and irrational, created one of the most extreme metaphysics ever devised, a perspective that in our view ultimately would destroy the science of signs. If we are to regain a consistent, enduring theory of signs, whether it is based on the work of Peirce, Morris, Saussure, Wittgenstein, or others, we need to develop a deep understanding of the traditions of semiotic, so that the theory and its various terms can become real instruments for inquiry, rather than opaque means of mystification.

NOTES

1. The authors wish to thank Richard J. Bernstein, Douglas Mitchell, and Milton Singer for comments and criticisms.

2. Against the assumption shared by Cartesianism and scholasticism, that reasoning must begin somewhere and that therefore there must be some premiss which is absolutely first, Peirce replied with a characteristically subtle argument: First suppose some thought to be represented by a horizontal line of a certain length. The premiss that determines this line thus can be represented by another line a little shorter than the first, and the premiss of the premiss by a still shorter line, and so forth. On this principle a point having no length will represent an absolutely first premiss. Now suppose an inverted triangle to be dipped in water. At any instant the surface of the water makes a horizontal line across the triangle. This represents a thought. As the triangle is dipped further into the water a longer line is marked by the water. This represents a subsequent thought. The point of the triangle represents an absolutely first premiss. Now to argue that reasoning must begin with such an unconditioned premiss is like claiming that there must be a moment at which the water will mark out a line under which it can mark out no shorter line. But there is no such line. For no matter where you mark the line, you can still mark as many lines as you please below it and below one another. And each of these lines will be shorter than the one above it. Let us say that you mark out the line a very small distance, A , from the apex of the triangle. You can still mark out a line $1/2A$ and $1/4A$ and $1/8A$ and so on, and each of these lines will be shorter but still of a finite length. There are an infinite number of rational fractions that could be marked out (compare *CP* 7.536). Thus, although thought may have a beginning in time (that is, the triangle may be dipped into the water), there is no absolutely first thought in the logical sense.

This subtle distinction is the same one that is the key to the solution of the motion paradoxes from ancient Greek philosophy. If we suppose that in order for us to traverse the stadium we first must traverse half the distance across, then traverse half of the remaining half, then half of the remaining quarter, etc., it is clear that we can never traverse the stadium. But of course we can traverse the stadium. Therefore the initial supposition is absurd. It is absurd in this way: We suppose that Achilles must make an infinite number of finite efforts. In fact Achilles only has to make a single continuous effort. Likewise when we begin to reason we do not need to begin with a distinctly first premiss. We only need to enter into a continuous process of thought—continuous from the beginning. And because there is no distinctly first premiss, the security of our reasoning does not depend on the indubitability of such a premiss.

3. Despite superficial similarities, this doctrine has little in common with the spirit of logical positivism's "verifiability criterion." Peirce proposed that a meaningful hypothesis can be tested, not that an infallible perception can be "verified."

4. Morris 1970, *The Pragmatic Movement in American Philosophy*, extends the ideas that pragmatism and semiotic are behavioristic theories and that Peirce was unnecessarily vague and ambiguous in his definitions of "sign" and "pragmatism." Morris says: ". . . Peirce himself had no single clear-cut comprehensive formulation of the nature of 'meaning.' There is, to be sure, a 'hard-core' doctrine which is quite definite. But, as we shall see, this is surrounded by supplementations and qualifications which arise out of Peirce's own dissatisfactions with his 'hard-core' formulation . . .

The issues here are very complex, and no rounded-out behaviorally-oriented semiotic was developed by the pragmatists. To this extent the pragmatic view of the relation of meaning and action, and hence the nature of pragmatism itself, remained nebulous. An analysis of some of Peirce's statements will illustrate the situation" (Morris 1970:7-18). Morris then goes on to quote Peirce's definition of signs as standing to somebody for something in some respect or capacity, and creating in the mind of that person an equivalent or more developed sign. He notes: "... the term 'sign' is not completely clarified since the interpretant of a sign is itself said to be a sign; there is no reference to action or behavior. In general, there is no hint of pragmatism, or the 'pragmatic maxim,' in this particular formulation" (Morris 1970: 19).

Clearly Morris does not realize that all conduct, "action or behavior," is of the nature of a sign, that it is semiosis, or *sign-action*. Nor does he realize that a "hint" of pragmatism *can* be drawn out of the "problem" that the interpretant is itself a sign, if we see that the pragmatic maxim's emphasis on future *conceivable* consequences of a concept is an emphasis on the continuity of signs.

5. Some examples from Morris's 1946 glossary of semiotic terms in *Signs, Language, and Behavior* may illustrate what we are criticizing as a fundamental lack of clarity:

Ambiguous sign	A sign-vehicle that is not unambiguous.
Behavior	This term is presupposed by semiotic and not defined within it. Roughly speaking, behavior consists of the sequences of responses (actions of muscles and glands) by which an organism seeks goal-objects that satisfy its needs. Behavior is therefore "purposive" and is to be distinguished from response as such and from the even wider class of reactions. Behavior is <i>individual</i> or <i>social</i> , and when social may be <i>co-operative</i> , <i>competitive</i> , or <i>symbiotic</i> .
Denote	A sign that has a denotatum or denotata is said to denote its denotatum or denotata. All signs signify, but not all signs denote.
General sign	A sign that is not singular. There are various degrees of generality depending upon the interrelationship of significata.
Interpersonal sign	A sign is interpersonal to the degree that it has the same signification to a number of interpreters; otherwise <i>personal</i> .
Language sign	See <i>Lansign</i> .
Lansign	A sign that is a member of a lansign-system. In this book "language sign" is often used in place of "lansign"; strictly speaking, only the latter term is defined.
Personal sign	A sign is personal to the degree that it is not interpersonal.
Plurisituational sign	A sign that is not unisituational.
Precise sign	Signs, not vague, are precise.
Reliable sign	A sign is reliable to the degree that members of the sign-family to which it belongs denote; otherwise unreliable.
Singular sign	A sign whose signification permits only one denotatum; otherwise it is general.
T-ascripitor	An ascripitor that denotes. "T" is used to suggest "true" though the latter term is not here defined. Similarly, an <i>F-ascripitor</i> is one that does not denote. Ascripitors in any mode of signifying may be T-ascripitors or F-ascripitors.

Unambiguous sign	A sign-vehicle is unambiguous when it has only one significatum, that is, belongs to only one sign-family; otherwise it is ambiguous.
Unisituational sign	A sign that signifies a given significatum in only one situation; hence, it is a sign-vehicle that belongs to no sign-family. Most signs are plurisituational.
Unreliable sign	A sign that is not reliable.
Vague sign	A sign is vague to a given interpreter to the degree that its significatum does not permit the determination of whether something is or is not a denotatum; otherwise it is precise.

(Morris 1946b: 345-56)

6. In a letter to Lady Welby dated 23 December 1908, Peirce remarked, "It is clearly indispensable to start with an accurate and broad analysis of the nature of a Sign. I define a Sign as anything which is so determined by something else, called its Object, and so determines an effect upon a person, which effect I call its Interpretant, that the latter is thereby mediately determined by the former. My insertion of 'upon a person' is a sop to Cerberus, because I despair of making my own broader conception understood" (SS, 80-81).

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