

The Philosophic Significance of Signification

What is a Sign?

Since the early 1860s Peirce was interested in signs and representations. Several topics led him to a recognition of a need for a theory of signs; his Kantian studies included a problem of asking in what sense our conceptions could 'represent' something in a phenomenal or noumenal, while his interest in logic and inference took him to questions of how the particular form of a logical expression can reflect or contain a logical truth and how inference may produce knowledge out of imperfect information. So, for example, the expressed form of a particular syllogism (Barbara) was considered by Peirce as a sign of a certain logical truth; and the sight of smoke as a sign of fire means that an inference that fire exists in the vicinity of the smoke is permissible. In his various philosophic ventures Peirce kept bumping into signs.

In his later years Peirce searched for a theory of signs as a theory of connections within the theory of everything. Signs had nice theoretical properties because they seemed to be triadic things that were inherently relational and perspectival. Signs were what they were by virtue of their relations to other sorts of things. There were more to them than Kempe's static spots and links, and they seemed to have computational properties as well. In addition, signs had dynamic properties; they made events occur in the universe. Semiotic action or causation appeared to have more theoretical fecundity than Newtonian particles in action because they seemed capable of explaining in a continuous manner all kinds of natural phenomena. Yet if signs could be an element of a general metaphysical theory they must be explained without reference to human intelligence. In

saying that 'man is a sign' Peirce was admitting that a non-anthropocentric, non-psychological theory of signs was possible.

The philosophic problem posed by a non-anthropocentric theory of signs is to explain sign action without the intervention of a developed human brain and without doing violence to the conception of a sign. Peirce made quite a few remarks to the effect that a sign could function on a sub-human level. These remarks may be taken to reflect his belief that a theory of signs should explain how this is possible. However, in this area of his work, it is possible to assemble a variety of assertions that do not cohere neatly together or rise to the level of a clear general theory of signs. As with most of his work after about 1895 Peirce made repeated starts on a comprehensive project, because his approach had to be architectonic, but this approach may have kept him from developing any particular facet in the detail it required.

What must the world be like in order for there to be signs in it? A male moose attracts a female by making a track in the dirt with his hoof, urinating in it, and then wallowing in it. This behavior looks teleological. The moose creates a long puddle of urine roughly the length of his body *for the purpose of covering* a large area of his body with the urine, and he does this because his goal is to attract females and the smell of his urine in fact does attract females who smell it. An interpretation in terms of signs is also possible: the male creates the opportunity for sign action by producing a mist of urine the air carries to the female; the peculiar smell becomes a qualitative experience in the mind of the female moose which connects to one or more of a variety of other experiences in her mind. We say she is 'interpreting' the smell; it could mean that she has a memory of a past copulation with any moose and an urgency to repeat it, or a memory of a past copulation with this moose and an urgency to repeat it, or there could be no memory at all but just an urgency which sets the muscles in action.

Now suppose instead that there is no urgency at all. The moose smells the urine and this only seems to overcome resistance which is really not there. The transaction is just a matter of chemical pheromones triggering the muscular response of a Cartesian automata. This sort of reduction did not daunt Peirce. A good description of sign action should be able to explain the action of the mating moose without reference to psychological notions of 'attraction' and 'urgency'. Such a description, he was convinced, had to be triadic in form, that is, had to consist of three nodules, each one of which could only be described in reference to the other two. The male does not trench unless there is a female nearby; the female does not approach without the urine stimulation. From our perspective we may say that the male's aim in creating the urine display becomes the female's in responding to it: copulation. But perhaps the male is a Humean and just does this because he knows what follows or he does it by instinct and the result follows invariably or usually. No matter. What is clear is that the male does not dig a trench so large the female falls into it. The urine is an efficient intermediary and no matter how mindless or molecular the process is in reality, what transpires is that two animals as physical bodies weighing many hundreds of pounds use a particular technique to bring about copulation. The efficiency of that technique, like the military command — Ground Arms! — was what fascinated Peirce about sign action.

Perhaps this example is a poor one because copulation is triadic behavior par excellence. My purpose is to illustrate Peirce's methodology. He wants to describe the rudimentary elements of sign action and then see if there is a theoretical value in applying the concepts to a variety of natural actions. He is not saying that, say, the erosion caused by a river in an antediluvial world *must* involve sign action, though he did say that it does. He is saying that sign action is not wholly contained in the human world of made-up signs. The contrary seems to make less sense. If there were sign makers before there were signs then how could the first sign have been created?

Our common scientific understanding allows us to accept the intelligibility of such a question. Out of grunts and groans, cuneiform shapes, and pictographs our various languages evolved. But we cannot see clearly how this gradual transition could take place. Wittgenstein thought that we could not even intelligently ask questions about the essential characteristics of sign action, that to do so would be to use language in a corrupt way:

104. We predicate of the thing what lies in the method of representing it. Impressed by the possibility of a comparison, we think we are perceiving a state of affairs of the highest generality.

105. When we believe that we must find that order, must find the ideal, in our actual language, we become dissatisfied with what we are ordinarily called “propositions,” “words,” “signs.” The proposition and the word that logic deals with are supposed to be something pure and clear-cut. And we rack our brains over the nature of the real sign. ((Philosophical Investigations.))

Peirce appears as the anti-Wittgenstein par excellence. He believes in “the crystalline purity of logic.” (*Philosophical Investigations*, p107) Peirce wants to get to the heart of sign action as a triadic structure taking many forms. Wittgenstein sees a lingua-centric predicament that does not allow deep inquiry but only an illusion of deep inquiry. Philosophy should only be content to uncover this “plain nonsense.” (p119) A general theory of signs is just so much nonsense. It is not a theory in the sense in which we may have theories about things like global warming or the decline in the world-wide population of frogs. Thus, Wittgenstein is led to treat animal communication as a gratuitous projection:

493. We say: “The cock calls the hens by crowing”— but doesn’t a comparison with our language lie at the bottom of this?— Isn’t the aspect

quite altered if we imagine the crowing to set the hens in motion by some kind of physical causation?

We could theorize that the crowing in a sound of a particular frequency that activates a receptor in the brain of the hens which causes them to come to the male. Peirce, as we shall see, thought that efficient causality — the sound vibration on the receptor — was necessary for sign action, but that final causation was required as well.

Before turning to Peirce's analysis I want to consider an historical episode: Royce's use of Peirce's sign theory in his metaphysics course at Harvard in 1915. After his death in 1914 the manuscripts and many books were transported to Harvard late that year. They sat like a great pyramid in Royce's office. ((Kenneth Laine Ketner, *His Glassy Essence: An Autobiography of Charles Sander Peirce* (Nashville: Vanderbilt University Press, 1998) p. 52.)) We may imagine that Royce, who had been mining the ideas of that "unique and capricious genius" ((So Peirce is called by Royce in a letter dated January 15, 1915. Noting the arrival of the manuscripts Royce indicated: "They are certainly fragmentary, but almost certainly inclusive of some valuable monuments . . ." John Clendenning, ed., *The Letters of Josiah Royce* (Chicago: University of Chicago Press, 1970) p. 622.)) for at least fifteen years, spent time going through some of the papers. In the fall of 1915 Royce gave a two-semester course in his 'social approach' to metaphysics and in these lectures Peirce's theory of signs and interpretation plays a prominent role. First, the theory provided support for Royce's view that ideas of community were essential in metaphysical analysis. For Royce, a Wittgensteinian solipsistic suspension of inter-subjective communication is just not believable and is contrary to the weight of evidence of intra-human and inter-species communication that is observed in everyday life. A community is a community of interpretation. When two persons meet who cannot at first communicate in

a shared language, the struggle to do so sets in motion a triadic process “so far as *means are suggested* which make the ideas of the two [persons] cohere.” (((Josiah Royce, *Metaphysics* (Albany: State University of New York Press, 1998) p. 57. This work consists of the stenographically recorded Harvard Philosophy 9 Course, 1915-1916, and is edited by Richard Hocking and Frank Oppenheim. Emphasis added.))) Even self-knowledge cannot avoid interpretation:

My present is problematical. I myself furnish the hypothetical interpretation insofar as I view my present as a process which involves the past and goes on to the future. The world is essentially that which contains and is the interpretation of a problematic side of experience. It has essentially the character of a world of interpretation, a community of interpretation. One cannot define the world in terms of a static absolute conceived as unchanging. One must view it as having the character of a self interpreting a self. . . . [A]n interpretation has as its very essence something teleological . . . (Metaphysics, p. 85)

Second, the theory provided to Royce analytical tools for investigation and discovery of interpretive communities and of the limiting conditions for intersubjective communication. Thus, “whether something is for us a sign with a meaning will depend somewhat upon the range of our time span: the light waves and intervals would have to enter into our consciousness. A being with a tremendous time span, or with a span very much less than ours, could not communicate with us.” (*Metaphysics*, p. 95)

Articulation of the broadest meaning of sign action and interpretation was the goal Peirce had set for himself. ((It is not the case that Peirce’s focus on signs was “mainly logical,” *Metaphysics*, p. 286.)) He wanted to know more about the nuts and bolts of how interpretations arise. This was a scientific investigation to him. He was not interested in *a priori* answers that

ended inquiry, such as: all interpretation is limited by the accepted categories of interpretation and no interpretation actually occurs because we cannot escape the linguistic categories of our own form of social life. His own fallible method he described as follows:

Logic, in its general sense, is, as I believe I have shown, only another name for semiotic ({{s emei otik e}}), the quasi-necessary, or formal, doctrine of signs. By describing the doctrine as “quasi-necessary,” or formal, I mean that we observe the characters of such signs as we know, and from such an observation, by a process which I will not object to naming Abstraction, we are led to statements, eminently fallible, and therefore in one sense by no means necessary, as to what must be the characters of all signs used by a “scientific” intelligence, that is to say, by an intelligence capable of learning by experience. CP 2.227

Particularly in his later years Peirce complained about the burden of developing a comprehensive theory of signs. Consider the following remark:

I here owe my patient reader a confession. It is that when I said that those signs that have a logical interpretant are either general or closely connected with generals, this was not a scientific result, but only a strong impression due to a life-long study of the nature of signs. My excuse for not answering the question scientifically is that I am, as far as I know, a pioneer, or rather a backwoodsman, in the work of clearing and opening up what I call semiotic, that is, the doctrine of the essential nature and fundamental varieties of possible semiosis; and I find the field too vast, the labor too great, for a first-comer. I am, accordingly, obliged to confine myself to the most important questions. CP 5.488

Clearly Peirce wanted his theory of signs to be empirical. He did not want to 'deduce' signs from their transcendental conditions. But he did not want to limit his theory to the study of human conventional signs. Since he believed that thought and reasoning were semiotic the study of signs could have been regarded as a study of the limits of thought. Yet, as noted above, Peirce wanted to push his theory to an even wider area, as part of a general system theory of the operations of universal nature. He seldom if ever adopted a psychological explanation to resolve a problem in analysis. He was convinced that triadic structures existed in nature that were non-human and yet 'mental' or quasi-mental. Their action or operation comprised *semiosis*:

It is important to understand what I mean by semiosis. All dynamical action, or action of brute force, physical or psychical, either takes place between two subjects [whether they react equally upon each other, or one is agent and the other patient, entirely or partially] or at any rate is a resultant of such actions between pairs. But by "semiosis" I mean, on the contrary, an action, or influence, which is, or involves, a coöperation of three subjects, such as a sign, its object, and its interpretant, this tri-relative influence not being in any way resolvable into actions between pairs. CP 5.484

Semiosis is an example of Thirdness. But is all Thirdness semiotic? A three body reciprocating system, such as a Helium atom, may be conceived of without including a 'picturing' capability we commonly associate with the nature and influence of signs. What, then, is the additional dimension in semiosis that makes it a particular kind of Thirdness? To answer this is to give an answer to the question: "What is a sign?"

Before turning to a review of some of Peirce's pronouncements on the rudiments of his sign theory, I want to point out that the scholar in this area of his work is immediately confronted with the problem of having to deal

with so many writings reflecting differing voices and purposes. There is correspondence on the subject of signs with Lady Welby and William James, and we can only regret that there was not more of this kind of writing. Some writings have confessional tones; some appear to be pure explorations, allowing the dialogical process to work its will; many are repeated fresh starts with a teaching and expository motive behind them. These writings are truly the zig-zags of an explorer in the wilderness. In the last decade of his life two problems stand out foremost as bedeviling Peirce: formulating a coherent and ramified theory of signs, including a deep understanding of how signs could be possible; and a proof of pragmatism. I believe that a large problem beneath the surface that Peirce struggled with was to provide a seamless connection between the theory of categories and the theory of signs. We may note that the analysis of each contained a certain isomorphic formalism: three items, one monadic, one dyadic, one triadic, with the dyadic having monadic and dyadic characters, and the triadic having monadic, dyadic, and triadic characters. Thus, the focus on classification causes mischief when relational processes are involved, so that it is easy to forget that while things are being described, their description is fundamentally inaccurate when the background factors and relations are taken into consideration. Take, for example, the question: 'May signs exist in a world without interpreters?' One could become tied into knots trying to figure out Peirce's final and best answer to this question.

Sign, Object, Interpretant

The answer to our question has a simple superficial answer. A 'sign' is an element in a triadic relation:

*If **S** represents some character(s) of object, **O**, to an Interpreter, then **S** is a sign of **O** and the information conveyed to the Interpreter is an Interpretant, **I**, of **O**.*

Signification is a flow of information from sign to interpreter. The flow direction determines how each part of the triad is to be denominated. The flow determines the nature of the end points. As soon as an Interpretant is formed it is capable of being either an object or a sign itself. Peirce was used to this process, since he had spent a lifetime trying to express in logical form a great variety of experiential data. He tried to give very general definitions of sign, object, and interpretant. Here are some of them:

*Now a sign is something, **A**, which denotes some fact or object, **B**, to some interpretant thought, **C**. CP 1.346*

A Representamen is the First Correlate of a triadic relation, the Second Correlate being termed its Object, and the possible Third Correlate being termed its Interpretant, by which triadic relation the possible Interpretant is determined to be the First Correlate of the same triadic relation to the same Object, and for some possible Interpretant. A Sign is a representamen of which some interpretant is a cognition of a mind. Signs are the only representamens that have been much studied. CP 2.242 (1897?)

In the first definition Peirce seems to restrict signs to the world of thought. In the second, he uses the term 'representamen' to mean any thing capable of 'representing' in a sense more general than we mean when we say signs represent. Peirce also suggests that some representama may represent even without the existence of thinking interpreters. This seems easy to imagine. When we identify a volcanic structure on Mars that looks like a "Happy Face" we can imagine that the face will keep on smiling after all human life is extinguished and that it might possibly be interpreted later as

a smiling face, just as it is possible for an extinguished race to have identified it before human life existed and identified it.

*A Sign, or Representamen, is a First which stands in such a genuine triadic relation to a Second, called its Object, as to be capable of determining a Third, called its Interpretant, to **assume the same triadic relation to its Object in which it stands itself to the same Object.***

CP 2.274 (1902?) (Emphasis added) Here, rather confusingly, Peirce suggests that all representamina are signs. The first definition harkens back to the “New List” jargon, the second is phrased in terms of the later categories. Another interesting idea found in the second definition, one that has cropped up in previous lectures, is the notion of dual or duplicative action. A sign duplicates, or replicates, its relation to its object in the form of an Interpretant’s relation to the object. The sign mirrors the object in some respect and then so does the interpretant.

Peirce classified signs in terms of the manner in which they were capable of signification:

*A sign is either an icon, an index, or a symbol. An icon is a sign which would possess the character which renders it significant, even though its object had no existence; such as a lead-pencil streak as representing a geometrical line. An index is a sign which would, at once, lose the character which makes it a sign if its object were removed, but would not lose that character if there were no interpretant. Such, for instance, is a piece of mould with a bullet-hole in it as sign of a shot; for without the shot there would have been no hole; but there is a hole there, whether anybody has the sense to attribute it to a shot or not. **A symbol is a sign which would lose the character which renders it a sign if there were no interpretant.** Such is any utterance of speech which signifies what it does*

only by virtue of its being understood to have that signification. CP 2.304 (Emphasis added.)

In this passage there is the suggestion that the distinction between thought and unthought signs may be reconciled in terms of the kind of sign a thing is. In the example given a bullet makes a mark that conforms to its shape. A shoe print on the beach is a sign of the shoe that made it regardless of whether or not anyone ever sees it. This could only mean that there was an identical or isomorphic spatial relation among the parts of the shoe and shoe print. This similarity, Peirce believed, was an objective one. But is it a sign without an interpreter? The foot print on the beach in *Robinson Crusoe* is a double sign: a sign of the foot that made it and a sign that there is human life nearby. (Ms. 318). A duplicate is not a sign by virtue of merely being a duplicate. In his endeavor to classify the sign relation has Peirce pushed too far beyond it and gathered up what did not properly belong there? He believed that under the rigors of logical analysis the concepts of ordinary language could be refined to scientific clarity and in so doing we could come to see the workings that motivated our common-sense distinctions in the first place. In a letter to Lady Welby Peirce asks:

What is the essential difference between a sign that is communicated to a mind, and one that is not so communicated? If the question were simply what we do mean by a sign, it might soon be resolved. But that is not the point. We are in the situation of a zoölogist who wants to know what ought to be the meaning of "fish" in order to make fishes one of the great classes of vertebrates. It appears to me that the essential function of a sign is to render inefficient relations efficient, — not to set them into action, but to establish a habit or general rule whereby they will act on occasion.

According to the physical doctrine, nothing ever happens but the continued rectilinear velocities with the accelerations that accompany different relative positions of the particles. All other relations, of which we know so many, are

inefficient. Knowledge in some way renders them efficient; and a sign is something by knowing which we know something more. CP 8.332

This remark, and others like it, illustrate Peirce's interest in giving a dynamic account of signs, along with his classifications. An overlap of these tasks may be found in his account of interpretants. The existence of an interpretant suggests the existence of a robust triadic relation involving something like what we know 'thinking' to be.

As to the Interpretant, i.e., the "signification," or "interpretation" rather, of a sign, we must distinguish an Immediate and a Dynamical, as we must the Immediate and Dynamical Objects. But we must also note that there is certainly a third kind of Interpretant, which I call the Final Interpretant, because it is that which would finally be decided to be the true interpretation if consideration of the matter were carried so far that an ultimate opinion were reached. CP 8.184

So the emergence of an Interpretant is the hallmark of triadic action, in contrast with dyadic action. Even a regulated feedback loop is not sufficiently triadic to generate a genuine interpretant:

. . . the rise of the mercury in an ordinary thermometer or the bending of the double strip of metal in a metallic thermometer is an indication, or, to use the technical term, is an index, of an increase of atmospheric temperature, which, nevertheless, acts upon it in a purely brute and dyadic way. In these cases, however, a mental representation of the index is produced, which mental representation is called the immediate object of the sign; and this object does triadically produce the intended, or proper, effect of the sign strictly by means of another mental sign; and that this triadic character of the action is regarded as essential is shown by the fact that if the thermometer is dynamically connected with the heating and cooling

apparatus, so as to check either effect, we do not, in ordinary parlance speak of there being any semeiosis, or action of a sign, but, on the contrary, say that there is an "automatic regulation," an idea opposed, in our minds, to that of semeiosis. For the proper significate outcome of a sign, I propose the name, the interpretant of the sign. CP 5.473

The mental representation of the mercury level is simply the observation of what that level is. It is distinguished from the mercury level when it is not observed only in that it is an observation of the mercury level. But this is a mental act which must connect up with the knowledge of how and why the thermometer functions so as to give a temperature reading, another mental representation, and from this the thermometer functions as a sign.

The relation of signification is layered and complex; what starts out as the action of a sign as an immediately recognized reference to an object, called the immediate object, is transformed into a recognition of a richer object that stands behind the sign in a broader context. Here is how Peirce distinguishes an Immediate and Dynamical Object:

But it is necessary to distinguish the Immediate Object, or the Object as the Sign represents it, from the Dynamical Object, or really efficient but not immediately present Object. It is likewise requisite to distinguish the Immediate Interpretant, i.e. the Interpretant represented or signified in the Sign, from the Dynamic Interpretant, or effect actually produced on the mind by the Sign; and both of these from the Normal Interpretant, or effect that would be produced on the mind by the Sign after sufficient development of thought. CP 8.343

Understandably, Peirce called the Normal Interpretant the Final Interpretant. He also distinguished Emotional Interpretants, Energetic Interpretants, and Logical Interpretants, the first having to do primarily with

the effect on the interpreter of qualitative aspects of the sign, such as a musical phrase or a blotch of color, the second, with a sense of real resistance against the effort of the interpreter, and the last being the influence of a mental sign on a mind thereby engendering a hypothetic rule. Peirce on Emotional and Energetic Interpretants:

This “emotional interpretant,” as I call it, may amount to much more than that feeling of recognition; and in some cases, it is the only proper significate effect that the sign produces. Thus, the performance of a piece of concerted music is a sign. It conveys, and is intended to convey, the composer’s musical ideas; but these usually consist merely in a series of feelings. If a sign produces any further proper significate effect, it will do so through the mediation of the emotional interpretant, and such further effect will always involve an effort. I call it the energetic interpretant. The effort may be a muscular one, as it is in the case of the command to ground arms; but it is much more usually an exertion upon the Inner World, a mental effort. It never can be the meaning of an intellectual concept, since it is a single act, [while] such a concept is of a general nature. But what further kind of effect can there be? CP 5.475

As defined by Peirce every sign must bring about an Emotional Interpretant as a feeling of recognition of something having proper significate effect. So even the most abstract concepts, of the sort Peirce loved to study as a youth — the Absolute, Infinity, Perfection-may produce an immediate Emotional Interpretant of some yet to be defined (interpreted) object.

Logical Interpretants have the capacity of ‘stimulating’ (CP 5.481) the mind to further interpretation of the sign:

We imagine ourselves in various situations and animated by various motives; and we proceed to trace out the alternative lines of conduct which

the conjectures would leave open to us. We are, moreover, led, by the same inward activity, to remark different ways in which our conjectures could be slightly modified. The logical interpretant must, therefore, be in a relatively future tense. CP 5.481

But it is not an expectation that the future will be a certain way; nor a desire for the future to be a certain way. Expectation and desire have an intellectual component, but not one sufficient to serve as a Logical Interpretant, which involves a generalized conditional rule—‘If A, then B’—and a generalized habit — ‘Do B if A occurs’. (CP 5.486)

The Perspective Problem

Peirce wanted his theory of signs to be as objective as possible. But how objective could that be? As we have asked: Are all signs in the eye of the interpreter? If so, in what sense could a sign cause or determine an interpretant? In the Kant-to-Hegel era these questions would be distinguished as being dogmatic or critical/transcendental questions. Something cannot be described in wholly non-mental terms if the conditions for its reality include mental operations. In his study of signs Peirce, more often than not, would start from the dogmatic, i.e., descriptive, classificatory, standpoint and run up against the critical standpoint, as suggested in the previous section. Now I want to look at this issue more closely. Consider the following remark on the Logical Interpretant:

It is not to be supposed that upon every presentation of a sign capable of producing a logical interpretant, such interpretant is actually produced. The occasion may either be too early or too late. If it is too early, the semiosis will not be carried so far, the other interpretants sufficing for the rude

functions for which the sign is used. On the other hand, the occasion will come too late if the interpreter be already familiar with the logical interpretant, since then it will be recalled to his mind by a process which affords no hint of how it was originally produced. CP 5.489

Or consider the following remark on genuine habit:

The habit alone, which though it may be a sign in some other way, is not a sign in that way in which that sign of which it is the logical interpretant is the sign. The habit conjoined with the motive and the conditions has the action for its energetic interpretant; but action cannot be a logical interpretant, because it lacks generality. The concept which is a logical interpretant is only imperfectly so. It somewhat partakes of the nature of a verbal definition, and is as inferior to the habit, and much in the same way, as a verbal definition is inferior to the real definition. 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. Consequently, the most perfect account of a concept that words can convey will consist in a description of the habit which that concept is calculated to produce. CP 5.491 (Emphasis added)

The message conveyed is that a particular sign does not contain all of the factors that determine its influence. The mind of the particular interpreter determines how much action a particular sign will have on it given the history of that particular mind's experience with it and the analytic capacity of the mind will influence or perhaps determine what kind of action will be attributed to the sign. Now this history and analysis could be looked upon as components of the triadic process. The problem becomes: how to incorporate such factors into a general description of semiosis.

As his work on signs in this Century proceeded Peirce saw the necessity of adding more and more concepts as essential to the process, and he raised more and more difficult questions, so that he was faced with the unhappy circumstance of being confronted late in life with the prospect that a favorite brain child being left without a sound foundation for later generations to work on. The fundamental problem, as I see it, is that he could not reconcile or unify the mental and non-mental definitions of a sign with a general theory of semiotic causation that applied to both. Toward the end of his life his definitions assumed components of increasing complexity. As noted at the outset, there is no question that from a scientific point of view he regarded his work on signs as a form of hypothesis about the conditions of representation. But that did not diminish the task of stating the hypothesis in a clear, consistent manner. For example when discussing the fact that semiosis requires a cooperation of sign, object, and interpretant to produce a “tri-relative influence,” (CP 5.484) he observes:

Although the definition [of semiosis] does not require the logical interpretant (or, for that matter, either of the other two interpretants) to be a modification of consciousness, yet our lack of experience of any semiosis in which this is not the case, leaves us no alternative to beginning our inquiry into its general nature with a provisional assumption that the interpretant is, at least, in all cases, a sufficiently close analogue of a modification of consciousness to keep our conclusion pretty near to the general truth. We can only hope that, once that conclusion is reached, it may be susceptible of such a generalization as will eliminate any possible error due to the falsity of that assumption. (CP 5.485)

Peirce did not want to confine his inquiry to “psychical semiosis” even if no other kind of semiosis existed, perhaps because he thought that logic was a clearer discipline than psychology. (CP 5.485)

Here are examples of the bifurcated view of signs:

*That everything indeterminate is of the nature of a sign can be proved inductively by imagining and analyzing instances of the surdest description. Thus, the indetermination of an event which should happen by pure chance without cause, sua sponte, as the Romans mythologically said, spontanément in French (as if what was done of one's own motion were sure to be irrational), does not belong to the event — say, an explosion — per se, or as explosion. Neither is it by virtue of any real relation: it is by virtue of a relation of reason. Now what is true by virtue of a relation of reason is representative, that is, is of the nature of a sign. . . . Every sign has a single object, though this single object may be a single set or a single continuum of objects. No general description can identify an object. But the common sense of the interpreter of the sign will assure him that the object must be one of a limited collection of objects. . . . It seems a strange thing, when one comes to ponder over it, **that a sign should leave its interpreter to supply a part of its meaning**; but the explanation of the phenomenon lies in the fact that the entire universe — not merely the universe of existents, but all that wider universe, embracing the universe of existents as a part, the universe which we are all accustomed to refer to as “the truth” — that all this universe is perfused with signs, if it is not composed exclusively of signs. CP 5.448n1 (Emphasis added.)*

A sign is a species of medium of communication. Ms. 339

. . . a sign is anything which being intelligently determined by an Object in its turn intelligently determines an Interpretant, which thus becomes mediately determined by the Object. Ms. 318 (Emphasis added.)

[A sign is] everything the direct perception of which will, in consequence of proper preparation of the percipient's mind, furnish any kind of knowledge

of an object either not perceived or not perceived in the respect in which new knowledge of it is afforded. Ms. 283 (Emphasis added.)

Mind belongs under the genus of symbols. Ms. 290

*The symbol, or general sign, . . . is something which is a sign **solely by virtue of the character imparted to it in the interpretant**, that is, it is a sign, not because it has any real connection with its object, or because it resembles it but simply because it may be understood to be a sign. Ms. 307 (Emphasis added)*

In another manuscript Peirce characterized the motion of objects like falling dominos in terms of sign action. Each falling domino is an index to the succeeding dominos of the original effect produced on that and earlier dominos. He claims that his description in terms of indexes is more economical, and no more anthropomorphic, than the physicist's description in terms of forces and positions. "Until you see this, you do not grasp the meaning I attach to the word 'Sign'." Ms. 293

There are many passages in Peirce's writings where he describes sign action in unidirectional terms. Sometimes the direction of 'influence' or 'determination' or cause of signification flows from interpretant to sign to object; but more often the reverse is true. I do not take these reversals to be contradictions or inconsistencies, but rather expressions of the difficulty of describing a process that is inherently multi-dimensional using language that is not precise enough. (Also to be factored in are the conditions under which Peirce wrote between 1900 and 1910 and the many sporadic fresh starts he made on the subject.) Nonetheless, I also believe that he recognized that semiotic action ultimately had to presuppose a background of 'tri-relative' forms. The more questions he raised about each component of the semiotic relation the more questions there were to be answered. The

more he studied interpretants the more he recognized the need for a “deeper study” of them. Ms. 339. But the process of defining the relations kept getting in the way of the task of defining the objects related. Peirce was clearly aware of the source of his frustration; he knew that: “We might therefore divide signs according to the nature of their being. But this would not be a division of the modes of being representative.” Ms. 316

In that same manuscript written around 1903, probably as preparation for a series of lectures on pragmatism to be delivered at Harvard, he raised many questions about sign action. With respect to the question whether signs have a special character in themselves he asks: “Can anything be a sign by virtue of its own character? Can anything become a sign by force of its brute actions and reactions? Can a thing become a sign by its intellectual relations?” These questions may be asked when the focus is simply on “the different elements of the sign’s being” without reference to its object or interpretant. Next consider signs in relationship to their represented, or “immediate” object. From this perspective Peirce asks: “Can a sign be a sign in representing its object in its character simply as something possible in itself? Can a sign be a sign in representing its object in its brute existence [or ‘existent’] acting upon the sign? Can a sign be a sign in representing its object in its intellectual character as informing the sign? Yes, a predicate, a subject, a copula.” Now consider the relationship between a sign and its real object, an object with more reality than is immediately represented by the sign. These questions are possible: “Can a sign be a sign of a given real object simply by virtue of partaking a character of that object? Can a sign be a sign of a given real object by virtue of an existent action of that object upon it? Can a sign be a sign of a given real object by virtue of being interpreted as being the sign of that object?” So far signs considered in themselves generate one set of three questions; when considered in relation to their object they generate two sets of three questions each. Now in relation to their interpretant they

generate three sets of questions each: (1) "Can the sign act on the interpretant by community of being? Can the sign act on the interpretant by compulsion? Can the sign act on the interpretant as a representation of the mind acts on matter, as a judge can appoint a constable and direct him to use force or as a law acts upon fact?" (2) "Can a sign intend [~~'cause'~~] its interpretant to represent it as to all intense and purposes the object, or as a substitute for the object? Can a sign intend its interpretant to represent it as an effect of its object? Can a sign intend its interpretant to regard it as a sign of its object?" (3) "Can a sign be interpreted in a feeling? Can a sign be interpreted in an action? Can a sign be interpreted in a sign?" Ms. 316 These questions show that Peirce was aware of the gap between the dogmatic and critical, perspectival theory of signs, and worked to overcome it.

After the Harvard Lectures Peirce worked a great deal on a classification of signs that more richly captured the mode of relations of each component. One such classification was sketched out in 1905 in the Logic Notebook (Ms. 339) classifying signs in terms of the triadic metaphysical categories:

A. Firstness, or "matter of the sign"

Qualisign

Sinsign

Legisign

B. Secondness, or "divisions according to Object"

a. As an Immediate Object

Indefinite Sign

Singular Sign

Distributively General Sign

b. As a Dynamic Object

I. Matter of the Dynamic Object

Abstract

Concrete

Collection

ii. Mode of Representing Object

Icon

Index

Symbol

C. Thirdness, or "according to Interpretant."

a. As Immediate Interpretant

Vague Immediate Interpretant Singular Immediate Interpretant

Distrib. General

b. As Dynamic Interpretant

I. Matter of Dynamic Interpretant

Feeling
Conduct
Thought

ii. Mode of Affecting Dynamic Interpretant

By Sympathy
By Compulsion
By Reason

c. As Representative Interpretant

I. Matter of Representative Interpretant

—
—
—

ii. Mode of being Represented by Representative Interpretant

—
—
—

iii. Mode of Being Represented to Represent Object by Sign Truly

This schema gives a good picture of the form of Peirce's classification and of its relation to the modes of representation. It shows that the movement from Firstness to Thirdness is a movement from objects as signs to signs as representations. Other more complete versions of this schema are revealed in the Logic Notebook. For our purposes it is noteworthy that the

triadic form of Thirdness, the non-degenerate form of Thirdness, consists of a Representative Interpretant which consists in an activity to represent 'truly' as would a Final Interpretant. The Representative Interpretant is "the interpretant that truly represents that [unclear word, might be 'the'] sign represents its object as it does" A day later Peirce wrote: "As it now seems to me the Representative Interpretant is that which correctly Represents the Sign to be a Sign of its Object." Ms. 339 Here is a clear statement of the view that representation is a product of the interpreter; that interpretation is movement from something indefinite to a genuine sign relation, and that signs cannot exist without interpreters. The next task is to shed better theoretical light on the context and conditions that make sign action possible.

Quasi-Mentality, Community, and Percussivity

Peirce explored a variety of models to explain just how the sign tri-relative process is held together. The dominant model that took several forms is the communication model. Signs can represent by virtue of an ongoing process of dialogue between sign, object, and interpreter. I shall describe some of the versions of this model.

1. ***Quasi-Mind.*** By postulating mentality as a character of nature Peirce is able to assume that triadic relations are not the exclusive province of the human brain. This view puts aside the question of whether interpretation is merely a product of the brain and signs part the brain's construction of reality and allows us to think of signs as operating in nature and acting upon us. This is the view Peirce long held in relation to thinking:

Thought is not necessarily connected with a brain. It appears in the work of bees, of crystals, and throughout the purely physical world; and one can no more deny that it is really there, than that the colors, the shapes, etc., of objects are really there. Consistently adhere to that unwarrantable denial, and you will be driven to some form of idealistic nominalism akin to Fichte's. Not only is thought in the organic world, but it develops there. But as there cannot be a General without Instances embodying it, so there cannot be thought without Signs. We must here give "Sign" a very wide sense, no doubt, but not too wide a sense to come within our definition. Admitting that connected Signs must have a Quasi-mind, it may further be declared that there can be no isolated sign. Moreover, signs require at least two Quasi-minds; a Quasi-utterer and a Quasi-interpreter; and although these two are at one (i.e., are one mind) in the sign itself, they must nevertheless be distinct. In the Sign they are, so to say, welded. Accordingly, it is not merely a fact of human Psychology, but a necessity of Logic, that every logical evolution of thought should be dialogic. CP 4.551

Peirce defines a Quasi-Mind as follows:

In one of the narrowest and most concrete of its logical meanings, a Mind is that Some of The Truth, whose determinations become Immediate Interpretants of all other Signs whose Dynamical Interpretants are dynamically connected. In our Diagram the same thing which represents The Truth must be regarded as in another way representing the Mind, and indeed, as being the Quasi-mind of all the Signs represented on the Diagram. For any set of Signs which are so connected that a complex of two of them can have one interpretant, must be Determinations of one Sign which is a Quasi-mind. CP 4.550

These remarks are found in Peirce's discussion of Existential Graphs a system of notation he devised to display as much as possible the separate

forms and distinct steps of logical thought. They are his attempt to describe logical inference with all of its assumptions plainly in view. A 'Seme' is "anything which serves for any purpose as a substitute for an object of which it is, in some sense, a representative or Sign. The logical Term, which is a class-name, is a Seme." (CP 4.538)

Thus, to say that a Mind is a Seme of the Truth is just to say that the Mind mirrors the Truth. In reality this seldom occurs since the contents of mind appear in piecemeal form as aspects of something larger. ((I find it interesting that Peirce had Fichte in mind in this discussion. Fichte's idealism was based on the connection, absolute in form and content, of the act of thinking reflecting on its own act. Here was an act that was a Seme of the entire Truth, but its content is puny.)) A Quasi-Mind exists when a complex of two sets of signs can have one interpretant and therefore are the determination of a single sign unifying the sets. Quasi-Minds are signs that unify signs through interpretants. Here is another way Peirce describes the function of a Quasi-Mind:

I remain convinced that thinkings and thought are signs. . . . it would be semeiotically necessary that all the thinkings shall be determinations of a single something corresponding to a mind, a quasi-mind, as I shall call it. For otherwise two distinct premisses would be their being merely simultaneously thought, no more be thereby copulated into one, thus getting put together, . . . Since the thinkings are all determinations of the quasi-mind, and since they are signs, it follows that the quasi-mind is itself a sign. Its function of bringing the different thinkings into interreference requires that, being a sign,, it should have for its object that single universe or single body of universes to which the whole course of thinking on any occasion relates. Ms. 292.

To conclude, signs may represent because they are the words in a dialogue between quasi-minds.

2. *Dialogue and Dual Consciousness.* The linking accomplished by a Quasi-Mind illustrates an aspect of consciousness referred to by Peirce as dyadic or double consciousness. The problem of linking knowledge components has been encountered in previous lectures. The problem is: If knowledge originates from particular sensations occurring at different times how is knowledge of continuity achieved? Peirce's answer is that consciousness is always a process of capturing, holding, and combining experiences. That is what it is to be conscious. Otherwise we are unconscious and in that case the entire problem of knowledge is irrelevant and unanalyzable. Dyadic consciousness, then, may be a component of the Quasi-Mind that allows signs to be joined into unified sets. This connection is suggested in the following passage:

The field of Thought, in its turn, is in every thought, confessed to be a sign of that great external power, that Universe, the Truth. We all agree that we refer to the same real thing when we speak of the truth, whether we think aright of it, or not. But we have no cognition of its essence that can, in strictness, be called a concept of it: we only have a direct perception of having the matter of our Thought forced upon it from outside our own control. It is thus, neither by immediate feeling, as we gaze at a red color, that we mean what we mean by the Truth; for Feeling tells of nothing but itself. Nor is it by the persuasion of reason, since reason always refers to two other things than itself. But it is by what I call a dyadic consciousness. (This passage was added as a footnote to CP 4.553, part of the discussion of Existential Graphs just referred to above.)

Peirce was aware that he was open to the criticism that he was begging the question. His response would be: If I am led to the formulation of a concept

(dyadic consciousness) that appears to be indispensable to the analysis of a problem (how do signs represent) then I may employ that concept even if I do not have independent justification for its reality. Indeed, how could we have knowledge or imagine having knowledge of dyadic consciousness in action?

In later years Peirce liked to emphasize that signs did not just represent but more essentially they “conveyed” or communicated information. Signs and communication are two sides of the same coin. If there are signs, the Fichtean solipsism is false. A dialogue must be taking place and a message being sent when something is regarded as a sign. (An assertion often heard in religious contexts.) Here is one of Peirce’s descriptions of this process:

The conception of the functioning of a sign, as such, is a hard one to analyze, A critical analysis of the nature of a sign would show that the action requires a source of concepts to be conveyed, and therefore in some sense a mind from which the concepts, propositions, and arguments are conveyed to the mind of the interpreter, and the two mind must be capable of coming to a understanding and of observing it when it is reached. . . . Concepts are signs. It is a corollary from the principal of pragmatism that existence consists in action; but there are other ways are reaching this result, as is well-known. Therefore, since the signs exist, they must function as signs. The function of a sign is to convey an idea. The idea must spring from some source or factory of ideas, which we may call a mind without begging the question of its being personal. The sign was also be interpreted; so that there must be an interpreting agent. This understands the source of ideas. The two must come to an agreement or convention. They must, therefore be of the same general nature, and we may call the interpreting agent a mind likewise. Not only must they come to an

*understanding but must have the power of observing when it is reached.
Ms. 280 (Emphasis mine)*

Peirce's description contains a model of communication that includes signal sending and reception, a transmission back to the sender, and confirmation of the signal sent and received by both parties, a true 'meeting of minds', so to speak. Presumably this may occur within a mind and among minds. This back-and-forth communication is described by Peirce in 1909 in relation to sign action:

*Thus the Sign has a double function: 1st to affect a mind which understands its "**Grammar,**" or method of signification, which signification is its substance Significate, or Interpretant, 2nd to indicate how to identify the conditions under which its significate has the mode of being it is represented as having . . . Ms. 277 (1909)*

This passage clearly reveals Peirce's late belief that signs have wholly relational, but not inherent characteristics. Nothing is a sign unless it affects a mind that understands its 'grammar' and unless it can direct the mind to the surrounding conditions under which it functions as a sign. Peirce also writes that a sign's

*. . . relation to its object is such as to determine the sign while producing little or no change in the object. . . . the object is agent, the sign patient. There must actually be an object; at least, the sign must actually be affected as by an object. But is not essential that it should be more than fit to have an interprete. **In order that a sign may actually function as a sign it must have an interprete** but it is not essential that it should so function. It may suffice that it is fit so to function. Towards its interprete the sign is agent, the interprete patient." Ms. 316 (Emphasis added)*

Since signs are made to act and to act is to convey there may be no signs that are not interpreted, by virtue of the tendencies for signs to interact. Although Peirce often uses 'determines' to refer to how signs, objects, and interpretants are related, he does not mean physical or efficient causation. He also uses the term 'emanates' and 'influence':

It may be asserted, (vague as assertion be) that in every case an influence upon the Sign emanates from its Object, in that this emanating influence then proceeds from the Sign and produces, or is capable of producing partly, at least, in a mental way an effect that may be called the Interpretant, or interpreting action [~~'effect'~~], which consummates the agency of the Sign. Ms. 634

So Peirce asks in this manuscript, how can a weather forecast in today's paper have as its object tomorrow's weather, and how can it be said that the weather tomorrow could then 'influence' or 'cause' today's forecast? Peirce's answer is that "when the meaning of the word 'cause' comes to be analyzed later he [the reader] may come to acknowledge that it is strictly true that final causes do act mentally. . . . [and] that real futurity is sometimes a mental cause of the expectation of it." Ms. 634.

3. **Percussivity** Closely connected with his concept of dyadic consciousness and sign conveyance is the view that the action of signs have a particular characteristic in the way they set the mind in motion. This is an explanation closer to the 'dogmatic' and objective end of the spectrum of explanations of semiosis. Consider first how signs convey, according to Peirce:

An event may provoke an effort of the mind, and not a mere reflex response of the body, without being thereby a sign; but if one becomes definitely conscious, in the provoked effort, of acting against a resistance,

or of resisting a force, then the notion of such resistance or such active force is conveyed; and there is a sign.” Ms. 318

Only when consciousness is provoked to recognition of resistance can a sign emerge. But the impact must be of a certain sort. It must be delicate and not shock the mind. When Peirce writes: “A mind may . . . be roughly defined as a sign-creator in connection with a reaction-machine” and that a reaction-machine is “very delicately susceptible, and in a vast variety of ways, to physical forces; but only provided these forces and their ways of incidents are of very special kinds. The event of a force being at any time of such a kind and so incident as to affect the reaction-machine is called an excitation” he is linking sign creation with a double action of the mind. This double action is involved in the cycle that runs from Immediate Interpretant to Dynamic Interpretant to Logical Interpretant, and when the cycle runs through many Logical Interpretants the journey toward the Final Interpretant is underway. Peirce was interested in the general triadic relation — operator, operation, operand — found in mathematics (Ms. 277, 1907). It could not have gone unnoticed by him that the same process occurs in epistemology and in the study of signs. How is such a process possible? Only through a simultaneous reciprocity when thinking objectifies itself and encapsulates its process as a product or result. The simple-minded British empiricism does this in interpreting sensation as sense-data. The importance of diagrammatic reasoning, according to Peirce, is that it can display or “show” logical connections and still “partakes of the percussivity of a Precept to determine, as its Dynamic or Middle Interpretant, a state activity in the Interpreter.” (Ms. 293) The mind cannot be shocked— which Peirce seems to contrast with percussion (CP 8.370)— but must be vibrated into making sign connections.

4. **Community of Interpretation** Peirce also postulated a semiotic environment of information sharing as a necessary condition for sign action. Here are some illustrations from Ms. 318:

. . . the purpose of a sign is to supplement the ideas of the life of which I, the interpreter, am a part, — ideas which I have drawn directly from my own life, — with a copy of a scrap torn out of another's life, or rather from his panorama of all life, his general view of life; and I need to know just where on my panorama of universal life I am to insert a recopy of this copied scrap. Here note well that no sign can ever fully direct its interpreter where upon his own panorama any copied scrap from another's that contains that same sign ought to be attached: and the reason is obvious. The utterer's sign can embody nothing but a bit of the utterer's idea of his own life.

Signs mostly function . . . between two minds, or theaters of consciousness Before the sign was uttered, it already was virtually present in the consciousness of the utterer, in the form of a thought.

Also in Ms. 318 Peirce observes that “the whole significance of a sign depends upon collateral observations.” So even a weathercock “having been devised as everyone knows to show which way the wind blows” could not be simply an indexical sign as he noted in the 1867 “New List” paper and for years after without the collateral observations about how it is created and what it is designed to do. In this case the inventor is the utterer and the weathercock is a sign of the inventor's thoughts, and since we know from collateral observations what the function of a weathercock is and how it has been constructed, it's variable motion is not only a sign of the direction of the wind but also, Peirce notes, a sign to us that it is not jammed by rust. Ms. 318

As stated at the outset, Peirce, the semiotic backwoodsman, was overwhelmed by the scope of the task his theory of signs presented. In a way the years of theorizing about logic, science, and mathematics, while providing him with many useful tool of analysis, also provided a vast labyrinth of possible avenues for the study of study. “My idea of a sign,” Peirce wrote, “has been so generalized that I have at length despaired of making anybody comprehend it . . .” (Ms. 278a) Scholarly focus on the classification has obstructed recognition that signs are “the same as semeioses, or units of processes” governed by a triadic telos. ((Carl R. Hausman, *Charles S. Peirce’s Evolutionary Philosophy* (Cambridge: Cambridge University Press, 1993), p. 72.)) Another insight may be found in the view that Peirce did not mean one thing by ‘semiotic causation’ but that the process could differ depending on the signs generated by the process. ((Menno Hulswit, “A Guess at the Riddle of Semiotic Causation,” *Transactions of the Charles S. Peirce Society*, Vol. XXXIV, No. 3 (Summer, 1998), pp. 641-88)) I believe that Peirce intended to create a general theory of sign action. The fact that he defined Sign, Object, and Interpretant at the outset is evidence enough of that. I also believe that final causation and the influence of the Interpretant must play a significant role in such a theory. Peirce implied as much when he wrote:

*The action of a sign calls for a little closer attention. Let me remind you of the distinction referred to above between dynamical, or dyadic, action; and intelligent, or triadic action. An event, A, may, by brute force, produce an event, B; and then the event, B, may in its turn produce a third event, C. The fact that the event, C, is about to be produced by B **has no influence at all upon the production of B by A.** It is impossible that it should, since the action of B in producing C is a contingent future event at the time B is*

produced. Such is dyadic action, which is so called because each step of it concerns a pair of objects. CP 5.472 (Emphasis added)

Should we assume, then, that Peirce meant to say that in triadic action, which is semiotic action, the production of *C* by *B* is an 'influence' on the production of *B* by *A* ? I believe this to be the case, not only from the textual evidence cited about showing that signs come into being only in an environment of interpretation but also because such a concept is intimately connected as a leitmotif to other areas of Peirce's philosophic work, as was noted in previous lectures.

One final word. Peirce's theory of signs is a natural outgrowth of his metaphysical theories. What is the world like such that signs are possible? Neither physics nor psychology, nor any of the social sciences have answered that question or even comprehended the deep challenge posed by it. What Peirce is telling us is: If sign action is possible, then the universe functions in a far different manner than the picture of it presented in the modern scientific disciplines.