An Introduction to Peircean Semiotics and the Philosophy of Inquiry

Charls Pearson

Associate Editor of *CSS*
American People's Ambassador to China for Logic, Semiotics, and Peirce Studies

Abstract: With this issue, *CSS* introduces a new section emphasizing the semiotics of Charles Peirce and his philosophy of inquiry. This will be a regular feature, appearing in every issue. The section covers both topics because Peirce regarded both semiotics and philosophy of inquiry as the same subject. In a future issue, we hope to present in this section a forum dealing with the reasons that he regarded them as identical.

I. Purpose

Our purpose is to introduce Peirce's science of semiotics and philosophy of inquiry not only to Chinese scholars, but also to scholars of the entire world. The Chinese are familiar with John Dewy, even to the point of sometimes calling him the "Chinese Philosopher". Dewey used ideas and concepts from Peirce's philosophy. He just didn't call it semiotics. He did, however, emphasize and elaborate on Peirce's philosophy of inquiry, calling it his primary logic. Many European scholars think in terms of Saussurian *semiologie*—not semiotics. Altho de Saussure was born 18 years after Peirce, he never had the advantage of having studied Peirce. And altho de Saussure's heart was in the right place, he never had the advantage of Peirce's knowledge of math, science, and history of philosophy. As I declare in every lecture that I give, "You cannot become even a decent semioticist in the twenty-first century until you have first mastered mathematics and science."

Many scholars regard Peirce's semiotics as too difficult to study. Indeed, De Saussure's *semiologie* is much simpler, in fact, too simplistic. It does not represent or explain the facts of the semiotic world, and has even been proven to

be a dead-end attempt to develop a science—one, in fact, that Peirce had already developed.

This section will include papers covering three broad topics: papers on applications, papers seeking a better understanding, and even papers extending Peirce's semiotics and philosophy of inquiry. But because Peirce is so badly misunderstood, only papers that display a mastery of the subject and even try to extend the frontiers of Peirce scholarship will appear here. This section is open to all such investigators.

‖. Semiotics, logic, and inquiry

Returning to the question of whether semiotics and philosophy of inquiry are the same subject or not, we are reminded that Peirce also regarded logic and semiotics as the same subject. But that was only in his final years. Most of his life he vacillated between regarding logic as a subset of semiotics and regarding semiotics as a subset of logic. As semiotics has developed as a science, however, we have now come to recognize that logic is but one science among very many semiotic sciences, all encompassed under the master umbrella, the paradigm science, of semiotics.

Logic, psychology, sociology, economics, anthropology, linguistics, historiology, ethnology, theology, ethics, esthetics, information science, and many, if not all, of the other human sciences are now recognized as semiotic sciences. There will be many examples of all of these in this section from time to time. In fact, in this first issue of the section, we have a paper by Robert Hatten on the use of musical esthetics to examine the details of several of Peirce's pragmatic sign components. In the next issue we will have a paper by James Liszka on combining Peirce's semiotics and theory of inquiry to develop a more powerful approach to ethics. And I'm sure that from time to time, I will include one of my own papers using Peirce's semiotics to improve our understanding of logic.

So, is it possible that the science of inquiry may come to be seen as merely one of the very many semiotic sciences? Who knows? But this sounds like another good topic for a future forum.

Thomas Sebeok declared semiotics and life to be identical. Are then life and inquiry identical? Eliseo Fernandez gets us started on a search to answer this inquiry about inquiry by analyzing several aspects of Peircean semiotics that relate to the concept of life itself. These are, first of all, relationality, followed by temporality and self-reference, but concentrating primarily on temporality. This paper is an expansion of some remarks that I heard Fernandez make at the 2009 Semiotic Society of America (SSA) annual meeting. Fernandez is among the finest interpreters of both Peirce's semiotics and his philosophy of inquiry,

especially as applied to the life sciences.

I have already mentioned Robert Hatten's paper using Peirce's semiotics to analyze musical esthetics in such a way as to achieve a better understanding of Peirce's concept of sign. This paper was his Presidential Address to the SSA. We are very lucky to obtain the right to publish it in *CSS*.

Hatten uses Peirce's concept of *interpretant* to better understand the concepts of *musical gesture* and *musical style*. He then uses these in turn to examine the details of the *source interpreter*, the *target interpreter*, the *source social and behavioral context*, and the *target social and behavioral context*, all components of the pragmatic structure of Peirce's concept of *sign*.

Elizabeth Cooke, a young specialist in both Peircean inquiry and Peircean mathematics contributes an address that she developed for the Chinese-American Bilateral Conference on "The Role of Charles Peirce as Founder of the Inquiry School of American Philosophy" sponsored by the Fudan University Center for Research in American Thought.

Peirce divided all inquiry dualistically into two extremes: truth-seeking, and urgent. Cooke calls these extremes "theoretical" and "practical" and notes that mathematics has both its practical aspects and its theoretical aspects. She then concentrates on what mathematicians do in practice in order to determine the ontological implications of practical mathematics (or applied mathematics). Her final conclusion is that practical and theoretical may be just the two extremes of a single and continuous range.

Steven Skaggs is an experienced designer and professor of design theory who also teaches Peircean semiotics to his design classes. Using Peircean analysis, he has noticed an interesting semiotic property of graphic designers—they may never construct arguments.

Finally, the initial essay is my own. I placed it first, not because it is mine, but because it raises the whole issue of the status of semiotic theory and Peirce's place within it. It is an expansion of some introductory remarks that I made in La Coruña, Spain at the first formal meeting of WATS, the World Association for Theoretical Semiotics, held in conjunction with the 2009 meeting of the International Semiotics Congress.

Ⅲ. Individual essays

As mentioned above, my essay on "The Status of Semiotic Theory" leads off the first grouping on "Extending the Theory of Semiotics and Inquiry". It combines the concept of *stages of a* science with Kuhn's concept of *scientific paradigms* in order to analyze the status of a science, and then applies this to the science of semiotics. It presents the four stages: pretaxonomic; taxonomic; nomothetic; and abductive/subductive (the proper terminology for what is usually

called "hypothetical/deductive") with the notion of *scientific paradigms* and the *subparadigm concept developed by the SSA's Special Interest Group for Empirical Semiotics* (*SIG/ES*).

Each paradigm must have seven subparadigms in order to qualify as a complete scientific paradigm. The seven subparadigms are: 1) philosophic (which includes the special metaphysics required by the paradigm, a grammar, a terminology, and etc.); 2) observational (which includes how to detect the subject phenomena, determine individuality, measure the observations, ask questions, and transform questions into experiments, etc.); 3) seeking invariance, generalization, and discovering the laws of the science; 4) developing abstract theories into data grounded explanations; 5) applied, solving practical problems, etc.; 6) developing new mathematical methodology for all the other subparadigms; and 7) developing a new *Weltanschauung* (learning a new way of seeing the old world thru the lens of the new paradigm, new problems, a new future, and a new world for the new science, etc.).

The essay concludes that most semiotic authors pay no attention to paradigms, that Peirce developed the first complete and successful taxonomy and taxonomic science, and that there is only one paradigm that ventures into the nomothetic and abductive/subductive stages.

Eliseo Fernandez completes the theory grouping with his essay "*Life and Temporality: the Place of Biosemiotics within Peirce's General Semiotics*". He examines the place of temporal relations within the relational framework of Peirce's semiotics. This requires him to call on a new relational world-view which he dubs the "relational turn". This relational turn requires the recognition of the relational nature of all reality, including the repudiation of nominalism and establishing realism as the *Weltanschauung*, the explicit metaphysics of semiotics.

He then examines the new relational metaphysics thruout a range of the traditional sciences, finally noting that all triadic relations share the properties of radical temporality and self-reference. Using the fact that semiotics depends explicitly on triadic relations, he then uses semiotics to analyze the triadic relation of temporality. He thus finds that organisms possess two different kinds of temporality: intrinsic and relational, allowing him to distinguish between anthroposemiotics and biosemiotics.

Fernandez draws a contrast between the symmetric nature of the NOW relation and spatial relations and the antisymmetric nature of the BEFORE/AFTER relation that marks the irreversibility of time and the INFERENCE relation of logic to suggest a connection between time and logic.

He concludes that in order to expand our understanding of semiotics we should inquire into the relations of temporality and semiosis. Also, in order to

explain the connections between anthroposemiotics and biosemiotics we need to clarify the semiotic properties of temporality. Finally, he advocates a more relational approach to all of semiotics in general.

The next grouping of papers all concern attempts to improve our understanding of Peirce's semiotic theory. It leads off with Robert Hatten's SSA Presidential Address "On Contexts, Complexity, and Continuity: Grounding Peirce's Theory of Semiosis to Explain Intersubjective Interpretation, as Exemplified by Mozart".

He starts by examining the pragmatic context of the sign and notes how potential signs use this pragmatic context to activate entire bodies of knowledge, which he calls "integrative competencies", which in turn constrain the range of potential interpretants. Hatten focuses on that body of knowledge that he knows best, musical style, and argues that such pragmatic contexts constitute a crucial grounding for interpretation and thus complete Peirce's theory of signification. His goal is to use an example from Mozart to show how such grounding provides a stable, intersubjective, range of interpretation for listeners familiar with the relevant style.

Hatten defines his use of the word "grounding" to mean that culturalized competency or vast network of habits that guides and constrains interpretation. This is the same concept that Searle called the "background and network" and I called the "social and behavioral context".

Hatten first agrees with Fernandez that the basic sign relationship as it functions in acts of interpretation is best understood in terms of relations and then introduces the triadic nature of the interpretant relation and the infinite chain of semiosis.

He can now state his goal more precisely: to show how chains of interpretants, which have accumulated over time to create webs of meaning, can become the systematic habits of a style that guide the interpretation of musical works, and these habits lend such consistency to our acts of interpretation that an intersubjective security is achieved.

He then defines an esthetic style as the grounding context for interpreting a work of art. This definition shows the close relation between the thought of Fernandez and Hatten, since it displays the rich continuity between the biological environment of an organism and the stylistic context of a work of art.

Thus by starting with the pragmatic context, Hatten shows its relation to the interpretant. Then by analyzing the chain of interpretants which accumulate over time, he clarifies the nature of the pragmatic context for styles, and finally how styles aid future interpretation with increased understanding.

Then, using measures 1 and 2 of Mozart's *Requiem* as an example, Hatten shows how an already practiced stylistic competency allows for lightning-fast

recognitions and further interpretive cognitions, using multiple parallel processing in the brain, which help the interpretant integrate a number of musical oppositions and emerge as a fully formed expressive interpretation. His example also demonstrates how stylistically grounded, and hence intersubjectively stable, our underlying acts of interpretation really are.

The second essay in this grouping is Elizabeth Cooke's "*Understanding Peirce's Mathematical Inquiry as a Practice: Some Ontological Implications*". She is interested in determining the kind of reality demanded by Peirce's theory of mathematical inquiry.

Peirce, who was normally antidualist, deliberately adopted a dualism for inquiry. He proposed one kind of inquiry for truth seeking matters which he called "pragmaticism", and another for urgent matters which he called "intuition". So Cooke's first task is to notice that mathematicians use both kinds of inquiry, which she calls "theoretical" and "practical", and then examine the most popular current solution for each approach.

She examines different ways to inquire into and characterize mathematical reality, including Peirce's own views, and finally decides to take a practical look at what mathematicians actually do in practice. Thus the title of the essay. From this standpoint, she decides that the Quine/Putnam Indispensability Thesis and Angus Kerr-Lawson's bicategorial view present the most recent popular solutions to each side of the dualism, but that

> ... the Indispensability Thesis must be extended beyond the mere role mathematics plays within science, to a more pragmatic and dialectical view of the relationship between science and mathematics. Each (view) is indispensible to the other within a more general and ongoing scientific inquiry, which evolves over the long run.

After a brief analysis of the semiotic dimension of mathematics and the role of semiotics in inquiry into mathematical reality, she concludes that mathematics does study reality so that all that remains to be done is to determine whether the reality studied by mathematics is the same as the reality studied by the physical sciences. In order to do this, she next studies Peirce's own position on the reality of mathematical objects.

After analyzing much of Peirce's published writings on the reality of mathematics (she uses primarily CP and NEM), she concludes that Peirce's best statement regarding mathematical reality is CP 1.184: "Mathematics studies what is and what is not logically possible, without making itself responsible for its actual existence", and then she adds, "But the possibility which mathematics studies is real possibility."

But this still does not answer Cooke's primary question: "What is the relationship between the reality of mathematics and that which the physical sciences study?" In order to obtain this final answer, she turns to a detailed analysis of her two chosen solutions: Kerr-Lawson and Quine/Putnam.

Kerr-Lawson claims that science studies one reality and mathematics another. But this doesn't satisfy Cooke because mathematical objects cannot be separated from scientific objects. As she reasons:

> Both rely essentially on a scientific method of error-correction of ideas in relation to objects about which not only deductions are made, but also inductions and abductions, and both are carried forward to the final opinion in the long run.

This forces her to turn to her other chosen solution—the Quine/Putnam Indispensability Thesis which she thinks is the more Peircean view.

The Indispensability Thesis holds empirical justification to be the best model for all inquiry. And since mathematics is indispensable to science's process of empirical justification—so Quine and Putnam argue-mathematical reality is inseparable from scientific reality. To this Cooke adds:

> We cannot separate the scientific theory from its mathematical component to verify just which part of the theory is confirmed or ought to be accepted. So when we establish truth in natural science, we simultaneously establish the truth of the mathematics used in the science.

Now that she has established her view of mathematical reality, she turns next to what Peirce would or should accept the Kerr Lawson or the Quine/Putnam approach. After a short discussion of both sides of the argument, she seems not to reach a definite conclusion, but she continues her justification of monadic reality by examining the quasi-empirical nature of mathematics.

This gives her a chance to discuss the relation between semiotics and inquiry, concluding that both are fallible, both depend on interpretation, and both are unlimited. From this, she adopts a trial conclusion: mathematics and science must use the same methods of inquiry; therefore they must study the same reality.

She immediately moves on to discuss another trial argument involving whose point of view we should adopt in determining what reality mathematics involves. There are three choices: the mathematician's, the scientist's, and the philosopher's. The mathematician assumes a separate reality, the scientist

assumes a single reality, while the philosopher must make sense of both and therefore assumes a stance somewhere between that of the mathematician and that of the scientist.

This allows her to reintroduce Peirce's inquiry dualism involving theory and practice, yielding another trial conclusion: when we are doing mathematics, we assume a split ontology as Kerr-Lawson argues but when we're engaged in scientific inquiry which uses mathematics in an indispensable way as Quine and Putnam argue we assume a monism. Since Cooke has previously argued that the theory/practice distinction is really not a dualism but only a difference in degree where in practical matters you must hold a belief, but in science you can afford to hold some claims provisionally, but that there is a mixture of both in each and that this line is a gray one①, her trial conclusion is that the inquiry dualism cannot hold for Peirce's pragmaticistic philosophy of inquiry and theory of semiotics. Thus there is no immediate solution to the ontological implications of mathematics as a practice. This last trial conclusion appears to be her final one.

Ⅳ. Summary

As can easily be seen, this section carries a wide range of material on Peirce studies, even while limiting itself to Peirce's theory of semiotics and philosophy of inquiry. In forthcoming issues, an even wider range of offerings will appear. Our hope is that these studies will stimulate interest in Peirce and that eventually some of our own readers will begin to contribute to the advancement in Peircean semiotics and inquiry.

---

① I have also argued along different lines to the conclusion that theory and practice are the two extremes of an inquiry continuum. See (Pearson, 2008: 18 and Fig. 7) listed in Cooke's references.