Semiotics and Philosophy in Charles Sanders Peirce
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Edited by

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LIST OF ABBREVIATIONS

The following commonly accepted abbreviations are used to refer to the standard editions of Peirce’s works:


INTRODUCTION

This volume brings together the papers presented to the International Conference on Semiotics and Philosophy in C.S. Peirce held at the State University of Milan in April 2005. It also has, however, a more ambitious aim: scholars who were not present at the Conference were invited to send contributions so that some of the most authoritative voices in contemporary studies on Peirce, in particular from among those in Europe, could be included within a single collection. The intention is to encompass the reflections of philosophers in different fields—logic, philosophy of mathematics, theoretical philosophy, analysis of language. They were to present the results of their studies of this thinker and indicate new lines of research while giving the non-specialist a clear idea of what it means today to address the many aspects of knowledge introduced by Peirce, without doubt the most prolific and versatile mind ever to have emerged in American culture. In short, this historical—but also in a broad sense ideal—figure is the focal point for all those who have generously contributed to this volume. They compose a complex polyphony in which each instrument interprets in its own way a score that in effect, as scholars well know, has always been incomplete but for this very reason open to many variations, some of them very fruitful.

Charles Sanders Peirce (1839-1914) is now referred to with increasing frequency in the most varied fields, from logic to epistemology, semiotics to linguistics, and mathematics to law. Nevertheless, his ideas are little known due to the difficulty in accessing his writings, made up of thousands of often unordered pages not widely translated into other languages. The problem of being able to see Peirce’s own formulation of his ideas is being solved in part by the mammoth task of bringing out the collection of his Writings. But this involves sorting out more than 100,000 manuscript pages and the work is still far from completion. Peirce still appears to us in fragments; just think that he never got as far as publishing a single philosophical monograph. And also fragmented into a thousand currents are the studies dedicated to him in every part of the world, from Japan to Croatia, as a look at any bibliography on the subject will show. Yet it is a well-known fact that this philosopher is the father of pragmatism and founder of modern semiotics as well as the inventor of the logic of relations and the system of writing he called “Existential Graphs”. He was in fact the last philosopher able to master very different fields of study so that he is deservedly called the “American Leibniz” and stands out as the undoubtedly greatest American thinker. In his own country, however, his work
is still widely neglected and people prefer to read his pupils, William James and John Dewey, who often distorted his thinking even though they developed it in other fertile directions. In Europe, Peirce is increasingly read and studied. As mentioned during the Conference, the example of Italy provides a good demonstration of this. Here, as far back as in the 1970s, the work of Umberto Eco (chairman of the first session) in the strictly semiotic field and that of Carlo Sini in theoretical philosophy made it possible for a complex and convoluted thought—“flashes of brilliant light relieved against Cimmerian darkness” as James put it—to become a powerful guiding beacon for a whole series of theoretical questions. This may well have happened for the very reason that though he put together a very solid and authoritative philosophical corpus, Peirce never presented it in a finished form and so left to those who followed in his wake a wide range of possible readings as well as the opportunity to indulge in free and varied interpretation—always irresistible for anyone engaging in philosophy.

So it is semiotics and philosophy or, better, semiotics as philosophy and philosophy as semiotics, which emerge from a reading of these papers. At this point, therefore, it is worth saying something on semiotics as it is understood here. We believe that Peirce did not engage in the study of signs with a view to establishing a specialist technical discipline like the one that is now taught in many of the new degree courses. He understood semiotics as the study of the referential sign relation between sign, object and interpretant. This relation can activate an unlimited semiosis that is able to overwhelm both reference to an object outside interpretation and reference to a subject abstracted from the very form of life and communication that makes him what he is. His philosophy, then, reflects on one side a complex hermeneutical interplay between logic and ethics and, on the other, a pragmatics of a realist and universalist rather than empiricist kind. For Peirce, semiotics is philosophy in the broadest sense of the term: a theory of categories, an expression of modes of being, an analysis of knowledge and the question as to what the universe consists of, as well as a description of what we are and what we are prepared to do. And philosophy is semiotics: a fundamental reflection on the theme of reference and of distance, of symbolic mediation, of being present for something absent. We could go so far as to say that this has been the case since Heraclitus, who in fragment 93 attributes to the God Apollo the obscure ability of the semainein: “The Lord whose oracle is at Delphi neither speaks nor conceals, but gives a sign”.

There is indeed a thread running through all of Peirce’s writings however diverse and inconsistent with one another they may appear to be. This thread consists of the brilliant intuition of the sign relation and its infinite references but also, and inseparably, of the question as to the relation that links man to nature, nature to its interpretant and the interpretant to the experience
constituting it, which can be of both a logical and practical kind. This thread is Peirce’s tone—if we can put it like that—his tone of voice and the tone of his writing, imprinted on the page in letters of fire each time he embarks on giving expression to his thoughts whether on astronomy or algebra, economics or esthetics. It is our hope that this tone is also present in the contributions to this volume. To varying extents, they present this great thinker’s ideas not only and not so much putting the emphasis on his answers to the many questions posed by his time—in part also ours—but highlighting the questions that he posed to himself, full of meaning, torment and curiosity. They are questions that can serve today as a springboard for doing good philosophy, which it should be remembered is love of knowledge, hence endless questioning, and not investigation channeled into a school of thought, a set of problems with given solutions, notions to be reeled off, in the desperate attempt to be objective and methodical.

Peirce was in this sense a true philosopher, who was able to engage with the technical languages of his time without losing sight of the only enquiry that could give them meaning. There are no contents that are philosophical in themselves and a philosophical doctrine only exists within the conventional a posteriori demarcations applied to certain historical events. To do philosophy does not mean dealing with being or acting or even the sign, addressing this or that theme but, instead, adopting the approach of the philosopher, of he who wants to be aware of his own gesture and is prepared to shift the question further and further back. Peirce undertook a radical epistemological investigation into the foundations of all knowledge, from the a priori kind that is mathematics and logic to that of the empirical sciences and of common sense. This line of enquiry was traced back to the extent of going beyond the usual distinctions at which traditional thought stopped, such as that between perceived and inferred knowledge or, even more, between matter and spirit. Although he very skillfully set down a methodology of knowledge—containing considerations that would still be of great value even when taken out of their philosophical context—he did not confine himself to this but pushed the question as to the possibility of knowledge to the extreme limit of a new cosmological conception. Now, this Peircean epistemology is entirely and authentically semiotic. Semiotic is the categorial starting point and semiotic is the awareness that reality is subject to being understood in and only in as much as mind and nature are two faces of the same coin, the two sides of the same sign process.

Peirce absorbed the lesson of Kant with great perception but went further by understanding the semiotic value of the categories. This enabled him to abandon what he saw as dogmatic in Kant (the thing-in-itself as the hypothesis of a pre-sign sensible manifold, but also the unity of apperception as the basis of objective knowledge). From its expression as a mode of the intellect, the idea of
category soon became a mode of the sign, that is—as Peirce saw it—of being. Also many other notions underwent significant modification as his writings followed one after the other. The common fate of the conceptual tools forged by Peirce is to be put to the test in ever new theoretical contexts, used at every point to which they are able to lead us as jimmies to break open the old containers of ideas transmitted by tradition. Thus, the idea of habit, an operative-methodological notion, was brought within cosmology; that of abduction served to establish the affinity between man and the universe; and the continuity principle was not only introduced to explain Cantor’s sets but also became a quite powerful criterion for explaining all of reality. In our view, it is for this very reason that Peirce is still read today and not just by professional philosophers; his ideas are seen not only as applying to limited fields of knowledge but also as keys to open up the whole of experience. We then find out that many law scholars work with his concept of abduction, which has also demonstrated its usefulness in various other disciplines like history and computer science. Likewise, the continuity principle, or synechism, can migrate from mathematical to logical analysis and even touch upon theology.

Peirce was also and above all a great logician and there are countless anecdotes on the number of original ideas he can boast of. But far more important is the fact that he made fundamental contributions to the algebra of logic, opening the latter up to analysis of the entire universe of relative terms. As is well known, the dominant tradition in logic during the twentieth century took a different path from that of algebra; nonetheless, we are still today reckoning with the work of Peirce. More than all of this, however, what we want to underline once again is that, hand in hand with his strictly logical research, Peirce never stopped reflecting intensely and radically on the meaning and foundation of this research. He contemplated the models of thought used in logic and mathematics and assigned to each of these disciplines its own place in the spectrum of the sciences. This is just one example—but a fundamental one in the philosophical debate—of what was said above regarding Peirce’s non-specialist approach even to subjects that are more specialist by definition. And again, Peirce’s analysis of the foundations of logical thought is carried out semiotically. It is from his study of the signs used in the deductive sciences that Peirce ends up by giving us acute and original answers to traditional questions in the philosophy of mathematics and logic: how does mathematics give us new knowledge? Where does the evidence in a demonstration come from? How can universal results be achieved? Peirce analyzed the graphic signs with which mathematicians work concretely and reread them in the light of the semiotic tools that he fashioned himself. Those same tools that were applied with mastery to identify a new table of categories as well as to follow a phenomenological path that can now help us to understand the legitimacy of logical thinking,
which Peirce centers on the notion of diagram. In all logical-mathematical writing he saw diagrammatic writing, the material representation of abstract relational structures. He held that the mathematician cannot but think diagrammatically. It is starting from this consideration that his research arrived at the system of Existential Graphs, which many insist on seeing as a senile extravagance but which is underpinned by profound theoretical evaluation. Unfortunately, contemporary logic and philosophy of mathematics have inherited from the tradition in the 20th century a strong negative bias against diagrammatic reasoning. This prejudice tends to make us doubt, sometimes unconsciously, anyone who claims the right to base themselves on similar oddities. What sort of strange devices might diagrams be, which instead of ensuring that complete transparency that symbolic languages endeavor to achieve, are encumbered with all their concrete spatial qualities so that it is very difficult to distinguish what belongs to the essence of pure thought from what is superimposed on it incidentally? A widespread feeling tells us that reasoning should be represented linguistically and symbolically in order to guarantee its independence from the unessential instruments used to give it expression. As often happened, Peirce went against the general trend in this respect. Not only did he never strive to reach pure thought stripped of its chance coverings, he maintained rather that thought does not exist at all outside of the material signs which express it on each occasion. To reason means to transform the concrete sign of the premises to reasoning into the concrete sign of its conclusion, and nothing is left to analyze when we eliminate these signs under the illusion of grasping their ethereal content. Peirce’s teaching goes very deep and ends by encompassing not only the thought of men but also all of nature. Even nature, he tells us, evolves by transforming signs into other signs; it too embodies thought of an inferential kind.

We believe that the papers presented here bear witness in the most direct way to the vitality of Peirce’s philosophical reflections. There is no celebratory homage to a great thinker but rather a keen and dynamic dialogue with his ideas. The authors talk to Peirce, discuss questions with Peirce in mind, sometimes arguing against his conceptions and pointing out their aporia, which in wide-ranging and fully philosophical thought are inevitable and also desirable. These papers display a vigorous approach to Peircean studies that is the true hallmark of philosophical enquiry. Philosophy—this great debate that unfolds through the centuries—grows and enriches its most deeply entrenched quality when it is truly able to listen and mingle, to contaminate itself internally and transfer cognitive tools from one part of its domain to another, readapting and reinterpreting them according to new requirements and the particular context. In our view, when we are given the possibility to take a writer outside himself, this is the clearest indication that he is still productive. It is gratifying to see in these papers that
today philosophers use Peirce’s ideas to reach beyond him. What we find in them are not detailed comments on his writings or precise explanations of his notions but, instead, reflections and arguments that apply the philosophical tools learnt from him to the treatment of new problems and the formulation of new themes, both of which have arisen in the most varied areas as original theoretical necessities independent of Peirce. Thus it is that Peirce’s cultural approach and his single conceptions can help us to get our bearings when we reflect on human actions. They can guide us in going back over some of the stages in the history of mathematics and take us into a dialogue with contemporary philosophers or those in the distant past, providing us with a deeper understanding of the conceptions on which we ourselves were formed together with our entire thought. This is how Peirce, in his very person, gives truth to one of the most distinctive features of his thought: that general sharing of knowledge that for him lay at the root of all genuine progress in it. We all take part in research and this condition takes on an ethical dimension for which philosophy is able to account.

Peirce, therefore, claimed a very elevated role for philosophy. This is because philosophy is not weak but strong knowledge, which can still teach the various scientific disciplines something and cross the rigid distinctions between them. Its strength is determined by the engagement of the question that moves it: the question as to the meaning of the practices that a certain society puts into effect and, hence, the question about this very questioning; the question about what is “meaning” and what is “practice” not in this or that theoretical operation but in general and from the very beginning. Meaning and practice, semiotics and pragmatism: this is what occupied Peirce throughout his entire life and we believe that he still has much to teach us on it. He therefore comes across as more of a teacher than an academic, reminding us like Socrates that the function of philosophers is to act as gadflies to culture, rather than to shut themselves up in the ghetto of “elegant conversation” to which our age would like to confine those who engage in pure thought.

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Susanna Marietti
CHAPTER 1
PEIRCE’S CONTRITE FALLIBILISM

Nathan Houser

My aim here is to reconsider the meaning and scope of Peirce’s doctrine of fallibilism. It may be helpful to begin by reviewing a contemporary account by Nicolas Rescher taken from his article on “Fallibilism” in the Routledge Encyclopedia of Philosophy. According to Rescher, fallibilism is a “doctrine regarding natural science” which holds that “scientific theories cannot be asserted as true categorically”. Fallibilism “does not hold that knowledge is unavailable” but only that “it is always provisional”. Rescher says that the doctrine of fallibilism is “most closely associated with Charles Sanders Peirce”.

Rescher holds what might be regarded as a strong version of fallibilism, according to which we are to understand that any scientific theory or system will ultimately fail. A weaker version might hold only that any scientific theory or system might ultimately fail. The ultimate failure, or the possible failure, of any theory is explained by Rescher as follows: “Rational inquiry links the products [of] our understanding to the experienced conditions of a world in which chance and chaos plays an ineliminable role, so that there will always be new conditions and circumstances that ultimately threaten our rational contrivances”. Rescher believes that this situation lends itself naturally to a Kuhnian interpretation of scientific progress.

Other than the role played by chance and chaos, principal grounds for fallibilism that Rescher gives are that available observational data underdetermine theories, and a similar but not equivalent point, that concrete realities are always experienced somewhat ambiguously. The ambiguity Rescher has in mind results from the need to interpret data, to put it into a theoretical context, in order to make sense of it. But, alas, since theories are underdetermined by observational data, any interpretation of data “carries in its wake the prospect of ambiguity, diversity, and discord”. According to Rescher, we occupy the predicament of the “Preface Paradox” exemplified by an author who apologizes in his or her preface for errors that have doubtless made their way into the work, while blithely remaining committed to all the assertions made in the body of the work itself.

Fallibilism, historically and perhaps conceptually, is a doctrine closely aligned with scientific realism. This is probably because fallibilists are naturalists,
generally speaking, who regard knowledge as an outgrowth of tested experience. Fallibilists have, therefore, generally been concerned with “protecting scientific realism”, to use Rescher’s terms. He says that Peirce’s stratagem was to adopt a convergence theory of inquiry according to which, though always fallible, scientific theories may be expected to “grow increasingly concordant and their claims less and less differentiated”. It seems, then, that according to Peirce we may expect science to increasingly approximate the truth, that state of information that is the limit toward which it is progressing.

Rescher doesn’t believe Peirce’s account to be plausible. He claims that the fact that scientific progress “is not simply a matter of increasing accuracy” but is “genuinely revolutionary”, involving fundamental changes of mind about how things happen, “blocks the theory of convergence”. According to Rescher, “realistic fallibilists” have to be more radical than Peirce. We have to adopt a “Cognitive Copernicanism” and hold “that there is nothing cognitively privileged about our own position in time”. “A kind of intellectual humility is in order”, Rescher says, “a diffidence that abstains from the hubris of pretensions to cognitive finality or centrality”. We shall see that in fact Peirce is in agreement with this admonition. Rescher understands that his fallibilism has a decided skeptical impetus which he thinks Peirce failed to overcome with his convergentism. This appears to leave scientific realism at risk.

Rescher mitigates his account of fallibilism by emphasizing that he regards the doctrine as applying to scientific knowledge but not necessarily, or at least not so radically, to the “knowledge of everyday life”. Because we are less committed to “detailed precision” in everyday life and, conversely, because in science we “deliberately court risk by aiming at maximal […] informativeness and testability”, fallibilism is “a more plausible doctrine with respect to scientific knowledge”.

Margolis on Peirce’s Fallibilism

Now I will turn to Peirce’s fallibilism but at first indirectly by considering the account given by Joseph Margolis in his 1998 article in the Transactions of the Charles S. Peirce Society. It was this article and Margolis’s more recent but less systematic treatment of fallibilism in his book Reinventing Pragmatism that led me to take a new look at Peirce’s fallibilism and its scope within Peirce’s system of philosophy.¹ Margolis’s paper is disturbing and unsatisfying in many respects yet overall I find it insightful and quite helpful. Margolis begins with an observation

¹ Significant portions of this section, as well as note 2, are taken from my 28 Dec. 2004 presidential address to the Charles S. Peirce Society (published in Transactions of the Charles S. Peirce Society, 2005).
that I don’t remember hearing before: that Peirce’s doctrine of fallibilism is a
linchpin of his philosophy. Certainly fallibilism is commonly regarded as one of
the many interesting doctrines to be found in Peirce, even as a defining doctrine,
but Margolis’s claim that it is a linchpin of his philosophy caught my attention in a
new way.

Margolis represents Peirce’s fallibilism, correctly I believe, as “an important
but sprawling doctrine”, one that Peirce “never entirely domesticated”. He
describes Peirce’s fallibilism as consisting of three “serially nested themes”: (1)
*fallibility*, the “thesis that, with regard to *any* proposition, it is humanly possible to
hold a mistaken belief”, which is “tantamount to a denial of Cartesian
indubitability”; (2) *self-corrective inquiry*, the thesis that “it is both possible and
likely that, for any mistaken belief, a society of inquirers can, in a pertinently finite
interval of time, discern its own mistakes and progress toward discovering the true
state of affairs”; and (3) a supporting metaphysics that marks Peirce’s fallibilism as
more than just an epistemological doctrine (Margolis, 539).

Margolis claims that Peirce failed in his defense of fallibilism. According to
Margolis, Peirce’s failure “is extraordinarily important for the ultimate fate of
many other contested theories that Peirce links to his doctrine”; in particular,
Margolis says that “Peirce’s realism and conception of thirdness *fail*, if the doctrine
of fallibilism fails” (Margolis, 536). So according to Margolis, what is at issue is
the very heart of Peirce’s philosophy. Margolis’s case against Peirce’s fallibilism is
based in part on his rejection of Peirce’s convergentism. But his chief complaint is
that Peirce’s fallibilism fails because of paradoxes that beset its enabling
metaphysics (Margolis’s third theme) and the unacceptable consequences of trying
to resolve those paradoxes. It turns out that the most damaging paradox, one
Margolis calls “the paradox of the known object”, simply dissolves on a careful
reading of the relevant Peirce text.2 Although, in my opinion, none of Margolis’s

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2 The Paradox of the Known Object (according to Margolis) results from two incompatible
claims, both, Margolis says, made by Peirce and required by his fallibilism.

Claim 1: “the act of knowing a real object alters it” (CP 5.555).

Claim 2: “the real thing is as it is, irrespectively of what any mind or any
definite collection of minds may represent it to be” (CP 5.565).

Margolis argues that this incompatible dualism runs throughout Peirce’s doctrine of
fallibilism and, effectively, destroys it. Margolis claims that “Peirce characterizes all of his
principal notions—truth, reality, objectivity, mind, existence, thirdness, community, belief,
knowledge, even pragmatism and fallibilism—in two distinct ways: in one, in accord with
the consensual life of actual societies working in finite ways; in the other, in accord with the
vision of the ideal limit of infinitely extended inquiry, in which the first is interpreted”
(Margolis, 553-554).

He goes on: “I hold that there is an analogous incompatibility involving each and every
one of Peirce’s central notions and that the primary function of the full doctrine of fallibilism
is to interpret and reconcile the double interpretation of all these notions. Effectively, the
arguments against Peirce’s fallibilism fully hits the mark, what matters here is that his provocative treatment succeeds very well in showing Peirce’s fallibilism in a new light and in revealing it to be a key Peircean doctrine calling for attention. In gathering in the name of Peirce’s fallibilism all of the doctrines and principles that either directly or indirectly underwrite it (he links fallibilism with, at a minimum, Peirce’s evolutionism, his logic of relations, his realism, his doctrine of thirdness, his theory of thought and mind, and his views on progressivism in science), Margolis gives a new sense to the meaning of Peirce’s fallibilism and its centrality for Peirce’s pragmatism and for his thought in general.

What Peirce Says About Fallibilism

Provoked by Margolis, I want to reconsider the scope of Peirce’s fallibilism and to begin working out a fuller picture of what it really amounts to. Let’s begin with a few background considerations. Recall that Peirce distinguishes between existence and reality, and that neither is absolute. Consider, for example, the difference between the two is what obtains in particular, determinate, and finite human actions and what obtains in the single, all-inclusive ideal, evolutionary continuum viewed at the limit of the infinite sequence of all such finite actions” (Margolis, 554).

Margolis concludes his case against Peirce’s form of fallibilism as follows: “Thus: the ‘real’ is altered by action, in the sense of finite human life; but the ‘real’ is, also, what it is ‘irrespective of any mind,’ at the ideal limit of infinite inquiry. The Deweyan form of fallibilism jettisons Peirce’s third theme and holds to the first two themes. The price of such a retreat is to replace the would-be legitimation of a realism in science with a pious hope in favor of such a realism […]. It’s no good insisting that Deweyan fallibilism ever recovers objectivity and realism: it has no regulative principle to offer; but then neither does Peirce’s fallibilism, since its regulative principle operates, per impossible, only at the ideal limit of inquiry. The dilemma cannot be overcome” (Margolis, 554).

In dismissing Peirce’s fallibilism, Margolis has placed a lot of weight on the inconsistency of the two claims Peirce made in the so-called “paradox of the known object”. It is certainly interesting, if not revealing, that Peirce did not make both claims. Margolis missed the irony of the paragraph that contains the purported first claim. This is how Peirce put forward the alleged claim: “It appears that there are certain mummified pedants who have never waked to the truth that the act of knowing a real object alters it. They are curious specimens of humanity, and as I am one of them, it may be amusing to see how I think” (CP 5.555). Peirce then continues to elaborate the claim he is attributing to pragmatists who equate “the True” with “that in cognition which is Satisfactory”, a view he, as a self-proclaimed “mummified pedant”, rejects. So, on a more careful reading of the text in question, the paradox disappears—it disappears, anyway, assuming that Margolis is wrong in holding that Claim 1 is required by Peirce’s fallibilism (as Peirce obviously denies).
following quotation from Peirce’s 1893 paper on “Fallibilism, Continuity, and Evolution”:

If all things are continuous, the universe must be undergoing a continuous growth from non-existence to existence. There is no difficulty in conceiving existence as a matter of degree. The reality of things consists in their persistent forcing themselves upon our recognition. If a thing has no such persistence, it is a mere dream. Reality, then, is persistence, is regularity. In the original chaos, where there was no regularity, there was no existence. It was all a confused dream. This we may suppose was in the infinitely distant past. But as things are getting more regular, more persistent, they are getting less dreamy and more real (CP 1.175).

Now the infinite past when nothing was real and the infinite future when all reality will have a fixed existence are ideal limits and not assumed by Peirce to be historical absolutes. The upshot is that reality itself is in a continual state of growth.

What about truth for Peirce. The standard view is that truth is belief at the ideal end of inquiry—but we should bear in mind that, from the side of logic, truth is the value of a proposition, which in Peirce’s philosophy is an intellectual sign that mediates between an object or state of affairs and an interpretant (an effect on an interpreter). This means that truth is always relative on the one hand to the conceptual resources of sign users and on the other hand is constrained by the pragmatic conditions that pertain between the object and sign users. As long as learning continues and pragmatic conditions change, truth in this sense cannot be fixed in eternal stagnation.

In his Cambridge Conferences Lectures of 1898, Peirce rather notoriously made a distinction between matters of vital importance and the selfless advancement of knowledge and he considered whether our conception of truth varies accordingly:

But whether the word truth has two meanings or not, I certainly do think that holding for true is of two kinds; the one is that practical holding for true which alone is entitled to the name of Belief, while the other is that acceptance of a proposition which in the intention of pure science remains always provisional. To adhere to a proposition in an absolutely definitive manner, supposing that by this is merely meant that the believer has personally wedded his fate to it, is something which in practical concerns, say for instance in matters of right and wrong, we sometimes cannot and ought not to avoid; but to do so in science amounts simply to not wishing to learn (EP2: 56).

With these background considerations in mind, let’s consider at last some of Peirce’s own expressions of his fallibilism. At the beginning of his 1893 article, Peirce argues that we can never hope to attain absolute certainty, absolute exactitude, or absolute universality, through reasoning. But then he says “if
exactitude, certitude, and universality are not to be attained by reasoning, there is [...] no other means by which they can be reached” (CP 1.142): not by revelation, not through intuition of innate truths, not by direct experience, nor in any other way. So, “we can never be absolutely sure of anything, nor can we with any probability ascertain the exact value of any measure or general ratio” (CP 1.147). This seems mainly an expression of Margolis’s first theme of fallibilism but there are clear indications here of other parts of Peirce’s philosophy that will support the fallibilist stance.

A statement that I particularly like is this one: “Fallibilism is the doctrine that our knowledge is never absolute but always swims, as it were, in a continuum of uncertainty and indeterminacy” (CP 1.171). This seems to connect Peirce’s metaphysical doctrines of synechism and tychism in a crucial way with fallibilism.

In “The First Rule of Logic”, Peirce expresses his fallibilism indirectly in a passage leading up to his famous dictum: “Upon this first, and in one sense this sole, rule of reason, that in order to learn you must desire to learn and in so desiring not be satisfied with what you already incline to think, there follows one corollary which itself deserves to be inscribed upon every wall of the city of philosophy, Do not block the way of inquiry” (EP2: 48). The error of becoming so satisfied with what we already incline to think that we loose the will to learn is an offense that many metaphysicians are addicted to Peirce says, and it reveals itself in different ways: in absolute assertions, in claims that something or other can never be known, in claims that something is utterly inexplicable, and in claims that the final and perfect formulation of a truth has been achieved. This seems to be mainly a methodological and perhaps an ethical concern.

An indication that Peirce may indeed have held the broad view of fallibilism that Margolis recommends can be found in a passage from Peirce’s 1893 fallibilism paper which the editors of the Collected Papers included in the autobiographical remarks gathered as a preface for the Harvard edition:

For years [...] I used for myself to collect my ideas under the designation fallibilism; and indeed the first step toward finding out is to acknowledge you do not satisfactorily know already; so that no blight can so surely arrest all intellectual growth as the blight of cocksureness [...]. Indeed, out of a contrite fallibilism, combined with a high faith in the reality of knowledge, and an intense desire to find things out, all my philosophy has always seemed to me to grow [...] (CP 1.13-14).

Perhaps this is mainly a call for intellectual humility and the recognition that seeds of knowledge cannot any longer take root in minds that have become hardened and inhospitable to new ideas. That seems to be what he had in mind when he wrote, also in 1893, that “Nothing can be more completely contrary to a philosophy the fruit of a scientific life than infallibilism, whether arrayed in its old ecclesiastical trappings, or under its recent ‘scientistic’ disguise” (CP 8, G-c.1893-5, pp. 282-3).
Peirce stated explicitly that he did not expect fallibilism to be attractive to conservative thinkers (those who dread consequences) but to radicals. Not to cocksure radicals, but to radicals who try experiments and who are eager to carry consequences to their extremes. Peirce believed that such radicals are animated by the spirit of science and that it is among them that fallibilism will find its supporters (see CP 1.148).

There are many other characterizations of fallibilism in Peirce’s writings but these constitute a sufficient set of examples. One can see that there are intimations of the broad view that Margolis takes even though it is not explicitly stated and perhaps it wasn’t even fully recognized by Peirce.

**Peirce’s Sprawling Fallibilism**

In what follows I want to begin developing Margolis’s insightful observation that Peirce’s fallibilism is “an important but sprawling doctrine, which Peirce never entirely domesticated” but which nonetheless is a linchpin of his philosophy. Which parts of Peirce’s philosophy support, or are crucially linked with, his fallibilism? How do they fit together?

With his three “serially nested themes” Margolis has made a good start: Peirce’s fallibility thesis is wedded to the epistemological theory of self-corrective inquiry (Peirce’s convergence theory of truth), and these positions are supported by certain metaphysical doctrines. It will take a lot of work to get everything connected up in the right way—a lot more work than can be undertaken here. But I’m hoping that we can improve on Margolis and map out a path for future research.

To begin making a better map of the territory, we might consider what different arguments from Peirce lead to the fallibilist conclusion? Susan Haack, in her “Fallibilism and Necessity” (Haack, 43), writes that “Some of Peirce’s arguments for fallibilism [...] stress the limitations of [our] human cognitive apparatus (no infallible intuition); others point to the weaknesses of our cognitive methods (error in measurement, uncertainty introduced by inductive reasoning); and others [...] appeal [...] to limitations as it were in the content of our knowledge (indeterminism)”. These add to the picture Margolis framed.

Another approach is to consider sources of knowledge—not knowledge with a capital K, but our store of beliefs or, we might say, our information base. What are some of the candidates: instinct; perception; inference? Anything else? Insight, perhaps; intuition; inspiration; revelation; and, for Peirce, we don’t want to forget *il lume naturale*. And what about testimony? Of course I cannot here begin a proper analysis of each of these possible sources of knowledge but I will consider briefly whether any of these sources can be expected to provide more than a fallible
ground on which to build our knowledge structures. I think this will be revealing even though for most of these alternatives we already know Peirce’s answer from the passages quoted in the previous section.

I suppose instinct is a good place to start for perhaps it is there if anywhere that we might expect to find the bedrock we are looking for. In her illuminating study, “Peirce and Wittgenstein on Common Sense”, Rossella Fabbrichesi reminds us that both of these great thinkers used that very word and both believed in “a solid bedrock of indubitable beliefs (Peirce) or certainties (Wittgenstein) that [...] constitute[s] the solid ground of any possible knowledge” (Fabbrichesi, 188). This is the ground of common sense that has been inculcated in human thought over the ages, presumably through some kind of cognitive selection process, and its sanction, though it does not ask for sanction, is pragmatic. It is simply not questioned because it has served us so well. But as pragmatic habits of some sort, I think that we must regard instinctive beliefs as the ends of long-conducted rational or semiotic inquiries spread over centuries and, as such, there must have been an implicit inferential process that led to these long-established conclusions.

Fabbrichesi points out that it is not only instinctive beliefs that bring inferential or, more generally, semiotic processes to a conclusion but, contrary to the perhaps prevailing view that for Peirce semiosis is never-ending, she accepts Peirce’s later pronouncement (and maybe earlier as well) that not only can semiotic inquiry reach conclusions (final interpretants) but that for all practical purposes it does so all the time. These conclusions, as Fabbrichesi tells us, are indubitable just as our instinctive beliefs are indubitable: the conduct of life demands that we carry on without doubt. But we know, do we not, that not even bedrock goes all the way down. Peirce gave a number of examples of when bedrock gives way to “events beyond human control”. Take the case of the long-settled belief that “heavy bodies must fall faster than light ones”. This really was bedrock for many centuries and, as Peirce noted, any competing views were regarded as “absurd, eccentric, and probably insincere”. “Yet”, Peirce continued,

as soon as some of the absurd and eccentric men could succeed in inducing some of the adherents of common sense to look at their experiments—no easy task—it became apparent that nature would not follow human opinion, however unanimous. So there was nothing for it but human opinion must move to nature’s position. That was a lesson in humility (CP 5.385, n. 1).

Now I know that instinctive habits have been serving the species far longer than the once “long-settled” belief that “heavy bodies must fall faster than light ones”. But if the bedrock of instinctive beliefs runs deeper it may be only because these beliefs are so vague, as Fabbrichesi pointed out, and though that very vagueness helps give us the confidence we need to get on with life it is a weakness when it
comes to elaborated intellectual thought. In fact it will support rational structures only by remaining silent.

Much more could be said about instinct as a source of knowledge but to reach the end of this survey we must move on. As intellectual offspring of the late Enlightenment Epistemologists, isn’t it through perception that we expect most of our knowledge to be acquired? Remember Peirce’s claim that “[t]he elements of every concept enter into logical thought at the gate of perception and make their exit at the gate of purposive action” (CP 5.212; EP2: 241). So this must be the main source of what we call our scientific or our theoretical knowledge—our accumulated store of intellectual interpretants. But is there any avenue through perception that doesn’t lead past an inspection booth where “fallible” is stamped on all passports? Well, maybe there are no such inspection booths; in fact it may be that absence which has been the source of much confusion because perception does not own up to the fallibility of its own productions. But if we take the “fallible” stamp in hand are there any products of perception that we should be willing to exempt?

Probably not. I have already indicated in passing that perception seems to encompass the sensory-cognitive process that begins in sense impressions and ends with perceptual judgments. Neither the sense impression nor the percept expresses anything that we can add to our encyclopedias or that we can reason from so we are left with the perceptual judgment as the source of knowledge that somehow begins in sensory experience. That is what introduces the intellectual component into perception; for convenience, I think of perceptual judgments as attaching the equivalent of text, at the propositional level, to sensations (but take note that even pictures and diagrams can represent facts, so not all propositions are linguistic entities). But perceptual judgments in whatever form are, after all, judgments, and judgments are the conclusions of inferences. I will spare you the analysis but, according to Peirce, “abductive inference shades into perceptual judgment without any sharp line of demarcation between them” so that “perceptual judgments, are to be regarded as an extreme case of abductive inferences” (CP 5.181). These judgments become the “first premisses”, from which, in the course of our experience, we are able to draw more and more remote conclusions and fill out our encyclopedias. But knowledge acquired in this way cannot be infallible unless abduction is an infallibly truth-functional process of inference. Of course it isn’t. In

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3 We can think of perception something like Robert Frost thinks of poems: “A poem [...] begins as a lump in the throat, a sense of wrong, a homesickness, a lovesickness [...] It finds the thought and the thought finds the words” (Frost to L. Untermeyer, 1 Jan. 1916, Bartlett’s *Familiar Quotations*).
fact abduction, though it may be the most fruitful form of inference, is also the weakest form. So perception cannot be a source of infallible knowledge.\(^4\)

Because of the merging of perception with inferential processes I have already begun to consider inference as a possible source of knowledge. Peirce has taught us that there are three distinct varieties of inference: deduction, induction, and abduction. I am going to speed things up a little by asking the reader to admit with me that if any form of inference could be infallible it could only be deduction. We might say, I suppose, that a quantitative induction might similarly seem definite enough to be a candidate for infallibility, but I would argue that it is only because quantitative induction shades into deduction that this is so. But the point is moot because neither deduction nor induction is in fact a source of knowledge, according

\(^4\) This is not the place to go into detail about the structure and intricacies of Peirce’s theory of perception but for full disclosure I should point out that it is not unanimously accepted that Peirce succeeded in linking the sensory ground of perception, the percept, with the cognitive outcome, the perceptual judgment. At a recent conference on Pragmatism and Analytic Philosophy held in Rome (sponsored in March 2005 by Università Roma Tre Facoltà di Lettere e Filosofia and Centro di Studi Americani), John McDowell expressly stated that he doubts that Peirce could have succeeded in this and I believe that McDowell’s doubt that this link can be legitimately made is commonly shared by philosophers who belong to the ‘family’ that reveres Wilfrid Sellars as a forebear. Here is a problem that needs some volunteers. If among the readers of this paper there are students who are looking for a research project and are willing to take up this challenge, a good place to begin, after first going to Peirce’s own writings, is with a book with the strange title: “Kant and the Platypus”—well, that’s its title in English. I confess that I have not fully fathomed this profound work by Umberto Eco but I recommend it as the most stimulating examination of Peirce’s philosophy of perception I know of. I trust it is not out of place to give fair warning that Professor Eco’s book is not a book to pick up and breeze through and master in a single reading. I have tried that and failed. It came somewhat as a relief to me when I learned, although from a reviewer I don’t fully trust, that Professor Eco is recorded as having said that even a very smart reader should expect to spend two weeks on every page of Kant and the Platypus. There are 431 pages, including 38 pages of endnotes, which are very rich and must be read (although the typeface is smaller and will take more time, perhaps another week per page). So a very bright reader should expect to take 900 weeks (862 weeks for 431 pages plus an extra 38 weeks for the endnotes because of the small type). I calculate that it will take a bright reader about eleven and a half years to read this book, and for ordinary readers, or for relatively slow readers like me, whether bright or not, who knows how long it will take—anyway, I’ve only had five years so far to begin sinking my teeth into Eco’s Platypus. Peirceans who read Italian have a three year jump on those of us who must read the English translation. Of course the reason this book is so difficult to read is precisely because it is so rich with the history of ideas and with theoretical insights and inter-relationships. That is why students would do well to go to it first after Peirce. Naturally it will not be possible to read Professor Eco’s book even in eleven and a half years without reading many other books and taking a few courses along the way, but for those who are familiar with Eco’s works that is to be expected.
to Peirce: “Deduction Explicates; Induction evaluates: that is all” (CP 6.475). Every plank in the bridge we build over the “chasm that yawns” between our primitive yearnings and scientific knowledge is laid by abduction alone, so if abduction cannot give us infallibility then no other form of inference can. There should be no need for me to more than mention that even in the case of deduction, which does promise us that if we start out with infallible premisses at least we can be confident of preserving our infallibility, that in fact we can never be certain that we haven’t made a mistake.

It seems to me that the three possible sources of knowledge just considered, instinct, perception, and inference, are the principal candidates and we have found that in each case Peirce’s fallibilist conclusion is compelling. Earlier I listed a few other possible sources: insight, intuition, inspiration, revelation, the light of nature, and testimony. It seems to me that in the cases of the first five of these candidates the situation is much the same as it is for instinct—except that some of us may not regard the beliefs that arise from insight, intuition, inspiration, revelation, or the light of nature, as conclusions of inferences, however extended; on the contrary, we may regard them precisely as direct non-semiotic implantings or else as the result of some kind of special vision (for example, the perception of natural relational forms due somehow to our natural attunement to them). Notice, if you please, that I am not suggesting that Peirce himself endorsed any of these means as possible sources of direct knowledge; on the contrary, we know that he rejected the idea of non-semiotic belief acquisition, what I call knowledge implantings (although, in passing, it might be worth considering whether someone else’s inferentially acquired interpretant could conceivably end up in your head). But the question is whether, nevertheless, any of these possible avenues to knowledge could underwrite infallibility and it seems to me that the clear answer is “no”. Either, as in the case of instinct, knowledge claims will be so vague as to be epistemically weightless, or else there will be doubts because of the nature of the knowledge acquisition itself. And you must see that testimony, our last hope, simply shifts to someone else all of the same uncertainties about knowledge acquisition that we have just considered. None of these sources can provide more than a fallible ground on which to build our knowledge structures.

**Concluding Thoughts**

I doubt that anything in this paper is, by itself, very surprising. But hopefully, taken together, these considerations will begin to generate a growing conception of fallibilism as something deep and central for Peirce, a touch stone, in a sense, for everything else. Margolis’s three themes, beginning with Peirce’s commitment to anti-Cartesianism, then extending to his convergence epistemology, and finding
support in metaphysical doctrines ranging from synechism to his evolutionary cosmology, together provide an initial framework for this broad view. But it is by searching more widely for everything in Peirce’s philosophy that supports his fallibilism or, conversely, depends on it, that we are able to begin filling in the picture.

The principal grounds for fallibilism that Rescher gives also apply in Peirce’s case: (1) that chance and chaos play an ineliminable role in the world; (2) that available observational data underdetermine theories; and (3) that concrete realities are always experienced somewhat ambiguously. From Peirce, directly, we can add that reality itself is in a continual state of growth.

Haack finds that Peirce’s arguments for fallibilism stress limitations and weakness in our human cognitive apparatus, in our cognitive methods, and in the content of our knowledge itself. Her concerns nicely highlight the three key correlates, the knower, the known, and the process of coming to know, as all involving limitations that underwrite fallibilism.

Haack’s approach connects well with the one I’ve focused on here: that of considering sources of knowledge and whether any source can underwrite infallibility. My suggestion is that Peirce’s treatment of all of these topics is in one way or another a contribution to his theory of fallibilism.

In drawing to a close, I want to look briefly at why Rescher and Margolis are so concerned with tying Peirce’s convergence epistemology so tightly to his fallibilism. They are both aware of the skeptical tendency of fallibilism and see, correctly, that Peirce’s adoption of a convergence theory of truth (and I would also add his later adoption of actual final interpretants in semiosis) is part of his strategy for “protecting scientific realism”. Neither Rescher nor Margolis believes that Peirce succeeded and I concede that to avoid skepticism a fallibilist will have to do some fancy stepping.

This is not the place to argue that Rescher and Margolis are mistaken in holding that Peirce’s convergence theory fails. But, anyway, one has to go beyond convergence in Peirce to find his answer to skepticism. The fact is that Peirce was a far more radical fallibilist than either Rescher or Margolis seem to appreciate. This is illustrated in a passage Hilary Putnam has called the “first really anti-foundationalist metaphor” (Borradori, 62) in which Peirce imagines us trying to make our way across an epistemological bog without ever having recourse to “the solid ground of fact”. [We] must [...] find confirmations or else shift [our] footing. Even if [we do] find confirmations, they are only partial. [We] still [are] not standing upon the bedrock of fact. [We are] walking upon a bog, and can only say, this ground seems to hold for the present. Here I will stay till it begins to give way” (CP 5.589; EP2: 55).

We are all walking across this bog. Fallibilism is the understanding that no matter where we are in our journey and no matter how solid the ground may feel
beneath our feet, at any time it may begin to give way. When we feel the ground
beginning to shift what is it that guides us in taking our next steps (hopefully) to a
new firm place? It could not be the convergence of inquiry; we would sink into the
depths long before that. No, it is abduction alone, or perhaps even that proto-
abductive cognitive process we call perceptual judgment, that saves our hides.

But I agree with Fabbrichesi that this is where our number one fallibilist,
Charles Peirce, seems to deviate a little from the hard-nosed no-nonsense approach
we usually associate with him. In her above referenced Cognitio article,
Fabbrichesi made the point that in an important sense our working hypotheses
always come at the beginning of inquiry, not at the end, and this is especially true
for perceptual judgments (Fabbrichesi, 2004). If there is inference involved, as
Peirce says there is (proto-abduction, anyway), there is also something very much
like a gift from nature as well, something that we just somehow manage to see as if
for the first time. Here we return to the Light of Nature and its gift to us of that
little bit of cognitive content that lets us imagine where we are in the world and,
maybe, where to safely take our next step. Fabbrichesi asks if this is in fact a
“Copernican turning point for the main upholder of anti-intuitionism and anti-
Cartesianism in the XIX century? Is Peirce really going back to some kind of
innatism?” (Fabbrichesi, 189). She doesn’t think so, and neither do I. But it is true
that Peirce’s Light of Nature requires us to be somehow attuned to nature through a
combination of instinct and relational isomorphisms and I know that there is still
much work to be done on this problem before doubters will be convinced that our
“first judgments” are logical or semiotic products rather than the magical
implantings I dismissed in the previous section. Of course these gift-of-nature
abductions, or proto-abductions, are not really very dependable—Peirce calls them
mere “guesses”—but they are sufficient to send us on our way and their ever-so-
slight tendency to be true is all that is needed to enable us, or enough of us, to keep
from sinking into the bog. Peirce does not insist that this way of escaping
skepticism is true but he says that there is reason to hope that it is true and he
believes it is the only hope we have.

My final words are about my title. Why contrite fallibilism? As far as I know
Peirce used that expression, “contrite fallibilism”, only once, in the quotation I
gave earlier where he said that it was “out of a contrite fallibilism, combined with a
high faith in the reality of knowledge, and an intense desire to find things out”, that
all of his philosophy had grown (CP 1.13-14). This adds a new dimension to
fallibilism, humility, which Rescher also noticed. Remember Rescher’s admonition
that “A kind of intellectual humility is in order, a diffidence that abstains from the
hubris of pretensions to cognitive finality or centrality”. But the humility Peirce
calls for is more contrite for it is a humility that nature demands of us, a hard
lesson learned, when, for example, we must bow our heads and admit that heavy
bodies do not fall faster than light ones notwithstanding the common sense of
generations. If there is a slightly religious sound to this I believe it may be because Peirce thinks that in joining the quest for scientific truth one must undergo a conversion of a Kuhnian sort and recognize, deeply, that we can only make progress together as a community of dedicated investigators, that there will be many setbacks along the way, and that our own part will at most be small.

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CHAPTER 2

SEMIOTICS OF THE CONTINUUM AND LOGIC OF THE UNIVERSE

Carlo Sini

The relation of semiotics to cosmology is a nodal point in the later speculations of Charles Sanders Peirce. It is considered by his interpreters to be one of the most difficult and even obscure in his entire thought: something very fragmentary as well as conceptually incomplete. To apply the theory of signs and phaneroscopic categories to a hypothetical explanation of the universe’s evolution appears to most thinkers to be a theoretical undertaking that combines undoubted originality and logical-imaginative brilliance with a broad measure of conceptual thinking that is arbitrary and vague or even untenable.

Particularly unacceptable is the application of an evolutionary criterion to phaneroscopic categories, whose distinctive character is purely logical and in no way chronological or evolutionary. As is known, phaneroscopic or phenomenological categories are not “derived” one from the other since they maintain a reciprocal independence despite being as a whole correlated in a circular fashion. In fact, how could we understand them without relating them reciprocally to one another? This does not at all mean, however, to “deduce them” or perhaps “resolve them” in the last of the three, which is exactly the difference from the triads in the Hegelian dialectic that Peirce expressly points out. If this is the case, how then do we understand the “spreading out” of these categories in a kind of cosmic evolution, a process stretching, for example, from the simple to the complex or from the vague to the determinate? These are notions typical of Spencer’s evolutionism and Peirce shows that he is aware of this, though at the same time he refers to Aristotle’s idea of possibility or potentiality (which, moreover, creates a further problem).1 But how to combine Spencer’s evolutionary

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categories with Peirce’s logical, semiotic and mathematical thought is largely unclear and surprising, to say the least.

In this regard, I will confine myself to quoting two well-known passages from 1891 and 1890 respectively:

It would suppose that in the beginning-infinitely remote-there was a chaos of unpersonalized feeling, which being without connection or regularity would properly be without existence. This feeling, sporting here and there in pure arbitrariness, would have started the germ of a generalizing tendency. Its other sportings would be evanescent, but this would have a growing virtue. Thus, the tendency to habit would be started; and from this, with the other principles of evolution, all the regularities of the universe would be evolved. At any time, however, an element of pure chance survives and will remain until the world becomes an absolutely perfect, rational, and symmetrical system, in which mind is at last crystallized in the infinitely distant future (CP 6.33).

I will begin the work with this guess. Uniformities in the modes of action of things have come about by their taking habits. At present, the course of events is approximately determined by law. In the past that approximation was less perfect; in the future it will be more perfect. The tendency to obey laws has always been and always will be growing. We look back toward a point in the infinitely distant past when there was no law but mere indeterminacy; we look forward to a point in the infinitely distant future when there will be no indeterminacy or chance but a complete reign of law. But at any assignable date in the past, however early, there was already some tendency toward uniformity; and at any assignable date in the future there will be some slight aberrancy from law [...]. We have therefore only to suppose the smallest spoor of it [the tendency toward uniformity] in the past, and that germ would have been bound to develop into a mighty and over-ruling principle, until it supersedes itself by strengthening habits into absolute laws regulating the action of all things in every respect in the indefinite future (CP 1.409).

The problems posed by such “conjectures”–though they be stimulating–are many. Not least is the one we could raise in respect of Peirce’s explicit position according to which in an infinitely distant past of pure potentiality, or even of pure chaos, there could be no time or logic at all. In the Cambridge Conference of 1898 on the "Logic of Continuity" he expressly states that time and logic are also products of evolution (CP 6.193) and also alludes in what is indeed at first sight a mysterious fashion to the punctuality of events that occur where there was no time (CP 6.200). Such drastic statements make us at the least cautious in taking Peirce’s cosmological conjectures literally. How can it be supposed that he was not fully aware of the at the very least apparent inconsistency of conceptions that speak of “pasts” and “futures”, however “infinitely” distant, but which–so it seems–lie outside time not to mention logic?