

Semiosis and the Proof of Pragmaticism

The Early Formulation of Pragmatism and Its Problems

In 1878 Peirce formulated the pragmatic maxim in his paper, "How to Make Our Ideas Clear," published in the *Popular Science Monthly*, as follows: "It appears, then, that the rule for attaining the third grade of clearness of apprehension is as follows: Consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object." (W3, p. 266) The first two grades of clearness of apprehension of concepts are familiarity and definition. (W3, p. 260) We must have some idea of what we are thinking about, in a very generalized sense, and then we must try to pin that down with a definition. An 'atom' is an 'elementary particle', so it was defined over the centuries. But that term had little useful value until attempts were made to define what was actually being referred to, in specific experimental contexts. The third grade of clearness is achieved when we conceive of experiments that would confirm or disconfirm our hypotheses about the properties of the object referred to by the term. Put in this way, the pragmatic maxim may be regarded as a theory of how certain signs may be studied by looking at those events that interpret our uses of the sign coupled with a rule that only certain kinds of interpretants are to be allowed to explicate the sign, and not others. Behind the maxim is the maxim: any differences in conceptions must translate in principle into a difference in sensory experience. Peirce illustrated this point using the debate over transubstantiation: Catholic and Protestant do not disagree over the sensory facts, just over the 'substance' of the Communion. However, since all conceivable sensible effects are consistent with both positions, the positions cannot achieve the third grade of clarity

because they cannot envision or set up experiments to support their positions.

In order for Peirce to make such an argument he must believe “how impossible it is that we should have an idea in our minds which relates to anything but conceived sensible effects of things.” (W3, p. 266) Our use of the term ‘hard’ illustrates this point. Our whole conception of ‘hard’ is the sum of the sensible effects of things that are ‘hard’ because of the specific manner in which they interact with other things. “There is absolutely no difference between a hard thing and a soft thing so long as they are not brought to the test.” (W3, p. 266) Yet the maxim only speaks of *conceivable* sensible effects; it says nothing about the requirement that the effects actually be produced. Must they be produced and if so in how many instances? Is pragmatism a theory about the limits of our imagination? Is it a theory that works for some kinds of thinker and not for others? These questions lead to further questions about the ‘basis’ or ‘foundation’ or even ‘proof’ of pragmatism. The maxim is expressed in the form of a generalization; but what sensible effects could be conceived to be true if pragmatism were true rather than false? Identification of actual sensible effects could never establish the generality of pragmatism, just as induction does not justify a physical law. Peirce thought that abduction — the mental process of formulating a theory out of facts in some manner suggested by, but not deduced from, the facts — was a theorizing activity that stood on its own and apart from induction and deduction. What kind of analysis or reasoning produced pragmatism? If the answer is ‘abduction’ is there then a fourth grade of clarity capable of identifying conceptions without exclusive reference to sensible effects?

As if the problems do not mount fast enough, consider the pragmatic analysis of the property ‘hard’. The pragmatist is understood as saying that there is no cognitive content in saying the un-scratched diamond *is* hard

because the meaning of hard is to be scratched or display other sensible effects. Yet if we say that 'X is a diamond' means 'If you try to scratch it you will fail and if you try to use it to scratch other things unlike it, you will almost always succeed' clearly this conclusion is based upon assumptions about the persistence and adherence of properties in objects over time, and contains an idea of generality about what counts as 'being scratched' and what the property of resistance is. Is it possible to regard something as being scratched that heals the scratch at the instant it is made, and that leaves no sensible effects? What is the difference between this phenomenon and one where an object is not scratched but just splits open as another object touches it? And how do these examples differ from that of the transubstantiation debate? This sort of difficulty led Peirce to believe in the years after 1900, when he returned to the topic with great devotion, that the explication of the conditionality of the pragmatism maxim needed more than reference to particular effects:

And do not overlook the fact that the pragmatist maxim says nothing of single experiments or of single experimental phenomena (for what is conditionally true in futuro can hardly be singular), but only speaks of general kinds of experimental phenomena. Its adherent does not shrink from speaking of general objects as real, since whatever is true represents a real. Now the laws of nature are true.

(CP 5.426)

All of the questions raised above troubled Peirce about pragmatism. We should not forget that pragmatism was a method presented in papers meant to illustrate the logic of science. Science, for Peirce, is a successful discipline or regimen of thought. Experimentation is a successful form of practice. Abduction or hypothetic inference is a successful form of reasoning. So whatever makes science possible also makes pragmatism possible. But this cannot be turned on its head: pragmatism cannot be the

measure of science. “Thus the validity of induction,” Peirce wrote, “depends upon the necessary relation between the general and the singular. It is precisely this which is the support of Pragmatism.” (CP 5.170) Peirce knew that pragmatism, in its early formulation, could not establish such necessary relations. Its account was limited by an improper emphasis on Secondness and action. Instead it should have emphasized “that our conception of all the possible practical effects of a conception must be a broadly general conception, of which Thirdness is the very life and soul. I was a young man at the time I enunciated the principle and no doubt like other young men exaggerated the idea of the work of carrying out intentions at the expense of the idea of the internal development of intentions.” (Ms. 313) So it seems that Peirce came to think of pragmatism as the result of a process of mental development, that required continued examination in order to be understood and justified.

That Peirce was so troubled has been taken to mean that he was a hopelessly old fashioned, foundational philosopher. Thus Richard Rorty attributed the “undeserved apotheosis” of Peirce to the fact that he gave a name to a theory he could not believe in or even understand because he remained “the most Kantian of thinkers — the most convinced that philosophy gave us an all-embracing ahistorical context in which every other species of discourse could be assigned its proper place and rank.” ((Richard Rorty, *Consequences of Pragmatism* (Minneapolis: University of Minnesota Press, 1982), p.161.)) Kant converted linguistic predication into a process of mental synthesis that served as a separate and deeper ‘foundation’ for our judgments, and Peirce went down the same blind alley, according to Rorty. The meeting ground of the old and new ways of thinking would be illustrated by the dialogue between James and Peirce on the occasion of Peirce’s series of seven or eight lectures on pragmatism delivered in Cambridge, Massachusetts in 1903, and which we will look at in some detail below.

There is no doubt that Peirce was searching for a foundation of pragmatism, and to the extent that someone is satisfied with pragmatism, or instrumentalism, or operationalism, and is dissatisfied with the old school mentality of philosophy as a search for truth, such an endeavor is a pompous waste of time. On the other hand, if someone believes that not all theorizing should be left to the natural and social scientists, because in some instances philosophic training affords opportunities for breakthroughs as respectable as those in the sciences, then such a quest should not be foreclosed in principle simply because a fashionable and aloof skeptical philosophy that merely allows modern academic philosophers to feel comfortably segregated in their departments will not permit it. Peirce struggled with, and cared about, the problem of the foundation or proof of pragmatism. But, as we shall see, pragmatism for Peirce did not need to be justified; it was an outgrowth of other philosophic beliefs.

Pragmatism, Realism, and Idealism

Pragmatism is anti-nominalism, in Peirce's later formulations. Around the time he was working on his proof of pragmatism (1903) he described nominalism as follows:

21. The modern philosophers — one and all, unless Schelling be an exception — recognize but one mode of being, the being of an individual thing or fact, the being which consists in the object's crowding out a place for itself in the universe, so to speak, and reacting by brute force of fact, against all other things. I call that existence.

22. Aristotle, on the other hand, whose system, like all the greatest systems, was evolutionary, recognized besides an embryonic kind of being, like the being of a tree in its seed, or like the being of a future contingent event, depending on how a man shall decide to act. In a few passages

Aristotle seems to have a dim aperçue of a third mode of being in the entelechy. The embryonic being for Aristotle was the being he called matter, which is alike in all things, and which in the course of its development took on form. Form is an element having a different mode of being. The whole philosophy of the scholastic doctors is an attempt to mould this doctrine of Aristotle into harmony with christian truth. This harmony the different doctors attempted to bring about in different ways. But all the realists agree in reversing the order of Aristotle's evolution by making the form come first, and the individuation of that form come later. Thus, they too recognized two modes of being; but they were not the two modes of being of Aristotle.

23. My view is that there are three modes of being. I hold that we can directly observe them in elements of whatever is at any time before the mind in any way. They are the being of positive qualitative possibility, the being of actual fact, and the being of law that will govern facts in the future. (CP 1.21-23; emphasis added)

Given this way of thinking about thinking, given Peirce's semiotic theory of cognition, he does not have to deduce or derive generality from the experience of sensible effects. Pragmatism cannot be theory of how conceptions are derived from sensible effects; it cannot support or co-exist with logical positivism, operationalism, or instrumentalism. Instead, pragmatism is supposed to be based upon scholastic realism and idealism. In one of his papers published in *The Monist*, "What Pragmatism Is," (1905) Peirce mentions that he had spent more time than most scholars studying pragmatism and that as a result he had time to reflect upon the need for its justification. He also tells us that he considered himself an experimentalist who had "inhabited a laboratory from the age of six until long past maturity," (CP 5.411) but with an interest in the writings of philosophers — Kant, Berkeley, and Spinoza — and discovered in them "strains of thought that recalled the ways of thinking of the laboratory." (CP 5.412) So Peirce is

saying: that since (1) pragmatism is part of the scientific method, and since (2) philosophers sometimes employ the reasoning associated with scientific experimentation, there may be a yet to be fully disclosed link between philosophy and science that gives credit to both and reveals and legitimizes the place of human intelligence in the universe. But in this essay, in which he only skims the subject, he makes a number of seemingly isolated assertions about the relation of science, philosophy, and pragmatism. I summarize these points as follows:

1. A proof of pragmatism would be “the one contribution of value that he has to make to philosophy. For it would essentially involve the establishment of the truth of synechism.” (CP 5. 415) Until now Peirce had credited his “New List” argument as his best piece of philosophic reflection. That argument grew out of insight into the elementary way the mind functions, that is, by a seemingly endless process of creating reflective and representative triads. Then Peirce linked the micro-New List categories with the three processes of inference. Now with the ‘discovery’ of pragmatism, an awareness of the hitherto natural methodology of theoretical reasoning, whether manifested in science or philosophy, could be analyzed and improved upon. Part of the analysis involves the justification of synechism, or the philosophy of continuity. Simply put, there must be a real continuity in nature or else signs could not represent, and if signs could not represent, then a process of reasoning would not flow from premise to conclusion and science could not true of anything.

2. Pragmatism is a refinement of positivism when revealed in the light of a “purified philosophy.” (CP 5. 423) The purified philosophy is at least in part the result of a ‘strenuous insistence upon the truth of scholastic realism.’ (CP 5.423) As discussed in previous lectures, the scholastic realism of Scotus was a doctrine that Peirce welcomed for its view that generality is a natural trait of reality, manifesting Thirdness. Generality is

“an indispensable ingredient of reality; for mere individual existence or actuality without any regularity whatever is a nullity. Chaos is pure nothing.” (CP 5.431) The refinement would have to be considerable. Peirce associated positivism with nominalism and considered the former a waning doctrine of the latter that has evolved into “an empiricism of a less metaphysical and more working kind.” (CP 8.37) Positivism was simply bad philosophy, not an avoidance of philosophy; its emphasis on particular facts and direct observation is predicated upon a misunderstanding of the nature of hypothetic inference and scientific experimentation. Regarding the former Peirce noted:

The positivist regards an hypothesis, not as an inference, but as a device for stimulating and directing observation. But I have shown above that certain premisses will render an hypothesis probable, so that there is such a thing as legitimate hypothetic inference.

(CP 5.511n1)

The positivist does not see that hypothetic inference, abduction, is a result of reasoning about generalities that are not collections of instances. It is made possible in the world we live in because of the nature of the world we live in. In other worlds scholastic realism might not hold true and hypothetic inference might be a mental waste of time in some world other than our own. Regarding the latter, scientific experimentation, the positivist does not look closely enough at the process itself. The positivist thinks of scientific experimentation as a discrete and isolated process in the sense in which an experiment has a particular start and ending, and is marked by a controlled observation in between. Peirce, however, sees an experiment, in the ordinary sense, as really a part of a collective series of single experiments linked to an actual experimenter. He lists the indispensable elements of an experiment as: (1) a flesh and blood experimenter; (2) an hypothesis capable of verification in the actual world inhabited by the experimenter; (3)

sincere, not fake, doubt about the truth of the hypothesis in the mind of the experimenter; (4) the experimenter's overall purpose, plan, and resolve; (5) "the act of choice by which the experimenter singles out certain identifiable objects to be operated upon"; (6) "the external (or quasi-external) act by which he modifies those objects"; (7) the reaction of the world upon the experimenter producing a perception; and (8) "his recognition of the teaching of the experiment." (CP 5.424) Peirce then observes: "While the two chief parts of the event itself are the action and the reaction; yet the unity of essence of the experiment lies in its purpose and plan ... " (CP 5.424) Why does Peirce use such a philosophically loaded expression as "unity of essence" in this context? I interpret this process triadically as follows: (1) an hypothesis is a mental scheme or diagram about how something, **X**, is to be explained; (2) the 'experiment' is the actual apparatus in the physical environment designed to observe the properties of **X**, on the assumption of the truth of the hypothesis, coupled with a particular act and subsequent reaction; (3) a recognition of the lesson learned by the experiment. In other words, the test does not just illustrate **X**, it *manifests X*, itself. It reveals something that is a power of nature in its clearer or purer form (e.g. as in the work of the Alchemists giving birth to chemistry and the regimen of the laboratory, Nineteenth Century experiments on the properties of electricity, etc.) This of course is only true if the experiment is successful, as measured against the hypothesis. Thus, the initial hypothesis is a mental form with only abstract unity, the actual experiment contains a series of conjoined physical items forming a concrete plurality, but at once upon the reciprocity of action and reaction there is achieved a "unity of essence" — if the hypothesis is correct — producing a concrete unity, and not just one successful experimental result but a revelation. This is a simplified picture, of course. As Peirce notes, in reality experiments occur in series and the results are often of a highly statistical nature. In such cases the revelations are minute. However, this does not alter the process, just increases the steps within it.

The positivist focuses on the second step and tries to construct a result out of induction, leaving out the manner in which the mind is capable of using hypothetic inference to isolate and control a force or system of nature in the experimental apparatus.

3. We can now appreciate the following remark: “So, instead of merely jeering at metaphysics, like other prope-positivists, ... the pragmatist extracts from it a precious essence, which will serve to give life and light to cosmology and physics.” (CP 5.423) What is the ‘precious essence’ of metaphysics that the pragmatist extracts to give life and light to cosmology and physics? A likely explanation is, of course, related to the triadic categories as they are interpreted as dimensions of (1) mind and (2) matter and their (3) reciprocal interaction — again the categories serving as transcendentalia. ((See Peter T. Turley, *Peirce’s Cosmology* (New York: Philosophical Library, 1977), a book that traces Peirce’s cosmology, categories, and pragmatism.)) Pragmatism, then, is an activity that fertilizes this interaction, creating triads through a conscious catalytic process of representization and habitual action. The pragmatist is a good scientist because he is both a thorough-going researcher and thorough-going theoretician. You had to be both, according to Peirce, in order to advance science. A researcher without a talent for hypothesizing on a theoretical level, is a mere lab technician, a washer of beakers. A theoretician without exposure to wet science is a mere dreamer or poet, but not a scientist.

In Peirce’s evolutionary scheme pragmatism emerges as a development of human reasoning once the conditions for it are established. Before the habit of scientific reasoning develops other habits must first be established. Before there is theoretical notation there must be indexical notation; before there is mathematical and chemical notation, there must be pictographic/ iconic notation. Each habit once established creates the conditions for the possibility of further habits. These additional habits can be more ‘abstract’

through the use of signs. In a letter addressed to his former student, Christine Ladd-Franklin, in 1891 Peirce described the role of habit in his cosmological theory:

I may mention that my chief avocation in the last ten years has been to develop my cosmology. This theory is that the evolution of the world is hyperbolic, that is, proceeds from one state of things in the infinite past, to a different state of things in the infinite future. The state of things in the infinite past is chaos, tohu bohu, the nothingness of which consists in the total absence of regularity. The state of things in the infinite future is death, the nothingness of which consists in the complete triumph of law and absence of all spontaneity. Between these, we have on our side a state of things in which there is some absolute spontaneity counter to all law, and some degree of conformity to law, which is constantly on the increase owing to the growth of habit. The tendency to form habits or tendency to generalize, is something which grows by its own action, by the habit of taking habits itself growing. Its first germs arose from pure chance. There were slight tendencies to obey rules that had been followed, and these tendencies were rules which were more and more obeyed by their own action. There were also slight tendencies to do otherwise than previously, and these destroyed themselves. To be sure, they would sometimes be strengthened by the opposite tendency, but the stronger they became the more they would tend to destroy themselves. As to the part of time on the further side of eternity which leads back from the infinite future to the infinite past, it evidently proceeds by contraries.

I believe the law of habit to be purely psychological. But then I suppose matter is merely mind deadened by the development of habit. While every physical process can be reversed without violation of the law of mechanics, the law of habit forbids such reversal.

(CP 8.317-318; Emphasis added)

The 'tendencies' that are supposed to operate in nature as rules are the pre-mental antecedents of human reasoning. There is no 'emergence' of mind from matter, however, because the mind/matter distinction is a distinction embedded in an earlier stage of human proto-scientific reasoning, in the fields of both the physical and psychical sciences. The distinction dissolves when the more expansive perspective of cosmological evolution is adopted, with its emphasis on semiosis as a process cutting across the hitherto delineated physical and mental realms.

In a draft letter to F.C.S. Schiller, written in 1906 Peirce describes how pragmatism was both a product and a methodological bridge to a higher physics, a 'speculative physics' as conceived in Naturphilosophie:

As to the plasticity of the real, I am, on one side, entirely with you, having in 1892 and 1893 [argued] ... that it is presumable that the laws of nature are not absolutely rigid. And whether they be so or not, it is to my mind quite certain that there are general signs, — namely, laws of nature, — which influence, or determine, actual events, and equally certain there are also other general signs which, having been shaped in human reasoning, further influence, or determine, muscular contractions, and through these, other actual events ...

I do not know whether or not you will approve of my particular way of denying Necessitarianism. But as it is certain that the proposition that every physical event is directly determined by dynamical non-telic conditions and laws alone while every mental representation is directly determined by logical and, as such, telic conditions and laws alone, does not conflict with the proposition that physical events are determined by mental representations and mental representations by physical events (as every student of G. Cantor will perceive); so on the other hand the propositions that the laws of nature are not absolute and that important physical events

are due to human reasoning are far from proving that human action is (in any important degree) free, except in the sense that a man is a machine with automatic controls, one over another, for five or six grades, at least. I, for my part, am very dubious as to man's having more freedom than that, nor do I see what pragmatic meaning there is in saying that he has more. The power of self-control is certainly not a power over what one is doing at the very instant the operation of self-control is commenced. It consists (to mention only the leading constituents) first, in comparing one's past deeds with standards, second, in rational deliberation concerning how one will act in the future, in itself a highly complicated operation, third, in the formation of a resolve, fourth, in the creation, on the basis of the resolve, of a strong determination, or modification of habit. This operation of self-control is a process in which logical sequence is converted into mechanical sequence or something of the sort. How this happens, we are in my opinion as yet entirely ignorant. There is a class of signs in which the logical sequence is at the same time a mechanical sequence and very likely this fact enters into the explanation.

(CP 8.319-20)

Thus, properly speaking pragmatism is not a method to make our *ideas* clear. It is not a subjective process. It is a method of inquiry into the real general powers of nature. However, if these real general powers were invariant relationships, inquiry would never arise and there would be no need for the assistance of the surrogate reality of representation. Thus, a condition for the possibility of pragmatism is that nature be capable of plasticity. In general we may say that the 'proof' of pragmatism involves understanding the singular traits of human intelligence in the fullest philosophical sense possible. Intelligence involves signs; signs involve semiosis. Semiosis and pragmatism are two sides of the same coin. One side is the 'subject' or 'I' side, and this is pragmatism as a conscious method of a thinking person; the other side is the 'object' or 'it' side, and

this is semiosis as a process that does not depend on me in particular. The unity of each side is the mirroring of a 'thou' in both processes. Pragmatism produces real mind/nature links, while semiosis really links nature in a mind-like fashion.

These remarks may provide a backdrop for Peirce's remarks to Schiller just quoted. First, to say that plasticity is an essential aspect of reality is to say that reality contains a dimension of conditionality. Events may result from invariant processes, but their combination and interaction allow a variety of possible outcomes. Pragmatism is just that habit of mind that recognizes and capitalizes on this. Next, Peirce describes the reciprocity and complementarity of semiosis and pragmatism when he notes that general signs are products of intelligence and shape intelligence. Pragmatism, as mental activity, as a manifestation of the 'active' intellect, tests cognitive content against a standard of would-be conceivable sensible effects. In other words, pragmatism is an operation of the imagination that links general conceptions with particular physical effects, and does so in a manner that seeks to equate the two: 'If **X** is hard, it will be scratched under circumstance **P**' and 'If circumstance **P** obtains, then **X** would have had to be hard'. On the other side of the coin, semiosis is a real physical activity that produces an effect on the object that is acting. The knife is dulled to some degree and manner characteristic of that very act of scratching and marking, while the mark is a sign of at least certain aspects of the action. Forensic studies in ballistics and handwriting, and in many other fields, is predicated upon acceptance of this relationship.

What is the general theory that explains both activities using one set of conceptions? Probably some rarified theory of semiosis. To Schiller Peirce suggests that the dynamical non-telic and the representational telic realms can be regarded as having a separate reality when looked upon within their own conceptual frameworks. However, from another perspective they can

be regarded as interacting with a single realm. One nexus point is the point in which the representational realm initiates activity. At that point a foreign element interjects and influences attention. The soul is not unconditionally free in the sense that it cannot determine the conditions it seeks to control or overcome. "The power of self-control," Peirce says, "is certainly not a power over what one is doing at the very instant the operation of self-control is commenced." Yet the representational realm is capable of gaining increasing control over, and understanding of, the dynamical non-telic realm through the practice of pragmatic science and the philosophical theory of signs. This process is only dimly understood, according to Peirce; although the explanation may involve a kind of process that is at once dynamic and semiotic:

This operation of self-control is a process in which logical sequence is converted into mechanical sequence or something of the sort. How this happens, we are in my opinion as yet entirely ignorant. There is a class of signs in which the logical sequence is at the same time a mechanical sequence and very likely this fact enters into the explanation.

What is this class of signs? Are they indexical signs, signs that make relations more efficient by directing energy? The problem Peirce faced was getting from the relatively simple illustration of the bridging relation to the general theory that is supposed to rival in scope Hegel's absolute idealism.

The truth is that pragmatism is closely allied to the Hegelian absolute idealism, from which, however, it is sundered by its vigorous denial that the third category (which Hegel degrades to a mere stage of thinking) suffices to make the world, or is even so much as self-sufficient... . For pragmatism belongs essentially to the triadic class of philosophical doctrines, and is much more essentially so than Hegelianism.

(CP 5.436)

In the last decade of his life did attempt to bridge this chasm when he proposed a proof of pragmatism as a well-reasoned philosophical justification of the method. This proof would embody many of the themes just discussed.

The Proof of Pragmatism

As noted above, in *The Monist* article (1905), “What Pragmatism Is,” Peirce suggested that after a description of pragmatism his reader would be interested in its proof. Pragmatism was not just a theory of meaning but a hypothesis about hypotheses that could be justified as true. It was not a social doctrine about how we arrive at inter-subjective meaning in a ‘community of interpretation’ operating within a scientific ‘paradigm’ but was part of the method of science, as understood by common sense, that sought and in principle could attain the truth. ((See Karl-Otto Apel’s able discussion of these two dimensions of pragmatism and how each is “correlatively mediated by the other” in *Charles S. Peirce: From Pragmatism to Pragmaticism*, Trans. John Michael Krois (New Jersey: Humanities Press, 1995), Ch. 8 (p. 170))) We know that Peirce believed the proof would involve a large and ramified project. At times he referred to several proofs of pragmatism that required “just as close and laborious exertion of attention as any but the very most difficult of mathematical theorems, while they add to that all those difficulties of logical analysis which force the mathematician to creep with exceeding caution, if not timorously.” (CP 5.468) He gave us a road map of such a proof in the “Lectures on Pragmatism” given at Harvard University in 1903. Although given to a University audience, unlike the Lowell Lectures which were for the literate public, the Harvard Lectures were a personal failure for Peirce. James had urged them to provide financial support for Peirce, who had an opportunity to stay in Cambridge that year, but then he refused to have them published because he judged them incoherent. Santayana, who

attended, described Peirce's unkempt, drunken appearance ("red-nosed and disheveled") and wrote that he took away from the lectures Peirce's classification of signs. ((Letter printed in Joseph Brent, *Charles Sanders Peirce: A Life* (Bloomington: Indiana University Press, 1998) Revised and Enlarged Edition, p. 292.)) This comment reminds us that although Peirce was deeply involved in the many philosophic issues we have been following, and was generating thousands of pages of philosophy each year, but very little of this work was seeing publication or being made known to the philosophic establishment of the time. I think this awkward circumstance is reflected in some of the autobiographical asides we find in the lectures. These lectures appear to be on a variety of subjects, but they were a unified project in Peirce's mind. Christopher Hookway has noted ((Christopher Hookway, *Peirce* (London: Routledge & Kegan Paul, 1985), p. 256. In this admirable book Hookway shows how the various 'topics' of Peirce's thought are really nodes in a matrix, requiring each to be seen in its connection with the rest.)):

The argument for pragmatism involves defences of Peirce's account of self-control and the normative sciences, his theory of categories and semiotics, and his treatments of deductive reasoning, induction and abduction... . The task is to show that investigators dedicated to the self-control of their reasonings in pursuit of the truth should adopt the pragmatist maxim as their only methodological rule for the clarification of conceptions and hypotheses.

Peirce wanted to use the lectures to show that pragmatism was not a subjective doctrine of meaning. To do this he needed to show that the practical consequences that define the pragmatic meaning of intellectual propositions such as 'Diamonds are hard' or "Atoms contain electrons' involve factors that do not depend upon the belief or acceptance of the

person asserting them. If that is supposed to be meant by 'practical' then "pragmatism is completely volatilized." (CP 5.33)

Since the task is to ascertain whether a certain philosophical doctrine, pragmatism in this case, is true, an examination of the stock of assumptions and presuppositions we may hold at the outset of the inquiry is in order, for "we do not come to this inquiry, any more than anybody comes to any inquiry, in that blank state that lawyers pretend to insist upon as desirable..." (CP 5.34) One such assumption is that we *ought* to follow the pragmatic maxim because to attain knowledge of the truth is *good*. There is no need to justify pragmatism if the acceptance of a certain desired outcome is rejected. Pragmatism, as a theoretical activity, is normative activity, involving notions of what is good and what is admirable. But again pragmatism would be "volatilized" if it had to rest upon our system of 'values' as we ordinarily talk about them. There is a science, however, "that does not draw any distinction of good and bad in any sense whatever, but just contemplates phenomena as they are..." (CP 5.37) This science is Phenomenology and its product is the theory of categories. In his first lecture Peirce tells his audience: "I have made long and arduous studies of this matter, but have not been able to draw up any catalogue that satisfies me." (CP 5.38) Peirce here is speaking of his long list of categories. He may have been referring to his studies many decades before or more recently on the 'logic of mathematics'. The short list of categories, on the other hand, were as soundly based as anything we could know.

These short-list categories became the subject of the second and are treated in the third lectures. In these lectures Peirce once again describes his triadic categories, versions of Firstness, Secondness and Thirdness. These categories have not been recognized by philosophy, he tells us, because "all modern philosophy is built upon Ockhamism" and because "the nominalistic *Weltanschauung* has become incorporated into what I will

venture to call the very flesh and blood of the average modern mind.” (CP 5.61) In his view philosophy was rather “a positive theoretical science, and a science in an early stage of development.” (CP 5.61) In spite of these obstacles the study of Phenomenology reveals the existence of “a mode of influence upon external facts which cannot be resolved into mere mechanical action.” (CP 5.64) ((Peirce suggests that the existence of right-handed and left-handed molecular formations is an example of physical systems that cannot be explained mechanically. (CP 5.65)))

Peirce continues the third lecture with a discussion of the relation between the general categories and the categories of signs, showing that the categories of signs, which begin as modes of thirdness (representation) replicate within themselves the entire triadic system in its full and degenerate forms, a topic discussed in the previous lecture. He then describes a map capable of perfect accuracy (“infinitely minute in its representation” CP 5.71) situated on the object it represents. The map will contain a representation of itself and that representation another, *ad infinitum*. Peirce concludes: “In other words each map is interpreted as such in the next. We may therefore say that each is a representation of the country *to* the next map; and that point that is in all the maps is in itself the representation of nothing but itself and to nothing but itself. It is therefore the precise analogue of pure consciousness.” (CP 5.71) ((Royce, as Peirce notes, used this same example to illustrate a case of a self-representing system that had the properties of the “endless fission,” in the words of F. H. Bradley, of thought. Thought relates subject and object and turns that relation into an object of its thought, *ad infinitum*. The series of maps, governed by a purpose “to draw it within and upon a part of the surface of the very region that is to be mapped” — Royce, *The World and the Individual* (London: Macmillan, 1901), pp. 498-505 — becomes an infinite series because “this process never could be ended without a confession

that the original purpose had failed.” (p. 506).)) Peirce does not elaborate on the significance of this illustration at this point in the lecture series. As I read it, it is supposed to pave the way for a discussion in later lectures of perceptual judgment where the form (triadic relations of character, object, and relation) and content (this character) are united in the form of a concrete abstraction.

In the remainder of the third lecture, Peirce describes Thirdness as “an irreducible unanalyzable conception ... simple and complex at the same time!” (CP 5.88) and then adds: “... the idea of the triplet involves the idea of pairs, and the idea of a pair the idea of units. Consequently, Thirdness is the one and sole category. This is substantially the idea of Hegel; and unquestionably it contains a truth.” This is not merely a logical truth for Peirce. If the categories operate in nature then “never will it be possible to find any Secondness or Firstness in the phenomenon that is not accompanied by Thirdness.” (CP 5.90) These remarks are a transition to the fourth lecture on scholastic realism.

In the fourth lecture Peirce turns to a discussion of our common-sense beliefs, illustrating them with the example of a belief that if I hold a stone in the air and let go of it, it will fall to the ground. This belief is firmer than it should be if we followed Hume’s argument that the belief in the uniformity of nature is based on induction, which provides not basis for such a belief since we cannot establish a framework for measuring its probability in the first place. Another hypothesis may be possible to account for this firmness: namely, that an “active general principle” is involved in the action of the stone and in the process of knowing about it, and that “general principles are really operative in nature” and that we experience this action is the process of knowing. (CP 5.101) This view, as Peirce reminds his audience, is the doctrine of Scholastic Realism. Generality, Peirce continues, is always more than a collection of particulars, since particulars have

particular differences among themselves. So for generality to relate to reality it must refer to “not merely many possibilities, but possibilities absolutely beyond all multitude.” (CP 5.103) But it cannot refer to possible objects unless it refers to how objects relate to each other: “Now Thirdness is nothing but the character of an object which embodies Betweenness or Mediation in its simplest and most rudimentary form.” (CP5.104) The character of mediation, according to Peirce, always involves representation. Therefore, to say that generality is really operative in nature is to say that objects in nature are capable of influencing each other not merely through the exertion of force but as well through the projection of a representation. We observe this phenomenon in our world when we see the ability of words to move crowds far greater than does the movement of the wind in speaking them or the reflection of light in reading them upon the bodies moved could accomplish. Peirce also hypothesized that our thoughts influenced the physical world around us though we could not detect this given the current state of our science. (CP 5.106)

In Lecture V Peirce discusses the divisions of philosophy and how the categories produced them. In the normative sciences we get: Firstness/Quality — Esthetics; Secondness/Action — Ethics; Thirdness/Law — “the science of the laws of conformity of things to ends” or Logic. (CP 5.129) We are not accustomed to thinking of logic as a higher order normative science, but Peirce wants us to think of logic in this context as a process of control — in contrast, perhaps, to his held view that logic always an matter of semiotic form. Logical goodness is the attainment of a desirable, not just desired result. “The logical reasoner is a reasoner, ” Peirce writes, “who exercises great self-control in his intellectual operations.” (CP 5.130) But the desirable result is not merely a useful result; it must be an “*admirable ideal*, having the only kind of goodness that such an ideal *can* have; namely, esthetic goodness.” (CP 5.130) Anything that is esthetically good “must have a multitude of parts so related to one another as to impart a

positive simple immediate quality to their totality.” Esthetic qualities will be “simple qualities of totalities not capable of full embodiment in the parts...” (CP 5.131) (How suggestive this remark is of Peirce’s juvenile metaphysical system of long-list categories discussed in the second lecture!)

Pragmatism is a method of understanding the meaning of a symbol in terms of how it might cause us to act, not literally, but as a guide to direct our intentions. It is a search strategy that we willingly accept as our aim. The strategy must be followed freely but it must eventually lead to objective results we do not have control over. It cannot be governed by my own wishes but it must have a dimension in which I am free to experiment with the manner in which the result is achieved:

In order that the aim should be immutable under all circumstances, without which it will not be an ultimate aim, it is requisite that it should accord with the free development of the agent’s own esthetic quality. At the same time it is requisite that it should not ultimately tend to be disturbed by the reactions upon the agent of that outward world which is supposed in the very idea of action. It is plain that these two conditions can be fulfilled at once only if it happens that the esthetic quality toward which the agent’s free development tends and that of the ultimate action of experience upon him are parts of one esthetic total.

(CP 5.136)

Peirce does not know whether such an aim is really attainable, but “it is comforting to know that all experience is favorable to that assumption.” It is of the essential character of a representation that it continue to be represented and be “capable of repetition.” (CP 5.138) As we noted in the previous lecture, for Peirce interpretants are ontologically prior to representations, even if causally subsequent and “determined by another

representation.” (CP 5.138) Representations require interpretation (a form of repetition) ; if conditions for interpretation do not exist a representation does not even begin.

Since pragmatism is a method of understanding, and understanding is a mode of representation, pragmatism must concern itself with and comprehend the conditions that give rise to logical goodness, i.e., to what produces the soundness of an argument, what we mean when we say that truth has been attained, the manner in which an argument or conception represents truthfully, adequately, and with a “quantitative goodness” that advances our knowledge. (CP 5. 143) This is an analysis that “needs to be scrutinized with the severest and minutest logical criticism, because pragmatism largely depends upon it.” Peirce now describes the three forms of argument — Induction, Deduction, and Abduction — as three modes of inference and asks the audience to appreciate the labors of his years linking these modes to the categories and to “certain other details” in order to give “slight additional weight to those opinions.” (CP 5.146) Clearly Peirce does not want to talk about Objective Idealism to this audience at this point. So he keeps his view narrow: while each mode is irreducible to any other, the “rationale” of each is to aspire to a necessary relation, as if explicitly expressed in deduction. Yet all necessary reasoning is capable of being expressed in mathematical form and all mathematical reasoning is diagrammatic, so all reasoning, whether it be inductive or abductive, involves an underlying structure of relations characterized by generality and continuity. The mind that understands the point of geometrical proof with one illustration and does not need to see the same demonstration over and over with slight variations directly touches this generality: “... the interpreter of the argumentation will be supposed to see something ... that is of a *general nature*.” (CP 5.149) The diagram is not a mere aid of argumentation for Peirce, easily substituted by any another system of language that disembodied Platonic minds could communicate with. It is

something that is seen with our human eyes that allows Thirdness to pour in upon us. (CP 5.150)

The proof then leads to a crucial point. Accepting the view that perception is consciousness of the singular involving general elements. It contains the elements of coercion and contingency; I cannot just make up the object (character) of perception and I cannot know that what I perceive must be necessarily the way it is and not otherwise. Yet I have an awareness of change, and before and after, without deriving these from the knowledge of the singular precepts or inference from this knowledge. (CP 5.157) This is evidence of a capability of knowing generality. Now Peirce believes that we must train ourselves to observe the action of generality in nature. Thirdness pours into us but we must open our eyes: “But the saving truth is that there is a Thirdness in experience, an element of Reasonableness to which we can train our own reason to conform more and more.” (CP 5.160) We train ourselves by studying science, logic, and mathematics, and by conducting scientific experiments. When we do this we discover certain methodological techniques, the manipulation of symbols into computational systems, the creation of diagrams that reveal underlying relations, and a “familiar example is where in analysis we treat operations as themselves subject to operations.” (CP 5.162)

Peirce gives special attention in the remaining lectures to abduction, the technique of formulating *good* (true and fertile) hypotheses. In Lecture VII Peirce sums up where he has been, with three “cotary” propositions about perceptual judgments: (1) that they are representational as well as singular; (2) that they contain certain general elements; and (3) that they differ by degree only with, and constitute a limiting case of, abduction. (CP 5.180-181) Peirce illustrates this point by referring to examples of visual illusions. We initially interpret them in a certain way and this shows “that this classification is contained in the perceptual judgment.” (CP 5.183) In

the *Philosophical Investigations*, Wittgenstein used the example of a “duck-rabbit” as a visual illusion, borrowed from a psychology book by one of Peirce’s students, Joseph Jastrow (1863-1944), to illustrate the same point Peirce is making. In Wittgenstein’s words: “The concept of a representation of what is seen, like that of a copy, is very elastic, and so *together with it* is the concept of what is seen. The two are intimately connected.” ((*Philosophical Investigations*, pp 194 & 198)) Peirce and Wittgenstein meet from opposite directions: Wittgenstein does not consider interpretation as something derived from an inner world applied to an outer world, while Peirce considers any perceptual judgment as containing or immediately instigating an interpretation. In either case there is a rejection of seeing the object in an objective manner and then consciously adding an overlay interpretation to what is supposed to be ‘really’ seen. Peirce remarks: “It is a marvel to me that the clock in my study strikes every half hour in the most audible manner, and yet I never hear it.” (CP 5.185) Perception is about drawing inferences and making judgments. This does not mean that we may not be startled with a large unexpected booming sound, which overrides our interests of the moment. The jump starting of perception by external forces is where Secondness enters the picture. But as soon as the sound is perceived it is perceived in the form of the triadic structure of quality, relation, object. We are interpreting at once. I think this is what Peirce means when he says: “I will venture so far as to assert that every general *form* of putting concepts together is, in its elements, given in perception.” (CP 5.186)

Peirce distinguishes abductive judgments from their limiting case, perceptual judgments, by arguing that the former can be questioned and even denied, whereas the barest phenomenological percept or ‘phaneron’, to use a term from his earlier writings, can never be doubted. Why, then, does he claim that a ‘form’ is “given in perception”? The answer, I think, is again: this is what is required by his Realism and anti-Cartesianism. The

simplest percept is still the result of a complex process which we may prescind from its connections and conditions. But when we focus just on the simple precept, such as the color of something, we are not given an opportunity to reflect much on it except to contemplate it or try to remember it accurately because it appears to be unrelated to anything but my consciousness and so cannot be analyzed into various relations. But on reflection even that experience reveals a triadic structure. There is a great deal more freedom in abductive inference, though, as noted, not total freedom. Abduction is not a mere play of the imagination but has “a perfectly definite logical form.” (CP 5.188) In the abductive inference:

The surprising fact, **C**, is observed.

If **A** were true, **C** would be a matter of course.

Hence there is reason to suspect that **A** is true.

(CP 5.189) the inference is logically sound only if **A** “would account for the facts or some of them.” But is **A** itself the result of an inference? Or, in other words is there a logic of discovery? Our experience is that there is not. Science is guessing even if observation is precise. The microscope or telescope did not advance scientific knowledge, but increased our perceptual worlds and the things we could wonder about and find ‘surprising’. Our inferences must *begin* to be formed through a process that we do not fully control. This is a fact that every problem solver recognizes, particularly when the problem has yet to be fully described and the sense in which **C** is surprising is not yet clearly delineated. (Note how Dewey’s theory of inquiry is embedded in these obscure passages from Peirce.) But control itself, Peirce observes, is “purely inhibitory. It originates nothing.” (CP 5.194) So how does the inference get jump started,

according to Peirce? The answer is by a sort of Schellingian ‘intellectual intuition’, a perception of ideas:

What can our first acquaintance with an inference, when it is not yet adopted, be but a perception of the world of ideas. In the first suggestion of it, the inference must be thought of as an inference, because when it is adopted there is always the thought so one might reason in a whole class of cases. But the mere act of inhibition cannot introduce this conception. The inference must, then, be thought of as an inference in the first suggestion of it.

(CP 5.194)

But Peirce’s ‘intellectual intuition’ is very narrowly construed. Simultaneous with the act of perception is the act of *ur*-inferring character (Firstness), otherness (Secondness), and inference (Thirdness), a process as automatic and beyond our control as perception is thought to be. In an unpublished draft of Lecture VII Peirce writes ((Ms 316. The quotation is from pp. 56-57. A “quodlibetical” individual probably refers to a characterless entity. “That which the Scholastics meant by transcendental unity was unity in the sense in which it is said *Quodlibet ens est unum*, that is, is self-consistent.” (CP 6.378))):

Granting that there may be some general concepts which are not perceptual, that is, not elements of perceptual judgments, these may make a kind of music in the soul, or they may in some mysterious way subserve some end; but in order to be of any cognitive service, it is plain that they must enter into propositions. For cognition proper is true, or at any rate is either true or false, and it is propositions alone that are either true or false. The only form in which a general can enter into a proposition is either as predicate or predicative constituent of a predicate or as subject. But a general subject is either an indesignate individual or a quodlibetical

individual of the universe to which no descriptive character is attached. It is therefore not what we mean by a concept. It involves merely directions as to what one is to do to find an individual such as is intended, without at all describing that individual. The general concept therefore must be the predicate or an element of a predicate of the nature of a predicate. /font>

We may regard this level of micro inferences as an 'atomic' level of cognition. However, there is a subatomic level from which Thirdness pours into the perceptual judgment. This is the world in which the reasonableness embodied in the universe gives rise to cognitive beings in the first place. However, once cognition occurs it does not cease because a cognitive being has its own vectorial energy or will. "But what is personal to us is not mind; it is nothing but Will, the utterly blind compulsive element in the universe whose only real use is to be the vehicle of the development of ideas." (Ms. 313, Lecture VI) A cognitive being is a vehicle through which the representational energies operating in the world are directed and redirected. Abduction is the process of identifying signs of processes that exist on a higher level of generality than the precept, with its narrowly identified triadic structure. And finally pragmatism is the rule that ranks the fruits of abduction, hypotheses, according to their logical, ethical, and aesthetic goodness. In Lectures VII Peirce describes the maxim as: "a conception can have no logical effect or import differing from that of a second conception except so far as, *taken in connection with other conceptions and intentions*, it might conceivably modify our practical conduct differently from that second conception." (CP 5.196; emphasis added) So it is clear from this definition that pragmatism is an experimental philosophy and not just a search for narrow operational definitions. Unobservables would be allowed, if they could be tied with other conceptions and intentions, as provisional beings. The deeper question for pragmatism is how far we must go to admit other conceptions and intentions, and how the maxim applies to those as well. Peirce does not

appear to be very concerned with this kind of problem. He has now given a proof of pragmatism in the sense of deriving it from his phenomenology, Semiotics, and Realism. The proof is embodied in his description of how the categories operate in natural processes and cognition. In a world where semiosis is possible pragmatism is a rule of abduction that multiplies the action of signs by creating interpretants that lead to increased knowledge and control in the world we actually live in. But Peirce did not want pragmatism to stand as a philosophy that required acceptance of all the Hegelian sounding metaphysical apparatus, although in the Lectures he did praise Professor Royce as someone who had deeply comprehended the significance of the “purposive element of thought” he was advancing (Ms. 313). He wanted the maxim to be embraced regardless of the philosopher’s commitments, because if it were true the philosopher of any stripe would have to follow it any way: “What hypotheses it admits all philosophers would agree ought to be admitted.” (CP 5.196) The reason for this is that pragmatism make the test of the acceptance of a hypothesis as good and fruitful our reliance on the truth of the proposition asserted by the hypothesis. And we rely upon a truth when he find ourselves acting habitually in a manner that assumes its truth. Of course, hypotheses must also meet the test of experimental verification.

Clearly, however, Peirce was not satisfied to end his lecture series with this pragmatic defense of pragmatism. He wanted his audience to appreciate and hopefully come to accept the *philosophical* basis for pragmatism, his proof of pragmatism, as well. He wanted them to become scholastic realists! He wanted to press upon them “the urgent pertinence of the question of thirdness, at this moment of the breakup of the agnostic calm” (CP 5.208). He wanted them to share his vision of semiotic animism that was alive in the universe so that the place of pragmatic abduction could be fully appreciated. At the end he wrote:

But the sum of it all is that our logically controlled thoughts compose a small part of the mind, the mere blossom of a vast complexus, which we may call the instinctive mind, in which this man will not say that he has faith, because that implies the conceivability of distrust, but upon which he builds as the very fact to which it is the whole business of his logic to be true.

(CP 5.212)

Peirce hoped that his listeners would have learned something from his lectures. But, there is very little evidence that they understood much of what he was up to. As stated earlier, the lectures are really a measure of how far removed Peirce was from the academic community of his time. His topic was too broad and not suited for a lecture series. He jumped too quickly over the individual parts of the argument; the full picture of synechism, which was supposed to be the kingpin in the proof, was never clearly shown or developed. And Peirce himself, with so much on his plate, failed to recognize how much the theme of mutual affection, which we shall attempt to define more clearly in the final lecture, was the bond that unified the categories, thirdness, semiosis, and his entire life work in philosophy.