Not Cynicism, but Synechism:

Lessons from Classical Pragmatism

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Probably you all know that hoary old joke about the two behaviorists meeting on the street: "Hi! You're fine, how am I?" We laugh; but of course sometimes another person really can notice something about your mental goings-on of which you're not quite aware yourself -- as I realized when, in the discussion after I had given a talk on philosophy of science at Yale, Karsten Harries observed: "Oh, I see; you're a synechist." Up till then I had been most conscious of the influence of Peirce's stalwart defense of the "scientific attitude," a genuine desire to learn the truth, and of the Critical Common-sensism I had adopted, and adapted; but as I mulled over Harries' comment I soon saw that synechism is, indeed, one of those pragmatist ideas that has made its way into my philosophical thinking, or perhaps another of those philosophical leanings of mine that makes pragmatism congenial -- and that my Critical Common-sensism could itself be plausibly construed as synechist in spirit.

As my sub-title indicates, my main purpose here is to trace the ideas that make me, at least, a prope-synechist: a synechist, that is, in a broad sense of the word. But though my title contrasts the synechism of the classical pragmatist tradition with the cynicism of recent self-styled neo-pragmatism -- I just couldn't resist the play on words! -- I shan't spend long on the Vulgar Pragmatism of Rorty and his admirers. I will, however, tell

you the marvelously ironic story of Peirce's first public presentation of synechism, when he read the nearly-finished version of "The Law of Mind" at the Harvard Graduate Philosophy Club in May of 1892. Among those present were Peirce's brother Jem, Josiah Royce, Francis Ellingwood Abbot, Dickinson S. Miller, and Charles Montague Bakewell. The same day, Abbot wrote in his diary that "[Peirce] read an able paper on 'Syechism,' his new system of philosophy"; and the following day, Bakewell reported in a letter to George H. Howison that he had "[h]eard Mr. Chas. Peirce read a paper last evening on Continuity, the Law of Mind, or '<u>Cynicism</u>'."

Peirce once wrote that the term "synechism" could be used to describe his metaphysical system as a whole (6.202, 1898); at the same time, however, his conception of metaphysics as continuous with the special sciences is itself clearly an expression of his synechism. This mutual dependence need cause no concern about vicious circularity (as Peirce observes in another context, "the reader will, I trust, be too well-grounded in logic to mistake ... mutual support for a vicious circle of reasoning" (6.315, 1893)); but it does pose some difficulty for an expositor. Since I have to start somewhere, I have decided to begin with Peirce's conception of scientific metaphysics.

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Peirce acknowledges the affinity of pragmatism with the earlier positivism of Auguste Comte. Moreover, he writes that historically metaphysics has been the arena of "ceaseless and trivial disputation" (6.5, 1898); it "is in a deplorably backward condition" (6.2, 1898), "a puny, rickety, and scrofulous science" (6.6, 1903). Nonetheless, far from sharing the blithely dismissive attitude of which Rorty boasts -- "the pragmatist ... does not think of himself as <u>any</u> kind of metaphysician" (CP, p.xxviii) -- Peirce is a metaphysician of remarkable depth and breadth.

Unlike indiscriminately anti-metaphysical positivist philosophies, Peirce's pragmat[ic]ism is a kind of prope-positivism which envisages the possibility of a reformed, scientific metaphysics:

> [The Pragmatic Maxim] will serve to show that almost every proposition of ontological metaphysics is either meaningless gibberish -- one word being defined by other words, and they by still others, without any real conception ever being reached -- or else is downright absurd; so that, all such rubbish being swept away, what will remain of philosophy will be a series of problems capable of investigation by the observational methods of the true sciences. ... So, instead of merely jeering at metaphysics, ... the pragmaticist extracts from it a precious essence, which will serve to give life and light to cosmology and physics. (5.423, 1905)

The reformed metaphysics Peirce envisages will be, not "seminary philosophy," but "laboratory philosophy" (1.129, c.1905), scientific both in its motive and in its method. It will be undertaken with the "scientific attitude," out of a genuine desire to discover the truth; and it will use, not the A Priori Method of "what is agreeable to reason," but the Scientific Method, i.e., the method of experience and reasoning. Peirce ties these two

points together: he maintain that the reason metaphysics is in such a bad way is that it has fallen into the hands of theologians, who are by profession committed to protect and defend religious doctrine, and so -- lacking the true desire to learn -- cannot possibly undertake their work with the scientific attitude; and insists that the reason for its deplorable condition is not that there is any peculiar difficulty in the subject-matter of metaphysics, and not, in particular, that its objects are beyond the reach of experience.

The "common opinion ... that Metaphysics is backward because it is intrinsically beyond the reach of human cognition," or that it "is inscrutable because its objects are not open to observation," Peirce writes, "is a complete mistake" (6.2, 1898). Metaphysics does, and must, rest on observable phenomena. If we fail to realize this, it is because the observations on which metaphysics depends are so commonplace that we ordinarily pay no attention to them. The fact is, however, that they are far more readily available than the observations needed by the special sciences; for they require, not expensive or specialized instruments, but only careful attention to our everyday experience. Philosophy "does not undertake to make any special observations or to obtain any perceptions of a novel description. Microscopes and telescopes, voyages and exhumations, ... are substantially superfluous ... . It contents itself with a more attentive scrutiny and comparison of the facts of everyday life ... ." (EP2:

146, 1903).

As I understand him, Peirce recognizes that even scientific metaphysics -- though at least it is not pragmatically meaningless "gibberish" -- may be false as well as true. There is no guarantee against bad good metaphysics, i.e., metaphysics that is of the right kind, but nevertheless mistaken. But, Peirce hopes, "by proceeding modestly, recognizing metaphysics as an observational science, without caring one straw what kind of conclusions we reach ... but just honestly applying induction and hypothesis ... the disputes and obscurities of the subject may at last disappear" (6.5, 1898).

Like the special sciences, scientific metaphysics will rely on abductive and inductive as well as deductive reasoning; and, differing from the special sciences not in kind but in degree of generality, sometimes "weld[s] itself" with them (EP2: 375, 1906). Nevertheless, scientific metaphysics is neither reducible to the special sciences nor subordinate to them. For since metaphysics investigates the most general aspects of reality, it is the discipline to which it falls to supply key presuppositions of the special sciences; which are, therefore, based on -- though not derivable from -- the underlying metaphysics. This thought is implicit when Peirce writes that the hitherto backward state of metaphysics has greatly hindered progress both in the physical sciences and in the "psychical" sciences of psychology, linguistics, anthropology, and sociology (6.2, 1898). It is explicit when

he writes that the "principal utility" of philosophy is "to furnish a Weltanschauung, or conception of the universe, as a basis for the special sciences" (EP2: 146-7, c.1903); and that the "special sciences are obliged to take for granted a number of most important propositions, because their ways of working provide no means of bringing these propositions to the test. In short, they always rest upon metaphysics" (1.129, c.1905).

This conception of the interrelations of metaphysics and the special sciences may be briefly illustrated by Peirce's treatment of the dispute between nominalism and realism. The question, as Peirce construes it, is whether there are real generals: "whether man, horse, and other names of natural classes, correspond with anything which all men, or all horses, really have in common, independent of our thoughts" (8.12, 1871); or, even more succinctly, "whether laws and general types are figments of the mind or are real" (1.16, 1903). As this last formulation reveals, the issue turns in part on the meaning of "real." Adapting Scotus' conception of the real as that which (unlike a fiction or figment of the imagination) is independent of how we believe it to be, Peirce gives it a characteristically pragmat[ic]ist twist: the real is independent of how you, or I, or anyone believes it to be; but not independent of how the community of inquirers would believe it to be at the end of inquiry -- for, as Peirce conceives it, the real is the object of the Final Opinion, and hence is of the nature of cognition.

Whether there are real generals is not a question that can be settled a priori; in particular, we can't just assume that for every general term of our language there is a corresponding real kind (a mistake for which Peirce criticizes Scotus). But neither is it a question that could be settled by physics, by psychology, or by any of the special sciences. During another lecture at Harvard, Peirce holds up a stone and asks his audience to agree that they could predict that, if he were to drop it, it would fall. If they allow that they predict what will happen, he argued, they must agree that there are real laws; for a mere generalization about actual droppings and fallings, as opposed to a genuine law about what would happen in all cases of unsupported stones' being dropped, would give no grounds for the prediction. The point was not, I take it, that nominalism is refuted experimentally by the stone's falling; but that it is refuted if, as his audience acknowledges, it is predictable in advance that the stone will fall (5.93, 1903). Notice how Peirce argues first abductively: a realist answer can explain how explanation, induction, prediction, and hence the special sciences, are possible, while a nominalist answer cannot; and then inductively: our everyday experience testifies that explanation, induction, and prediction <u>are</u> possible. This is at once an application of the scientific method in metaphysics, and an argument that the legitimacy of the special sciences presupposes a realist metaphysics.

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Introducing a paper of 1893 entitled "Immortality in the Light of Synechism," the editors of The Essential Peirce describe synechism as "the doctrine that everything is continuous" (EP2: 1); and Peirce himself refers to synechism as a "doctrine" both in the introduction and in the concluding paragraph of "The Law of Mind" (which, after he had presented it at Harvard, was published in the Monist for 1892 as the third in a series of five of his metaphysical papers appearing between 1891 and 1893). Some years later, however, Peirce wrote that "[s]ynechism is not an ultimate and absolute metaphysical doctrine; it is a regulative principle of logic, prescribing what sort of hypothesis is fit to be entertained and examined"; it is "that tendency of philosophical thought which insists upon the idea of continuity as of prime importance ... and, in particular, upon the necessity of hypotheses involving true continuity" (6.173 and 6.170, 1902, my italics). This seems to me a significantly better formulation: more plausible in itself, and making better sense of Peirce's observations about the synechist's attitude to dualisms.

Even in its less stalwart forms, Peirce writes, "synechism can never abide dualism, properly so called" -- not even dualism "in its broadest legitimate meaning," referring to the style of philosophy that "performs its analyses with an axe, leaving, as

the ultimate elements, unrelated chunks of being" (EP2: 1893). Tying this to his contrast between scientific and seminary philosophy, he observes that theologians and moralists tend to stress dual distinctions (the saved versus the damned, good versus evil); and comments, "how helpless ... such minds are in attempting to deal with continuity ... the leading conception of science" (1.62, c.1896). However, unlike certain "philosophical cranks," the synechist "does not wish to exterminate the conception of twoness" (EP2: 2, 1893). Indeed, Peirce surely doesn't mean to "exterminate" secondness, or to deny that dual distinctions may be useful; his point, I take it, is the importance of looking for underlying continuities, and of recognizing that supposed dualities are often better conceived as lines of demarcation drawn at some point on a continuum. The comment he makes in his Logic Notebook for 1909, on the successful execution of his experiment in triadic logic, is emblematic: "Triadic logic is universally true. Dyadic logic is not absolutely false however, it is only L [at the limit of truth and falsity]."

In the terminology of our day, we might say that the synechist idea is to favor hypotheses that treat supposed differences of kind as really only significant differences of degree. But Peirce's own way of putting it -- that the trouble with the axe-wielding style of philosophy is not simply that it makes dual distinctions, but that it leaves us with "unrelated chunks" -- has the virtue of making it more apparent why, in his

entry on "Synechism" for Baldwin's Dictionary of Philosophy and Psychology, he maintains that synechism "amounts to the principle that inexplicabilities are not to be considered as possible explanations." For whatever is ultimate is inexplicable; but continuity is the absence of ultimate parts, and generality, "which is the same thing as continuity," is "the form under which alone anything can be understood" (6.173, 1902).

Construed, as I shall construe it, as a regulative principle rather than as a metaphysical doctrine, synechism conjectures that scientific metaphysicians should favor abductive hypotheses that posit continuities over those that posit simple, brute dualities -- not because they are guaranteed to be true, but because "the synechist maintains that the only possible justification for so much as entertaining a hypothesis is that it affords an explanation of the phenomena"; and anti-synechistic hypotheses breaking reality into unrelated components "set up a barricade across the road" of inquiry (6.171, 1902).

In the introductory paragraph of "The Law of Mind" Peirce describes himself as having attempted to develop the synechist idea, "a good many years ago," in his anti-Cartesian papers in the Journal of Speculative Philosophy. This allusion to the 1868 "cognition" series as synechist avant la lettre refers to the ideas about the continuity of cognition in those papers -- which, indeed, are with hindsight clearly no less synechist (though he didn't use this word at that time) than "How to Make Our Ideas

Clear" is pragmatist (though Peirce didn't use that word either). I would add that, in virtue of its awareness of the continuities between human learning and other animals' exploration of their environment, and between inquiry and other means of settling opinion, "The Fixation of Belief" (1877) seems no less synechist in spirit.

In the concluding paragraph of "The Law of Mind," Peirce writes that synechism carries along with it "a logical realism of a most pronounced type; ... objective idealism; [and] tychism, with its thorough-going evolutionism" (6.103 and 6.163, 1892). The following year, in "Immortality in the Light of Synechism," he writes that "the synechist will not admit that physical and psychical phenomena are entirely distinct"; and argues that, though it is not itself religion but a [meta-]hypothesis of scientific metaphysics, synechism "may play a part in the onement of religion and science," by envisaging the possibility of a continuity of carnal and spiritual consciousness (EP2: 2, and EP2: 3, 1893). And in just a few pages at the beginning of "The Logic of Continuity," the lecture of 1898 in which he suggests that his metaphysical system as a whole might be called "synechism," he presents a stunning metaphysical panorama in which the idea of continuity is the organizing principle linking agapism, tychism, and the categories. This is Peirce the metaphysician at his most philosophically fertile, his most scientifically sweeping, his most cosmologically prescient, his most mathematically imaginative

-- but also, sometimes, his most darkly Cimmerian.

Agapism, the "doctrine of evolutionary love," posits an evolution from an initial chaos into order. Peirce summarizes the idea in the first of the papers of the Monist series, "The Architecture of Theories":

> ... 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. (6.33, 1891).

This, Peirce continues, is not just an evolution of the existing universe, but "a process by which the very Platonic forms themselves ... are becoming developed" out of initial vague potentialities (6.194-5, 1898). And it is not mere "tychastic evolution," evolution by sporting or fortuitous variation, nor mere "anacastic evolution," evolution by mechanical necessity; it is "agapastic evolution," evolution "by creative love," by affinity -- of which tychastic and anacastic evolution are merely degenerate forms (6.302, 1893). The key mechanism of agapastic evolution is "The Law of Mind" to which the title of Peirce's first explicitly synechist paper refers, and which he states as follows: "ideas tend to spread continuously and to affect certain others which stand to them in a peculiar relation of affinity" (6.104, 1892).

Peirce's summary of agapism continues: "At any time, however,

an element of pure chance will remain." This is tychism, the doctrine that absolute chance is a factor of the universe, that not everything is governed by law. This element of chance will remain, Peirce continues, "until the world becomes an absolutely perfect, rational and symmetrical system in which mind is at last crystallized in the infinitely distant future" (6.33, 1891). This is why Peirce says that (though "synechism" would) "tychism" would not do as a name for his metaphysical system as a whole: "for although tychism does enter into it, it only enters as subsidiary to that which is really ... the characteristic of my doctrine, namely, that I chiefly insist upon continuity, or Thirdness" (6.202, 1898). The element of chance is a remnant of the original disorder, and will eventually be superseded.

In all this, naturally, the universal categories are ubiquitous. At the beginning of "The Architecture of Theories" there is Peirce's vivid description of three ways of going about developing philosophical theories, analogous to three ways of going about building a house. Near the end of this paper is an initially very puzzling passage where Peirce writes that "Chance is First, Law is Second, Evolution is Third" (6.33, 1891). "Law is second" is unexpected, to say the least; but perhaps what Peirce is suggesting is that at this level of metaphysical meta-analysis laws are seen to constitute a kind of fixity in chance, but to be themselves evolving; yielding an ordering in which law comes second, between chance and evolution. The categories are also at

work in the last paper in the Monist series, "Evolutionary Love" (1983), in Peirce's classification of the three kinds of evolution: tychastic (1st), anacastic (2nd) and agapastic (3rd). In "The Logic of Continuity," Peirce writes that without independent elements of firstness (feeling) and secondness (reaction) "Thirdness would not have anything on which to operate" (6.202, 1898).

In several places Peirce writes that continuity is thirdness. <make a serious paragraph on this>

The agapastic development of thought is the adoption of mental tendencies, not heedlessly or by force of circumstance or logic, but by "an immediate attraction for the idea itself, ... by the power of sympathy, that is, by virtue of the continuity of the mind" (6.307, 1893). This, I take it, indicates what Peirce means when he says that synechism carries with it a "logical realism of the most pronounced type." In "The Logic of Continuity" he writes that "[e]very attempt to understand anything ... supposes, or at least hopes, that the very objects of study themselves are subject to a logic more or less identical with that which we employ" (6.189, 1898). Thought is gradually evolving towards harmony with its object, destined to culminate in the Final Opinion.

"The old dualistic notion of mind and matter ... as two radically distinct kinds of substance, will hardly find any defenders today," Peirce writes in "The Architecture of Theories." This means we are obliged to accept some form of "hylopathy," or

monism, of which he distinguishes three: neutralism, materialism, and idealism. Neutralism, making inward and outward aspects of substance both primordial, violates Ockham's razor. Materialism is "quite as repugnant to scientific logic as to common sense, since it requires that a certain kind of mechanism will feel ... an ultimate, inexplicable regularity." Peirce concludes that "[t]he one intelligible theory about the universe is "objective idealism, that matter is effete mind" (6.24, 1891). The following year, in "Immortality in the Light of Synechism," Peirce writes that mind and matter are not distinct substances, not even "entirely separate sides of one shield," but phenomena "of one character, though some more mental and spontaneous, others more material and regular" (EP2: 2, 1893); which, as his title indicates, allows for the possibility of disembodied, spiritual consciousness.

But this way of presenting objective idealism, as if it were simply a rival theory in the same domain as Cartesian dualism, neutralism, and materialism, is misleading. It places too little emphasis on the adjective "objective," and on the fact that even in "The Architecture of Theories" Peirce had presented his idealism in terms of law: "the physical law is derived and special, the psychical law alone is primordial ... matter is effete mind, inveterate habits becoming physical laws" (6.24-5, 1891). It is hard to reconcile with Peirce's cryptic comment, in "Notes for a Book, to be entitled 'A Guess at the Riddle'," that "[f]aith requires us to be materialists without flinching" (1.354,

c.1890); and with the fact that Peirce himself speculates very suggestively about how it is possible for protoplasm to feel: e.g., "feeling, or immediate consciousness, arises in an active state of nerve-cells" (1.386, c.1885); "[t]here is no doubt that this slime-mould, or this amoeba, or at any rate some similar mass of protoplasm, feels ... when it is in its excited condition" (6.133, 1892).

The appearance of inconsistency is mitigated in the fourth of his five Monist papers, "Man's Glassy Essence," where Peirce writes that "[p]rotoplasm certainly does feel," and that this "can never be explained, unless we admit that physical events are but degraded or undeveloped forms of psychical ones" (6.264, 1893). Once it is acknowledged that matter is just dead mind, mind informed by inveterate habits, he continues, the only further explanation needed is why, in protoplasm, these habits are "to some slight extent broken up " (6.264, 1893).

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Peirce doesn't say that objective idealism, agapism, tychism, logical realism, etc., are implied or required by synechism, but that synechism "carries [these ideas] along" with it. I think he means that these are hypotheses of the type that synechism, qua regulative principle, recommends; and so have the merit of being at least potentially explanatory. But their synechistic character

does not guarantee their truth; and they are not the only hypotheses of the desirable, potentially explanatory, synechistic type. And although, so far as I know, only Peirce writes explicitly of synechism, there are other hypotheses also plausibly described as synechistic to be found in the other classical pragmatists as well. For example (though Peirce might have said that it violates Ockham's razor), James's radical empiricism arguably qualifies as synechistic; for it repudiates any dualism of mind and matter, instead distinguishing mental and physical phenomena as differently-related arrangements of, as James says, "experience," itself construed as neutral, neither mental nor material. And, though Peirce might not quite approve of Dewey's vehemence in opposition to the traditional dualisms of mind vs. matter, fact vs. value, rationalism vs. empiricism, etc., Dewey is undeniably thoroughly synechist; in large part, no doubt, because of the influence of Hegel -- whose synechism Peirce had acknowledged (though he had gone on to complain that Hegelianism is an "anacasticism," and, in an allusion to the house-building analogy of "The Architecture of Theories," rather unkindly described Hegel's as a "pasteboard model of a philosophy that in reality does not exist" (6.305, 1893)). George Herbert Mead's account of society, mind, and self, in its subtle exploration of the continuities between human language and the "language of gestures" found in other social animals, seems no less synechist in spirit than Peirce's "Fixation of Belief." And Sidney Hook's articulation

of naturalism, though pulling strongly against that "onement of religion and science" Peirce had envisaged, seems no less synechist in spirit than Dewey's conception of the relation of science and common sense.

In acknowledging the influence of synechism in my own philosophical thinking, I am not endorsing every synechistic hypothesis that Peirce himself proposes. However, I will begin my sketch of synechist themes in my work with an issue where I think Peirce's approach was just about exactly right: the relation of metaphysics to the special sciences. But because, these days, theologians constitute less of a threat to the health of the philosophical enterprise than literary post-modernists and their ilk, I am inclined to put what is essentially the same idea in a somewhat different way. First: If it is to be worth anything, philosophy must be a kind of inquiry, an effort to discover the truth of the questions within its scope; if, as Rorty urges, it were to give up the aspiration to discover truths and become "just a kind of writing," it's not clear that philosophy would be worth anything. This is not to deny that some works of philosophy, like some works of history, etc., qualify as "literary" in the aesthetically-honorific sense of the word: as Plato's dialogues surely do, and Bacon's Essays, and many others; nor is it to deny that some works of imaginative literature convey philosophical truths: as Eliot's Daniel Deronda surely does, and Orwell's Nineteen Eighty-Four, and

many others. It is only to place philosophy on a continuum (the continuum of kinds of inquiry) to which the sciences, history, etc., also belong.

This conception requires, second, that there be a class of question characteristic of philosophical inquiry, and capable of true or false answers. Rorty -- who suggests that the idea of a specifically epistemological class of questions arose only in the context of a distinction between science and philosophy implicit in Descartes and Hobbes, but not explicit until Locke and Kant -- maintains that there is really no such class. I think there is a characteristically philosophical type of question; not, however, that the class of such questions is set in stone. Not all or only the questions on the agenda of the philosophers of ancient Greece were still to be found on Descartes' agenda, nor are all or only Descartes' questions to be found on, say, Quine's or Derrida's; we may be sure that Heraclitus didn't concern himself with the Gettier problem, and I don't suppose Gettier spends much time wondering whether the world is constant or in flux. The evolution of new questions and the displacement of old ones is simply one of the ways in which disciplines develop. It is a familiar fact of the history of science that the questions tackled by the sciences shift and change; e.g., Friedrich Miescher (the man who first identified the stuff, for which his word was "nuclein") had no conception of the question about the structure of DNA which Watson and Crick were later to become famous for answering; the concept

of macromolecule, and the idea that stereochemical structure, as well as chemical composition, matters, came only later. And the fact that, in philosophy as in the sciences, new theories and new concepts raise new questions and displace older ones doesn't mean there are no characteristically philosophical questions.

But in the course of its long history metaphysics has only too often been focused on questions that were later displaced as they turned out to rest on false presuppositions. (The appropriate response to such questions is obvious, if laborious: trace their roots until you find the falsehood, the wrong answer, among the assumptions on which they depend.) In fact, I see this long history of misconceived questions based on wrong answers to earlier questions as the chief source of the idea that there must be something just inherently wrong with the metaphysical enterprise as such -- an idea which, in my opinion as in Peirce's, is "a complete mistake."

Like Peirce, I take the fundamental questions of metaphysics to be about the world. They are of course questions of an especially high degree of abstraction and generality; a point Quine makes vividly when he writes that, while the question of how many and what kinds of beetle there are is characteristic of zoology, the question of how many and what kinds of thing or stuff there are is characteristic of metaphysics. This isn't to deny that answering metaphysical questions often requires strenuous efforts at conceptual clarification: we saw earlier how Peirce's

articulation of his realism led him to adopt, and adapt, Scotus' conception of reality; and after the very first sentence of my statement of Innocent Realism -- "there is one real world" -- I too faced the obligation to clarify what I mean by "real," and to say what there being one world (rather than none or more than one) precludes. Nevertheless, Innocent Realism is, like Peirce's "scholastic realism of a somewhat extreme stripe" -- and as metaphysical theories ought to be -- about the world, not just about conceptual schemes or linguistic frameworks.

Third, the fact that it makes claims about the world, and not just about our concepts or our language, means that metaphysics cannot be conducted purely a priori, but must, as Peirce said, use the method of experience and reasoning. As Peirce also said, this doesn't mean that metaphysicians need to conduct experiments or set off on expeditions; only that, like scientific inquiry, metaphysical inquiry requires making potentially explanatory conjectures, exploring their consequences, checking out how well those consequences stand up to evidence, and using your judgment whether to stick with them, modify them, or give them up and start again. Metaphysical abductions and meta-abductions can be expected to be at the highest level of generality; and the evidence by which they stand or fall, again as Peirce said, can be expected to be more commonplace than recherche. If we are wondering whether there are uniformities in nature, no fancy equipment or skillful experiment will help; nevertheless, the common experience that it

is possible to predict how animals, or people, or stuff will behave is apropos.

This approach enables us to steer clear both of apriorism, represented in our times by the "descriptive metaphysics" that Strawson defended in the wake of the Logical Positivist (post-Humean, post-Comtean) critique of the legitimacy of the metaphysical enterprise,[1] and even more strikingly by Kripke's appeals to the synthetic a priori and David Lewis's quasi-Leibnizian modal realism; and of a Quinean scientism that would make metaphysics secondary to, dependent on, current scientific theorizing. Peirce's synechist conception of metaphysics was far ahead not only of his own time, but also of ours.

Now let me turn to my second synechist theme, the continuity of inquiry in the sciences with everyday empirical inquiry. This theme is also present in Peirce; but it is disguised somewhat by his use of "science" equivalently to "genuine, good-faith inquiry," "the scientific attitude," equivalently to "the genuine desire to discover the truth," and "the scientific method" equivalently to "the procedures of good-faith inquiry." It is expressed less obliquely by Dewey, who writes that "scientific

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[1] See also Haack, "Between the Scylla of Scientism and the Charybdis of Apriorism," in The Philosophy of Sir Peter Strawson, ed. Lewis Hahn (La Salle, IL: Open Court, 1997), 000 -000.

subject-matter and procedures grow out of the direct problems and methods of common sense" (Logic: The Theory of Inquiry, p. 88); and by Hook, who writes that "scientific method is the refinement of the canons of rationality and intelligibility exhibited by the techniques of behavior and habits of inference involved in the arts and crafts of men; its pattern is everywhere discernible even when overlaid with myth and ritual" ("Naturalism and First Principles," p.173).

In our times, no doubt because of the remarkable successes of the natural sciences, "science," "scientific," etc., are often used honorifically, as all-purpose terms of epistemic praise. This is quite different from Peirce's inclusive usage, which accommodated all good-faith inquiry under the rubric "science"; for, covertly suggesting that only the work of scientists is good inquiry, it is exclusive in spirit. This modern, honorific use of "science" has contributed to the presumption that there must be a line of demarcation setting off real science, the genuine article, both from lesser intellectual enterprises and from pseudo-scientific mumbo-jumbo, and a uniquely rational method of inquiry that explains the successes of the sciences. But it is thoroughly unfortunate, disguising what would otherwise be obvious: that not all and not only scientific evidence is good evidence, and not all, and not only, scientists are reliable inquirers.

In place of this axe-wielding demarctionist approach, I have proposed a Critical Common-sensist account which acknowledges the

continuities -- epistemological, methodological, and metaphysical -- between inquiry in the sciences and everyday empirical inquiry. That honorific use of "scientific evidence" notwithstanding, the evidence with respect to scientific claims, like the evidence with respect to empirical claims generally, includes both experiential evidence and reasons, working together as clues and intersecting entries in a crossword puzzle do. But it is, so to speak, more so: the experiential evidence relevant to scientific claims usually depends on instruments of observation which themselves depend on previous scientific theorizing; the mesh of reasons supporting scientific claims is even more complex and ramifying; and, almost always, scientific evidence is a shared resource. In the notes to their first paper proposing the double-helical structure of DNA, for example, Watson and Crick cite twenty-three other papers; and this is only the tip of an enormous iceberg, for they also depend implicitly on a vast body of what could by that time be simply taken for granted as background knowledge.

At least in the sense in what that phrase is often understood, there is no "scientific method": no mode of inference or procedure of inquiry, that is, unique to the sciences and guaranteed to produce true, or more probable, or more nearly true, or more empirically adequate results. There are the procedures and modes of inference of all empirical inquiry -- but these are not used only by scientists; and there are the many and various helps to inquiry that have been devised by generation upon generation of

scientists constantly evolving, and often local to this or that area of science -- but these are not used by all scientists.

Like any empirical inquirer, a scientist makes an informed conjecture about the possible explanation of some puzzling phenomenon, figures out the consequences of the conjecture's being true, checks how well those consequences stand up to the evidence he has and any further evidence he can lay hands on, and then uses his judgment whether to accept it, modify it, or abandon it and start again. But scientific inquiry, like scientific evidence, is more so: scientists have devised models and metaphors to aid the imagination, instruments of observation to aid the senses, sophisticated experimental controls to block misleading evidence, mathematical, statistical, and computing devices to extend our limited human reasoning powers, and even a social organization of mutual scrutiny, peer review, rewards and incentives which helps keep most scientists, most of the time, reasonably honest. All are fallible and imperfect; but nevertheless they are genuine helps. To borrow a memorable phrase of Gustav Bergmann's that Peirce would surely have enjoyed as much as I, the sciences represent the Long Arm of Common Sense.

And, of course, scientists investigate the same world -- the one real world -- as historians, investigative journalists, detectives, legal and literary scholars, auto-mechanics, plumbers, and the rest of us do; a scientist trying to solve the structure of the hemoglobin molecule, for example, a detective checking

blood traces left at a crime scene, and a housewife trying to figure out how to get blood-stains out of the laundry are all investigating the same stuff. And successful scientific inquiry, like successful empirical inquiry of any kind, is possible because if we, and the world, are a certain way. No empirical inquiry would be possible for us if we didn't have sense organs competent to detect information about particular things and events around us, and the intellectual capacity to make generalized conjectures and devise ways to check these conjectures against further evidence; or if the particular things and events of which we can be perceptually aware were not of kinds, and subject to laws. Otherwise, we couldn't categorize things or discover useful generalizations about them; nor could the natural sciences -- deeper and more detailed than everyday empirical inquiry, far better unified, more accurate, yet still thoroughly fallible and imperfect -- gradually have managed to identify real kinds of thing or stuff, discern their inner constitution, and discover laws of nature.

This was, by the way, one theme of the talk of mine that prompted Harries' comment: the very possibility of scientific investigation really <u>does</u> require a kind of realism; but these metaphysical presuppositions of science are precisely those also taken for granted by anyone who engages in the most ordinary of empirical inquiry -- out of which, as Dewey and Hook observe, the sciences have grown. In this context, I quoted Peirce: "Let us

not pretend to doubt in philosophy what we do not doubt in our hearts." To maintain, as I do, that scientific inquiry is continuous with common-sense inquiry of the most ordinary kind, is not to deny that for some purposes it is necessary to draw a rough and ready line between science and other things. One way might be to think of the sciences as differing from such other activities as clog-dancing or advocacy in being kinds of inquiry; as differing from other kinds of empirical inquiry such as history or legal or literary scholarship in virtue of their subject-matter; and, perhaps, as differing from natural theology in virtue of the kinds of explanation they acknowledge as legitimate. This is a reasonable starting-point for understanding how science differs from literature or the entertainment industry. But if we want to understand the historical aspects of social science or evolutionary biology, but to avoid assimilating science and history, we shall need something subtler; and if we want to understand how creationism differs epistemologically from physical cosmology or evolutionary biology, we will do better to focus on questions of evidence and warrant, rather than fussing over whether creationism is bad science, or not science at all.

"Non-science" is an ample and diverse category, including the many human activities other than inquiry, the various forms of pseudo-inquiry, inquiry of a non-empirical character, and empirical inquiry of other kinds than the scientific; and to make matters even more complicated, there are plenty of mixed and

borderline cases. The honorific use of "scientific" and its cognates tempts scientists as well as laypersons to criticize poorly conducted science as not really science at all; but "not scientific" is as unhelpful as generic epistemic criticism as "scientific" is as generic epistemic praise. The phrase "pseudo-science," which presumably refers to activities which purport to be science but aren't really, derives its pejorative tone in part from its imputation of false pretenses, but also in part from the honorific use of "science." But rather than criticizing poor work as "pseudo-scientific" it is always better to specify what, exactly, is wrong with it: e.g., that it is not serious or honest inquiry; that it rests on assumptions for which there is no good evidence, or which are too vague to be susceptible to evidential check; or that it uses mathematical symbolism, or elaborate-looking apparatus, purely decoratively.