

Selected Writings of

C.S. Peirce

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This is a selection of some of Peirce's writings and as such not very representative. There is an emphasis on his writings on science, especially his pragmatism, along with its history and relation to religion.

Peirce is a pragmatist. This is a metaphysical assumption, namely that only that which has demonstrable consequences has a real meaning and existence. Truth is to Peirce what the community is ultimately decided upon. This may sound like scientific truth is nothing but a social construct, but with Peirce the notion of the community is not limited in time and place, and does even include intellects which may succeed us. In fact in his definition he adds what he calls fated. Meaning that the ultimate opinion is fated. By fated he means something that is unavoidable, and thus his definition becomes somewhat circular, which is not surprising, maybe not even deplorable. Reality is what exists independent of our thoughts (actions can of course alter reality) and the future opinions of the community, are independent of any set of individuals; in fact your own future opinions are not known to you neither determined as you have no control over what you will encounter and what will influence you. One may compare that to the notion of Popper that we can asymptotically approach truth, even if our conception of it at any time is provisional.

Peirce takes exception to Descartes and his approach of going down to the basics by systematic doubting until you get down to the indubitable, an approach clearly based on Euclid's deductive method. You cannot will doubt, Peirce points out. He also rejects those who take immediate sense perceptions as the basics. Any perception is the result of a complicated cognitive process, something which Popper also points out. Thus Peirce starts in *media res*. We have to work with what we have, not what we imagine we have, or would like to have. What we have is doubt and belief. Belief is a case of habit, while doubt is a forceful interruption of habit. Doubt brings about discomfort and a need to struggle. The struggle is referred to as inquiry and has as its goal to bring about relief, i.e. a state of belief. Once belief is established, it forms the basis for action. So called belief that does not, does not qualify as real belief, by virtue of being too inconsequential. But belief leading to action may give rise to new doubts, relief never being permanent. And of course in the process of the inquiry smaller doubts and reliefs will be encountered and achieved respectively presenting basically a fractal picture. This incidentally is what thought should be thought of as. A thought is composed of smaller component thoughts, or references to such, *ad infinitum*. This can explain the paradox of Zeno, time consisting of moments of no duration, supposedly adding up to nothing, while Peirce seems to fall into the trap, by remarking that each moment having no extension in time cannot be the basis for a thought of that moment, and hence it all adds up to nothing.

Science is not a question of systematic knowledge but a matter of attitude. The teachings and findings of Ptolemy are all obsolete and discounted, but that does not invalidate his efforts as being conducted in the true scientific spirit. Science is about

inquiry, i.e. concerned about finding belief-relief. There are other methods. One is the *a priori* method. This is to start out with fundamental truths and from them deductively infer the beliefs. The problem is how to get hold of those indubitable facts. For the metaphysician from Plato, Leibniz to Hegel it is a question of finding facts agreeable to reason (and are there really anything that is more seductive?). Such indubitable truths are not to be found. Everything can be doubted, which does not mean that it has to be doubted, recall that doubt is not a matter of volition, but something that is externally forced on you. The reasoning of science is not mainly one of deduction, but one which deals with external observations. Peirce has a lot of names for various such stratagems, calling them inductions and abductions. Another method is to hit upon a belief and try to convince yourself of its validity, and in such a way find relief. The method may seem absurd but is no less common. You may worry about having a disease and thus try to convince yourself that you do not have it, rather than going to the doctor and risking finding out that you have it. In this way you have to avoid anything that can contradict or otherwise challenge what you like to believe. Because after all you want to hold onto a certain belief because you would be wretched would you not hold to it. Some such beliefs may have little practical consequences. You may believe that after your death you go to heaven. It may make you feel very good, and there will be nothing in life which will contradict it. And from the point of view of an atheist, neither will there be any contradictions in your (non-existent) afterlife as well. This is a view that cannot be falsified, or from the point of view of Peirce, along with most metaphysical creeds have no practical consequences ¹. Peirce dubs this belief by tenacity, and it has many advantages. The man who sticks to his beliefs and acts on them without deliberation, may proceed very far in life, and earn the admiration of many.

The problem with tenacity is of course that it is subjective and will invariably come in conflict with other subjective views unless you isolate yourself from society and become an hermit. But a society as a whole may want to promulgate good beliefs, and a society has far more resources than a mere individual. Thus a society makes sure that only some beliefs are taught and spread and sees to it that any challenging and dissenting views are barred. The next step is to supervise the community to monitor as far as feasible the thoughts of its members to make sure that nothing subversive is being maintained and spreading, and to punish, ultimately to destroy members of the community whose thoughts and opinions are not in harmony with the basic values. This is termed by Peirce as the method of authority, and although it may seem as a caricature, it has been a very common method practiced throughout history, in fact, it seems to be the method of default. Its extenuating feature is that traditionally the reach of the powers were limited, both as to what beliefs to protect (and thus confining those to the very essential) and the extent of surveillance. With modern technology this is changing. While this does not, as of yet, involve science, it certainly involves social mores, what is referred to as political correctness. There are many opinions which you are not to challenge, such as democracy, the equal values of men etc, and if you are suspected of not sharing those you are expelled from the community and marked as a racist, fascist, terrorist or simply a pedophile, the latter far more abhorrent than that of a murderer. Of course many of those core beliefs

¹ But if it makes you feel good, so much the better? This might be the attitude of a William James.

you find not only very congenial but worthy of protection. Whether this be due to social indoctrination or objective truth is another thing, maybe not worth exploring, as too risky, based on science they are not, which may also be thought of as a good thing. Still one should not close a blind eye to the extent many of our social beliefs are imposed on us. Maybe those are beliefs that do not adhere to Popper's criteria of falsifiability or Peirce's more or less equivalent notion of having no practical consequences, but basically reducing to a question of ideology.

Peirce has a very down-to-earth attitude towards science, he is also critical, but not too critical of the metaphysicians. They are mainly censored for not being scientific enough, their concepts are too vague and imprecise. This does not rule out the possibility that they may progress and become scientific in time, thereby anticipating Russell's vision that philosophy progresses by amputation. Whenever a branch of philosophy achieves sufficient maturity it is removed from philosophy and becomes a science by its own. He also warns, as Popper would do later on, that one should not jeer at metaphysics and disparage it too readily, it always contains something of interest, and thus an attitude shared by Popper, who spoke of metaphysics as a proto-science, along the lines of Russell above. Peirce also briefly discusses positivism and like Popper recognizes that for all its distancing from metaphysics it is nevertheless a variant of it. Verification lies at its heart, but verification always being based on direct observation leads to a logical impasse. One cannot by direct observation verify whether an observation is direct or not, and thus the whole edifice crumbles. One may think that this is a cheap way of demolishing a theory, on the other hand a theory that claims to be based on logic can also founder on logic. Those who live by the sword die by the sword. Theories and attitudes that are not based on logic are far harder to logically attack providing no purchase for such attempts at deconstruction.

Thoughts and things. Thoughts are what we are immediately familiar with and thus it is natural and logical to take this as our point of departure. This is the top-down approach and very ably developed and presented by Berkeley, who along with Kant and Spinoza belong to the philosophical heroes of Peirce, because in their thinking he recognizes his own attitude of the laboratory man, which is the personal and psychological point of departure for the pragmatist. But the most successful of approaches has nevertheless been the opposite, namely the materialistic bottom-up approach. Here things are the basics, and ultimately everything could be explained by a mechanical point of view starting with things. Democritus being the first advocate of the idea that everything is governed by laws. The ultimate expression of it, is that everything is explained by the position and velocities of all the particles in the universe. In particular we see that in the final analysis everything can be worked out by the mathematical deductive method. Peirce remarks that the chains of deductive reasoning that any mathematician engages in are far more intricate than anything that a metaphysician may involve himself in, and hence the former looks upon the reasoning of the latter with deep contempt. On the other hand, Peirce reminds the reader, that the subtlety of a philosopher lies not so much in his arguments as in the fecundity and subtlety of his basic concepts, and a mathematician who is trained and habituated to dismissing the latter is apt to get lost in fantastic reasoning if let loose in the green fields of philosophy (although he does not express himself in quite such vivid terms.)

Peirce is dissatisfied with a mechanistic and materialistic world view. It cannot in the end provide a clear and reasonable explanation of the universe, which should be the ultimate purpose of any theory, although he is of course fully aware of its practical success, and his approach as a pragmatist should incline him to be one. Consciousness and free will are very inconvenient facts for a materialist, furthermore the fact that mechanics is time-reversible while the macro phenomena with which we are intimately familiar with such as growth and decline, aging and death are not. This to him are conclusive evidence that the mechanical point of view is ultimately inadequate to the task. How can things explain thoughts and feelings (the latter being part of the latter, which pace some of his remarks, are not exclusively conducted in terms of language). More generally he rejects the whole doctrine of necessity, which governs mathematics, but not necessarily the universe. He speculates that the mechanical laws may not be applicable to single atoms, a remarkable suggestion of quantum mechanics, made in the 1890's and that electrons may move in more than three dimensions, likewise a remarkable premonition of multi-dimensional string theory. However, one should not make too much of such speculations, based less on honest inquiry than idle play of the imagination providing potential obstacles to a too predictive theory. Instead he emphasizes the role of chance in the universe and the concomitant formations of habits, which he identifies with evolution. He takes Herbert Spencer to task for having tried to explain evolution on purely mechanical principles, when the laws of mechanics have evolved, which is a somewhat remarkable statement if taken literally. In short there is to the universe other principles than the mechanical (and deductive) there is an important element of the spontaneous and the spirited.

Peirce presented his ideas on pragmatism in an article in *Popular Mechanics* in 1878. This is remarkable and shows the degree of sophistication of popular science at the time. The science lectures drew large crowds throughout the 19th century reflecting an enthusiasm for scientific instruction which seems to have faded with the expansion of formal education. In those days the successful popularizer did not deem it unavoidable to dumb down but seem to have communicated in a straight and honest way. His friend William James seized on the idea immediately and became in a sense a convert, or rather finding that the ideas complied so well with his own nascent philosophy of radical empiricism. He would later publish books on 'Pragmatism' and 'The Will to Believe' in which he would espouse opinions which could only embarrass his friend. James, who was also an enthusiastic champion of Bergson, the most fashionable philosopher of the turn of the century, surely took a far too subjective approach landing himself in indefensible territories². While others stressed the practical, not to say commercial, aspects of pragmatism, never intended by Peirce. Having seen his terminology kidnapped and abused, he reintroduced it as 'pragmaticism' to stress the difference to his emulators as well as coming up with a name too ugly to be adopted by anyone else.

Did Peirce believe in God? He certainly believed in a reality outside the influence of individual thoughts. From a formal point of view a belief in an external reality and a God may grammatically be indistinguishable, and thus if you are prepared to believe in one, you may as well be entitled to believe in the other, and any discrimination must be

² His approach was severely attacked by Russell and while trying to defend himself, only getting himself even more mired in silliness

based on personal idiosyncrasy. However grammar may lead us astray, and the subversive influence of language has been one theme of 20th century philosophy³. Peirce seems to believe in some form of God, unclear what form. This giving his unmaterialistic stand, which he shared by many at the time, maybe not as surprising⁴. A final selection concerns a neglected argument, supposedly being an argument in favor of God, however the article is written in such a tentative and vague way that unless you read it with a high degree of sympathy you can hardly be expected to make head or tail of it.

The selection is a bit one-sided emphasizing Peirce views on science (some of his comments on the history of which and of which there only remains fragments, are quite interesting as you expect, especially on his account of the accomplishment of a Kepler). Peirce as a metaphysician is not as interesting as an idiosyncratic thinker. He writes in the style of an extended stream of consciousness, which although not devoid of charm, makes it hard to follow arguments and makes him more often than not let threads of it fade away omitting to draw any conclusions but absentmindedly leaving things to dangle in mid-air.

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³ This is clearly an attitude proposed by Wittgenstein, and Russell remarks that concrete and abstract nouns are grammatically treated the same, which make people confuse them and think that they are of the same kind. Similarly verbal statements display very different number of levels, but are invariably treated in the same way leading to endless confusions.

⁴ William James wrote on religious experience, be it from a psychological point of view not primarily an ontological and showed an interests in mediums and thus not adverse to the possibilities of miracles, whatever that means. Peirce also was assigned to write on Hume's dismissal of miracles, but with little enthusiasm, the result of which is also included in the selection.