

GENUINE DOUBT AND THE COMMUNITY IN PEIRCE'S THEORY OF INQUIRY

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We must not begin by talking of pure ideas,—vagabond thoughts that tramp the public roads without any human habitation,—but must begin with men and their conversation.¹

For Charles Peirce, the project of inquiry is a social one. Though inquiry, the passage from genuine doubt to settled belief, can be described on the individual level, its significance as a human activity is manifested in collective action. Peirce carefully described the proper method of inquiry as the “scientific method” in the 1877-8 *Popular Science Monthly* article series.² Carried out by a community of investigators, the conclusion to be attained, given a sufficient amount of time, is what philosophers have generally referred to as Truth, its object, Reality. For any individual, Truth transcends experience and inquiry. But it does not transcend experience and inquiry altogether: is a fixed limit, an ideal, towards which a properly functioning community converges.

What, in principle, makes the cohesion of such a community possible? Why did Peirce believe that *convergence* towards an ultimate conclusion was the necessary end of unlimited scientific inquiry? This essay examines Peirce's notion of community to answer these questions and suggests that the presence of genuine doubt not only makes convergence possible, but also constitutes the starting point for *almost* all inquiry. The exception is philosophical inquiry. As Douglas Browning points out in his paper “The Limits of the Practical in Peirce's View of Philosophical Inquiry,”³ Peirce's later work describes philosophical inquiry as one type of inquiry where genuine doubt is commonly *not* the starting point but rather an intermediate stage resulting from *cultivated doubt*. How can Peirce make room for “cultivated doubt” in philosophical inquiry after he has stressed how crucial genuine doubt is in providing the objectivity necessary for an eventual convergence of belief? Taking my cue from Browning's analysis, I argue that passages in Peirce's *Popular Science Monthly* articles indicate that Peirce had already begun to shift away from genuine doubt as the necessary starting point for philosophical inquiry. What is the significance of this shift for the scientific community's convergence of opinion? I conclude by exploring the effects of two plausible interpretations of the shift.

I. Community

Peirce prefaces his case for science as the best method for fixing belief by showing why three other popular methods fail. Though I do not intend to evaluate his arguments against these other methods, they reveal some basic assumptions Peirce held about human nature. For example, in “The Fixation of Belief” Peirce argues against the method of tenacity stating that it “will be unable to hold it’s ground in practice. The *social impulse* is against it.”⁴ Peirce believes that, inevitably, the ostrich takes its head out of the sand to find that others think differently—and just as convincingly—as he. What is the source of this inevitability? It seems to be evolutionary: “This conception, that another man’s thought or sentiment may be equivalent to one’s own, is a distinctly new step, and a highly important one. It arises from *an impulse* too strong in man to be suppressed, without danger of destroying the human species.”⁵ Peirce’s judgment appears to stem from the fact that when we ask “Where do I find myself in relation to others?” we answer that “I am not now a hermit, nor do I aspire to be.” Accordingly, Peirce’s method is built upon the assumption that humans are and will continue to be part of a transactional social and rational order. In contrast to Descartes’ self-reflective, individualistic inquirer, Peirce’s inquirer operates *within* a social world where the need to answer each other’s questions is *felt* as real. Peirce’s problem, then, concerns how a variety of individuals can fix their beliefs. In the series’ third article “The Doctrine of Chances,” Peirce states that accepting one’s role in a community is to accept the dictates of logic itself:

It seems to me that we [individuals] are driven to this, that logicality inexorably requires that our interest shall not be limited. We must not stop at our own fate, but must embrace the whole community. This community, again, must not be limited, but must extend to all races of beings with whom we can come into immediate or mediate intellectual relation. It must reach, however vaguely, beyond this geological epoch, beyond all bounds. ...Logic is rooted in the social principle.⁶

For Peirce, rationality and valuation are not two distinct activities of atomic individuals but are essentially *social* ventures which are interlaced. He writes that “...when we consider that logic depends on a mere struggle to escape doubt, which, as it terminates must begin in emotion...why should we wonder to find social sentiment presupposed in reasoning?”⁷ Unlike the mystic or the Cartesian for whom truth is intuited and personal, Peirce’s community can achieve settled belief only if its method is sufficiently objective and inclusive:

To satisfy our doubts...it is necessary that a method should be found by which our beliefs may be caused by nothing human, but by some external

Genuine Doubt and the Community in Peirce's Theory of Inquiry

permanency—by something upon which our thinking has no effect...It must be something which affects, or might affect, every man. And, though these affections are necessarily as various as are individual conditions, yet the method must be such that the ultimate conclusion of every man shall be the same. Such is the method of science.⁸

Peirce considered the method of science potentially comprehensive enough to subsume a diverse range of interpretations, eventually guiding inquirers to one convergent conclusion. Why did Peirce think that this could be accomplished? Why would it not be possible for diverse scientific theories, honestly conducted, to generate final conclusions which were ultimate *and* incompatible? In other words, what is it about Peirce's scientific method that insures that consensus would eventually be attained?

In part, his answer is that the subject matter itself insures this outcome. For science must have an underlying faith in the hypothesis

that there are real things, whose characters are entirely independent of our opinions about them; those realities affect our senses according to regular laws, and...by taking advantage of the laws or perception, we can ascertain by reasoning how things really are...⁹

Science's faith in an independent world of objects is not groundless, however. It is supported by common features in our experience: the irritation of our doubts, the repugnance we feel at two contradictory propositions, our drive towards belief (and satisfaction), our history of shared successes. Experience indicates realities currently beyond our full comprehension, but unlike Kant's noumena, it is not impossible, in principle, to know them. Reality does not transcend science in any absolute way—it is accessible through ordinary, immediate experience.¹⁰ Traditional arguments often neglect immediate experience because they presuppose a Cartesian standard which demands that we disqualify some of our deepest beliefs because they are based on experience which is non-cognitive and uncertain. Peirce refers to this as "paper doubting." Paper doubts deny that experience which is felt can still have logical significance for judgment. As Idus Murphree noted,

No such unanimity of opinion would be possible without the cultivation of the same method of inquiry, and the essence of that method is the invocation of one kind of evidence, the sensible evidence which follows upon experimental action.¹¹

In a phrase, "Reality is recalcitrant." We may construct all the elaborate theories we desire but we will still be "awakened from our pleasing dreams by rough facts." The effect of experience's authority is mainly negative or limiting. Peirce writes, "All that experiment can do is to tell us when we have surmised wrong. The right surmise is left for us to produce."¹² There is a

basic test for any theory: does it fit with the impinging evidence of experience? And this question must be answered by an even more fundamental one: does the inquirer experience the unease of doubt?

Without entertaining paper doubts, one may still question the assumptions making convergence possible for Peirce's community of investigators. For example, Peirce assumes that the members of the community would want and be able to subordinate their egos (i.e., private gain) to a common goal. This seems implicit in Peirce's claim that humans possess an insuppressible impulse toward sociability: a kind of evolutionary logic, manifested as an impulse, will eventually subordinate humanity's irrational and egotistical desires to the non-partisan promotion of inquiry. If Peirce meant this to be an assertion about human nature, then much more evidence is needed (if a definite answer is even possible). However, in Peirce's defense, it is also reasonable to interpret him as offering this more as a *hope* about human nature than as a *fact*. Seen this way, the method he offered would complement that hope, and both would be instrumental to a final consensus. (For eventual consensus is certainly *not* aided by the assumption that the social impulse is going to deteriorate.)

Perhaps a more serious objection to the possibility of a Peircean community pertains to the objectivity with which inquirers could make observations. Arguing for his method, Peirce writes that a man should "consider that, after all, he wishes his opinion to *coincide with the fact*... To bring about this effect is the prerogative of the method of science."¹³ But why did Peirce assume that "the facts" of observation could be observed objectively enough to avoid, in the long run, the construction of deeply incompatible—because egoistic—scientific theories?

There are two concerns here. First, an observation may be distorted by the particularity of the observer's sensations. Peirce has already answered this: laws of perception, constructed by extensive correlation, will eventually be able to eliminate this distortion.¹⁴ Second, observations may be filtered through the rose-colored glasses of one's theories: unconsciously the data observed would either be fit into one's theory or selectively neglected.¹⁵ In some instances, a hypothesis would only seek out certain (supportive) kinds of observation.¹⁶ The motivation to bias data with theory can stem from either egoistic or communal feelings; if egoistic, there would seem to be no *methodological* reason to expect that the scientific community could, by itself, prevent a *divergence* of truths about the world.

Peirce was aware that science could promulgate this kind of theoretical solipsism. His reply was that the community could only guard against this

Genuine Doubt and the Community in Peirce's Theory of Inquiry

if each inquirer would "be at all times ready to dump his whole cartload of beliefs, the moment experience is set against them".¹⁷ He cannot have "any such immovable beliefs to which he regards himself as religiously bound to be loyal".¹⁸ By inculcating in himself an almost Pyrrhonian caution against dogmatism, the inquirer could insure that he "coincide with the fact" of experience. In other words, if the inquirer could commit to developing the virtue of "open-mindedness," scientific inquiry itself could be self-regulative at a meta-theoretical level.¹⁹

II. Genuine Doubt

We have seen that a Peircean pursuit of truth involves two kinds of assumptions about the scientific community of investigators. First, their cooperation in inquiry will be aided, if not guaranteed, by a "social impulse" to strive for truth and "coincide with fact." Second, compromises will be encouraged by investigators' recognition that the recalcitrance found is a generic feature of all their experiences. Unlike spurious metaphysicians who manufacture consistent conclusions from premises unchecked by experiment, scientists correct and confirm hypotheses by carefully considering and arranging future experience. Their stance is fundamentally practical rather than reflective or contemplative. This practical stance is preserved over time by the persistent recurrence of *genuine doubt*.

The presence of genuine doubt is the experiential alarm signaling the need for a revision of one's hypotheses. This state of unease, from which the inquirer struggles to free himself, is also the basis for the more foundational hypothesis that there is one reality toward which scientific investigators strive:

The feeling which gives rise to any method of fixing belief is a dissatisfaction at two repugnant propositions. But here already is a vague concession that there is some *one* thing to which a proposition should conform.²⁰

So, convergence toward one reality seems to be an underlying implication of genuine doubt. But Peirce is ambiguous about the hallmark of genuine doubt. Some writings imply that the externality of surprise is the distinctive mark:

It is important for the reader to satisfy himself that genuine doubt always has an external origin, usually from surprise; and that it is as impossible for a man to create in himself a genuine doubt by such an act of the will as would suffice to imagine the condition of a mathematical theorem, as it would be for him to give himself a genuine surprise by a simple act of the will.²¹

Other writings stress novelty as the distinctive mark:

A proposition that could be doubted at will is certainly not *believed*. For belief, while it lasts, is a strong habit, and as such, forces the man to believe until some surprise breaks up the habit. The breaking of a belief can only be due to some novel experience, whether external or internal.²²

Regardless of which condition is emphasized, it is clear that Peirce believed genuine doubt to be an irreducible and unmistakable species of experience. Similarly, Peirce believed that an experiential context for genuine doubt must also be accepted as given:

It is implied, for instance, that there are such states of mind as doubt and belief—that a passage from one to the other is possible, the object of thought remaining the same, and that this transition is subject to some rules which all minds alike are bound by. As these are facts which we must already know before we can have any clear conception of reasoning at all, it cannot be supposed to be any longer of much interest to inquire into their truth or falsity.²³

It is important to note that Peirce thought these states of mind and their interrelations are, though foundational, not “intuited” as indubitable in anything like a Cartesian fashion. Nothing is. These states are simply ones which we find ourselves unable to doubt. Yet the logical contingency of this starting point in no way disqualifies its adequacy for knowledge. In “Some Consequences of Four Incapacities” Peirce wrote,

We cannot begin with complete doubt. We must begin with all the prejudices which we actually have when we enter upon the study of philosophy...A person may, it is true, in the course of his studies, find reason to doubt what he began by believing; but in that case he doubts because he has a positive reason for it, and not on account of the Cartesian maxim. Let us not pretend to doubt in philosophy what we do not doubt in our hearts.²⁴

III. Philosophical Inquiry

Thus some of Peirce’s statements imply that the inquirer, be he scientific or philosophic, must wait for experience to force upon him a “real and living” doubt in order for inquiry to proceed, and it would seem that other kinds of doubting are spurious, leading only to thought “deeply imbued with that bad logical quality to which the epithet *metaphysical* is commonly applied....”²⁵ However, other statements by Peirce imply that this portrait of the inquirer is far too passive. After all, how quickly could science progress if inquirers merely waited for experience to present them with genuine doubts? As Browning’s paper makes clear, Peirce’s later writings describe a starting point for philosophical inquiry which actively *cultivates* genuine doubt. Cultivated genuine doubt? Is that possible? How could such doubt retain the

Genuine Doubt and the Community in Peirce's Theory of Inquiry

corrective influence that fortuitous genuine doubt (produced by “rough facts”) was claimed to have?

In answering these questions, it is helpful to look again at the early 1878 papers for roots of this later view. That genuine doubt was not the only possible starting point for philosophical inquiry is already evident in “Fixation of Belief.” Peirce wrote,

The irritation of doubt is the only immediate motive for the struggle to attain belief. It is certainly best for us that our beliefs should be such as may truly guide our actions so as to satisfy our desires; and *this reflection* will make us reject any belief which does not seem to have been so formed as to insure this result. But it will only do so by *creating a doubt* in the place of that belief. With the doubt, therefore, the struggle begins, and with the cessation of doubt it ends. Hence, the sole object of inquiry is the settlement of opinion.²⁶

This passage affirms that doubt's irritation is the only *immediate* motive for inquiry, yet it also describes a preparatory reflective process preceding doubt. This is puzzling. Peirce seems to be saying that *reflections* about fallible beliefs may actively *create* that doubt which will lead to a more satisfactory belief (i.e., one more likely to fulfill desire).²⁷ But how can reflection, on Peirce's account, be “creating” a genuine doubt? After all, the reflection itself has no external origin nor is it surprising or novel. In these respects it resembles Cartesian doubt.²⁸ Of course, the reflection Peirce is speaking about comes not *ex nihilo*, the product of Cartesian whimsy; there must be something in one's data which compels that particular reflective activity. What is questionable here is whether or not the process of reflection can create the surprise, the irritation, the novel experience of a *genuine* doubt.

I do not think Peirce wanted to imply that reflection could create genuine doubt, and I suggest that his use of the word “create” was imprecise. For if reflective activity could *create* the conditions for genuine doubt, a natural check on speculation might diminish over time, with the possible end result being a divergence, not convergence, of inquiry. (In other words, scientific theories might come to a point where their formulation relied so heavily on these doubt-creating procedures that the natural check provided by fortuitous genuine doubt would be disproportionately subordinated.) Instead, it is more likely that the process of reflection can help us to *recognize* those genuine doubts we presently have. To this end, reflection helps us by preparing the ground for genuine doubt, much as musement does. Musement, which Peirce later called the “systematic business” of the critical common-sensist,²⁹ is foreshadowed as a “feigned hesitancy” in the earlier “How to Make Our Ideas Clear.” There Peirce writes

Most frequently doubts arise from some indecision, however momentary, in our action. Sometimes it is not so...Feigned hesitancy, whether feigned for mere amusement or with a lofty purpose, plays a great part in the production of scientific inquiry. However the doubt may originate, it stimulates the mind to an activity which may be slight or energetic...until at last, when all is over...we find ourselves decided as to how we should act under such circumstances as those which occasioned our hesitation. In other words we have attained belief.³⁰

As Browning notes, Peirce was to move resolutely away from the 1878 notion of genuine doubt when considering the starting point of philosophical inquiry. Peirce's confidence came to rest upon the "systematic business" of traditional philosophical inquiry which utilizes logical analysis and imaginative experimentation almost exclusively. By 1905, Browning writes,

Peirce recognized a form of philosophically significant inquiry which did not have a starting point of genuine doubt...The preferred form of philosophical investigation is not that which is left to the vagaries of circumstance, to the fortuitous occurrence of genuine doubt, but it is that which serves both to lead towards and encourage genuine doubt and to proceed, once such doubt has been so brought about, to its destruction by belief. But on this view the starting point of philosophical investigation is no longer genuine doubt, which now occupies a middle point in the investigation, but something quite different. This new starting point, though not adumbrated in any detail by Peirce, appears to consist in or be instituted by a sort of voluntary act in which one "sets himself" to reflect upon and examine certain of his beliefs.³¹

Browning's characterization of philosophical inquiry's intentionally ambivalent starting point is one I agree with wholeheartedly. I would comment, however, that passages from 1878 quoted above indicate that this intentional ambivalence was already present, albeit in germinal form, in that series. There, the starting point of philosophical inquiry is described much in the same way as the unpublished 1905 remarks: the "feigned hesitancy" and doubt-creating reflection of 1878 are the precursors of the "logical analysis" and "experimenting in imagination" of 1905. All work by encouraging the reconsideration of one's general premises via genuine doubt, though in none of them, as Browning points out, is it clear why genuine doubt is *indispensable* for philosophical inquiry.

Returning to this essay's initial query about why Peirce believed scientific inquiry would converge, I think it is clear that Peirce thought that there was a basic social impulse in humans (and therefore in scientists) for cooperation and corroboration. At a deeper level he explained that the convergence of opinion may also be promoted—though not guaranteed—

Genuine Doubt and the Community in Peirce's Theory of Inquiry

by genuine doubt's generic presence in experience. When Peirce elaborated his account of the starting point of philosophical inquiry, he shifted away from the idea that genuine doubt must come to be on its own terms and allowed that reflection could aid in the creation of genuine doubt. I have tried to cast light upon an interesting issue raised by this shift: does an inquirer's reflection only elicit the genuine doubt necessary for inquiry, or can reflection actually create it? I have argued that the latter interpretation of reflection's capabilities poses a threat to the eventual convergence of inquiry. For if individuals can create or manipulate genuine doubt (in the service, say, of a pet theory), the temptation to do so might become chronic; manipulated doubt might eventually rival the presence of naturally occurring doubt. Hyperbolic skepticism need not be the inevitable result, but I suspect that conjectures would become increasingly subjective, speculative, and resistant to regulative checks—all anathema to future convergence. Such misuse of “created” doubt is by no means necessary or inevitable. But since human beings often exhibit a tendency to withdraw from active social lives into spheres that are at once highly personal and aesthetic, it seems worthwhile to point out some plausible consequences for the communal aspects of inquiry.³² If, on the other hand, Peirce is interpreted to mean that an inquirer can only use reflection to *elicit* or make conscious those doubts that may be implied by his experience, then progress toward a final convergence would remain unimpeded.

Notes

¹ CP: 8.112. This paper uses two different sources of Peirce's own writings. CP indicates the *Collected Papers of Charles Sanders Peirce*, volumes 1-6 edited by C. Hartshorne and P. Weiss, 1931-1935, volumes 7 and 8 edited by A.W. Burks, 1958. (Cambridge, Mass: Belknap Press); W indicates *Writings of Charles S. Peirce: A Chronological Edition*, edited by Max Fisch et al., 1982, (Bloomington: Indiana University Press).

² W: 3: 242-337.

³ Douglas Browning, “The Limits of the Practical in Peirce's View of Philosophical Inquiry,” in *From Time and Chance to Consciousness: Studies in the Metaphysics of Charles Peirce*, Ed. Edward C. Moore and Richard S. Robin (Oxford: Berg Publishers, 1994), pp. 15-29.

⁴ W: 248, emphasis mine. Manley Thompson has commented in *The Pragmatic Philosophy of Charles S. Peirce* (Chicago: University of Chicago Press, 1953) that “Peirce's account of the four methods clearly suggests a historical progression” and further that “Peirce does speak as though the historical passage from the method of tenacity to that of authority, then, of taste, and, finally, of science were an inevitable and continuous progression due to certain forces in human

nature, such as the 'social impulse,' 'instinct,' and the 'wish' to have one's 'opinions coincide with the fact' " (77-78) For a related analysis of Peirce on the relation between evolutionary theory and inquiry see Thomas A. Goudge's *The Thought of C.S. Peirce* (Toronto: The University of Toronto Press, 1950) and Peter Skagestad's article "C.S. Peirce on Biological Evolution and Scientific Progress" in *The Relevance of Charles Peirce*, edited by Eugene Freeman (La Salle: Monist Library of Philosophy, 1983), pp. 348-372.

⁵ Ibid., emphasis mine.

⁶ W: 284.

⁷ W: 285.

⁸ W: 253-4.

⁹ W: 254.

¹⁰ As John E. Smith notes in "Community and Reality" in *The Relevance of Charles Peirce*, "The real is what demands our attention, and on more than one occasion Peirce interpreted the human phenomenon of *willing* as our response to the insistence of what stands over against us (1.381; cf. 1.358, 1.325; 3.337, 3.613)." (41)

¹¹ Idus Murphree, "Positivism in Peirce's Pragmatism," in *Studies in the Philosophy of Charles S. Peirce, Second Series*, edited Edward C. Moore and Richard S. Robin, (Amherst: University of Massachusetts Press, 1964), p. 235.

¹² CP: 7.87.

¹³ W: 256, emphasis mine.

¹⁴ In our century, Heisenberg's discoveries present a more serious obstacle for observational objectivity than any Peirce had to consider.

¹⁵ Occasionally, the role of the data will even be negligible. Consider Copernicus's case: Ptolemy's astronomical data were largely uncorrected by Copernicus and played no major motivational role in the construction of the heliocentric system. It was primarily Copernicus's a priori convictions about the (mathematical) aesthetics of the Ptolemaic system that motivated him to work out a simpler, and more beautiful, system.

¹⁶ I think Peter Skagestad is right to point out that the crucial locus for the problem of convergence is the *initial* formation of hypotheses, or as Peirce called it "abduction." Skagestad writes, "Given a body of observations, it will always be possible to account for them by any number of incompatible hypotheses, of which no more than one can be true. No hypothesis, therefore, is confirmed by observations made before it was formulated; confirmations can come only from new observations which have resulted from predictions from the hypothesis...The success of induction, then, depends upon its being performed as a test of predictions deduced from an antecedently formed hypothesis. The deduction and induction involved in the testing of the hypothesis have only the function of transmitting truth; hence, if they are to lead us to true conclusions, the hypothesis must have been formed in such a manner as to produce truth." See Skagestad, *The Road of Inquiry: Charles Peirce's Pragmatic Realism* (New York: Columbia University Press, 1981), pp. 180-181.

Genuine Doubt and the Community in Peirce's Theory of Inquiry

¹⁷ CP: 1.55.

¹⁸ CP: 6.3. I first came across this in C.J. Misak's *Truth and the End of Inquiry: A Peircian Account of Truth*, (Oxford: Clarendon Press, 1991).

¹⁹ This ethical component is necessary for convergence. As Skagestad notes in *The Road of Inquiry*, by 1896 Peirce "had already discovered underdetermination, and hence realized that convergence towards truth must take place at the stage of hypothesis formation, if it is to take place at all...Chance guessing...cannot explain convergence. How, in that case, is it that convergence can take place through any kind of guessing? It can take place, Peirce replies, in two ways. In the first place, biological evolution may have produced an instinct for making rough guesses at those truths the knowledge of which would have an immediate survival value. But in the second place, since the theories of the mature sciences are neither rough nor of immediate survival value, instinct must at a certain stage have been supplemented with intellectual and moral self-control. Science is the fruit of instinct tempered by virtue." (188) See also pp. 190-192.

²⁰ W: 254.

²¹ CP: 5.443.

²² CP: 5.524.

²³ W: 246.

²⁴ CP: 5.265.

²⁵ W: 246.

²⁶ W: 247-248, emphasis mine.

²⁷ This habit of thought could obviously function as a self-correcting feature in scientific inquiry. Only by constantly scrutinizing our methods can we improve their adequacy to our experience.

²⁸ Susan Haack has an interesting discussion of this later "Critical Commonsensist" strategy for cultivating doubt in "Descartes, Peirce and the Cognitive Community" in *The Relevance of Charles Peirce*, 238-263. Motivated by the belief that "If you have reason to expect trouble, it may be better to look for it than to have it catch you unawares" the upshot for the Peircean inquirer may be that "this *rationale* for deliberate criticism of beliefs makes Critical Commonsensism feasible, but only at the cost of accentuating its affinities with Descartes' method. For how, now, is Peirce to draw the line between a *specific* reason for doubt, and no reason at all?" (249).

²⁹ CP 5.517, 1905. This passage was brought to my attention by Browning's essay.

³⁰ W: 262.

³¹ Browning: 10-11.

³² Lovers of mathematics and logic, such as Kepler and Peirce himself, seem peculiarly susceptible to this tendency.