

14

Peirce and Cartesian Rationalism

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One of the consequences of Cartesian rationalism was its continuation of the scholastic habit of developing philosophy around exclusionary disjunctions: certainty or ignorance, mind or body, reason or perception. If we take this habit into our examinations of the history of philosophy, we easily fall into a dichotomizing of philosophers: Parmenides or Heraclitus, Hume or Kant, Plato or Aristotle, and so forth. In the case at hand, we'd be tempted to begin by opposing Descartes and Charles Peirce (see PEIRCE). Indeed, this route is well traveled. From a Peircean perspective, however, this would be a mistake. Peirce saw himself as standing in an intellectual tradition with Descartes, as sharing interests, problems, and concerns. Thus, as we mark out the important distinctions between Peircean pragmatism and Cartesian rationalism, we must do so against the background of these shared interests. As Peirce saw it, "Descartes marks the period when Philosophy put off childish things and began to be a conceited young man. By the time the young man has grown to be an old man, he will have learned that traditions are precious treasures, while iconoclastic inventions are always cheap and often nasty" (*CP* 4.71). In the overview of Peirce's critical engagement with Cartesian thought that follows, it will be important to keep in mind that Peirce saw the Cartesian tradition as a treasure even as he marked out his own disagreements with it.

A Method of Inquiry

Max Fisch well states the common interest of Descartes and Peirce in finding a method of inquiry. Referring to Peirce's series of articles entitled "Illustrations of the History and Logic of Science," Fisch says, "the six 'Illustrations' that were published in 1877–78 have gradually come to be recognized as the nineteenth-century *Discourse on the Method of Rightly Conducting the Reason and Searching for the Truth in the Sciences*; and so far no twentieth-century *Discourse* has superseded it" (*W* 3:xxxvi–vii).

In the first essay of the series, "The Fixation of Belief," Peirce established his general relationship to Descartes. Descartes sought to overcome the method of authority that characterized much of medieval philosophy, and did so by turning to his own *a priori* method. As Peirce put it in "How to Make Our Ideas Clear":

When Descartes set about the reconstruction of philosophy, his first step was to (theoretically) permit skepticism and to discard the practice of the schoolmen of looking to authority as the ultimate source of truth. That done, he sought a more natural fountain of the principles, and thought he found it in the human mind; thus passing, in the directest way, from the method of authority to that of a priority, as described in my first paper. Self-consciousness was to furnish us with our fundamental truths, and to decide what was agreeable to reason. (CP 5.391)

Peirce's own move beyond the a priori method was a central feature of his response to Cartesian rationalism. This revision of the nature of inquiry involved his tripartite scientific method whose three stages were: abduction or hypothesis development, deduction or prediction of consequences, and induction or experimental testing of hypotheses.

Descartes and Peirce both described scientific inquiry as a movement through three stages or phases: an originary moment, a method for developing cognition, and an outcome of the method. For Descartes, universal doubt initiates inquiry, intuition and deduction constitute the method of knowing, and these yield absolutely certain claims. Peirce agrees that doubt is originary, that there is something like insight that leads to knowing, and that living beliefs are the outcome of inquiry. However, his theory of inquiry radically transforms each of Descartes' moments in the process. This chapter begins with sketches of Peirce's resistance to the three stages as Descartes describes them, and then turns to an overview of Peirce's own transformed theory of inquiry. Finally, to indicate the sorts of consequences to which Peirce's revision of method led, two corollary metaphysical issues will be examined that are among the most important to surface in Peirce's critique of Cartesianism: the dispute between nominalism and realism, and the notion of an individual, substantive self.

As we examine Descartes' method, we must keep in mind that we are dealing with a caricature. A more nuanced and careful reading of Descartes' texts and letters reveals a more complex and cautious approach to the issues at hand. Nevertheless, a distilled version of Descartes' method can be found articulated in his *Discourse* and enacted in his *Meditations*. In its simplest outline, the method begins with a universal doubt, a working skepticism. The doubt can only be overcome by ideas that are absolutely and immediately clear and distinct – by intuitions. These intuitions yield the certainty requisite for “scientific” knowledge and become the basis for a deductive chain that produces further certainties. The famous exemplar for such foundational intuition is the *cogito*. In reconstructing Cartesian method, Peirce addressed each of these features in turn.

Doubt, Intuition, and Certainty

In Part Four of the *Discourse*, Descartes described his method, a method that appeared again later in his *Meditations*. For him, the search for truth begins by rejecting “as absolutely false everything in which I could imagine the slightest doubt and to see, as a result, if anything remained among my beliefs that was completely indubitable” (Descartes 1999, p. 24). Peirce did not reject Descartes' notion of doubt wholesale;

indeed he may well have recognized, as Karl-Otto Apel suggests, that Descartes' emphasis on radical doubt has perhaps "generated a new total disposition which has created the very situation of an open community of experimenters that Peirce and Dewey praised so much . . ." (Apel 1981, p. 63). The two agreed that doubt constituted the first moment of inquiry. Nevertheless, Peirce rejected Descartes' appeal to universal doubt and revised the scope and the function of doubt within the process of scientific investigation.

His principal concerns with Descartes' radical doubt were two. On the one hand, Peirce did not believe the "universal doubt" recommended by Descartes was experientially possible: "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" (W 2:212). As Peirce saw it, Descartes' maxim of universal doubt was arbitrary and never fully actualized even by Descartes – the plausible assertion that all beliefs are in principle open to doubt is not the same as actually doubting all of one's beliefs in the present. As Peirce stated it: "To make the reflection that many of the things which appear certain to us are probably false, and that there is not one which may not be among the errors, is very sensible. But to make believe one does not believe anything is an idle and self-deceptive pretence." (CP 4.71) The assertion of doubt still leaves us, practically speaking, *in medias res* with a variety of belief-habits guiding our conduct and our thinking.

On the other hand, Peirce believed that the maxim of universal doubt revealed that Descartes' doubt, when it was actualized, was not always genuine – it was what we might call a conceptual doubt. "Hence this initial skepticism," Peirce argued, "will be a mere self-deception, and not real doubt" (W 2:212). Descartes himself seemed to recognize the arbitrariness of his doubting when he described it as "pretending" (Descartes 1999, p. 25). If doubt in philosophy and science is arbitrary in this way, if genuine and pretend doubts are mixed together, then inquiry could begin anywhere, at any time. One could simply, as Descartes does, *assert* doubt. The history of science should look entirely capricious if this were true, following whatever arbitrary doubts one pretended to raise and revealing no logic of development. This arbitrariness of doubt indicates that the process of Cartesian inquiry is at bottom ahistorical. This brings us to the second moment of the method that Descartes outlined: the finding of immediate beliefs by way of the principle of clarity and distinctness.

Peirce's historicist and synechistic notion of cognition, which grew out of his resistance to the appeal to universal doubt, leads to a consideration of Peirce's second concern – his distrust of Descartes' reliance on intuition. Doubt is the origin of Cartesian inquiry; intuition and subsequent deduction constitute the Cartesian method for overcoming doubt. Again, the inception of Peirce's concern is practical: he simply doesn't see evidence that humans have a capacity for infallible intuitive knowing. "We have no power of Intuition," he asserted, "but every cognition is determined logically by previous cognitions" (W 2:213). If we were to have such a faculty, then the *a priori* method should be effective and not lead humans into conflict over beliefs. In short, if Descartes were right, we should agree more than we do. Descartes tries to outflank this concern by offering clarity and distinctness as the traits of genuine intuitions. Thus, intuition requires a knowledge of and a facility with this principle of clarity and

distinctness. Peirce took this move to be sleight of hand; it provided criteria but the criteria were as suspect as the faculty they were introduced to support. In response to the Cartesian principle, Peirce said, "he professed to demonstrate that whatever appears to us clear and distinct must be true; – another of those modern conveniences by which Descartes rendered philosophizing so reposeful" (*EP* 2:71). Even if the criteria of clarity and distinctness do not beg the question of intuition's certainty, it is nevertheless the case that the certainty yielded is for the individual intuer alone, even if she or he *claims* universality. Only the person who has an intuition *knows* with certainty. But the individualism that Peirce here found to be problematic was considered by Descartes to be an advantage.

Descartes clearly believed not only that one *could* but that the individual inquirer *should* work alone: "Thus one notices," he argued, "that buildings that were started and completed by a single architect are usually more attractive and better designed than those which a number of architects have tried to put together by making use of old walls that had been built for different purposes" (Descartes 1999, p. 11). The moral here is that truth – including any claim to universal truth – is best found by lone inquirers. Cartesian science, as exemplified by Descartes' solitary meditations, is a singular pursuit. Having established a foundational truth through intuition (in Descartes' own philosophical architecture this is the *cogito*) the lone intuiting inquirer, without external distractions, can now pursue further truths through deduction as well as by employing the criteria of clarity and distinctness to establish other beliefs as genuine intuitions. In his words, "Having noticed that there is nothing at all in the proposition 'I think, therefore I am' which convinces me that I speak the truth, apart from the fact that I see very clearly that one has to exist in order to think, I judged that I could adopt as a general rule that those things that we conceive very clearly and distinctly are all true" (Descartes 1999, p. 25). In the *Meditations* Descartes employs both avenues to develop his world-view. Specifically, he employs his principle to underwrite a version of the ontological argument for belief in God. This was akin to reclaiming a Queen in a chess game; Descartes' God, in part by guaranteeing the soundness of intuition and deductive reasoning, becomes crucial to his solving a variety of philosophical problems. Peirce thought this move still left us questioning the very intuition of the principle: "Descartes and others have endeavored to bolster up the light of reason by make-believe arguments from the 'veracity of God,' and the like. They had better not have pretended to call that in question which they intended to prove, since the proofs, themselves call for the same light to make them evident" (*CP* 2.28). Peirce believed the "celebrated criterion of clearness and distinctness" to be "no more than an utterly unsuccessful attempt to define the old 'self-evidence' of the axioms of reason" (*CP* 2.28).

To his practical concern that we do not possess a faculty for intuiting truths, Peirce added several more formal objections. The history of science reveals not universal agreement but the "social impulse" of disagreement that forces us to consider others' beliefs that do not agree with our own. The social impulse suggests that inquiry is a communal not an individual process. Moreover, for Peirce, the social impulse indicates that there are always some inquirers who are wrong. This point he generalized into his "fallibilism," the claim that human inquirers *are* fallible. Our fallibility, our

disagreements, and the developmental nature of the history of science all point to the belief that science is not only historical but also communal; moreover, because it is both historical and communal, it is also not immediate as Cartesian intuition suggests but is mediated over time by the development of both new discoveries and new ideas. Thus, the intuition and immediacy of Cartesian rationalism fail to make sense of the actual practices of scientific inquirers. Peirce's resistance to the apodictic nature of Descartes' method for overcoming doubt led him necessarily to a rejection of the outcome that Descartes projected.

That outcome was "truth," by which Descartes meant absolute certainty. Such certainty was the only outcome Descartes believed worthy of belief, as evidenced in his description of the importance of the *cogito*: "After that, I thought about what a proposition generally needs in order to be true and certain because, since I had just found one that I knew was such, I thought I should also know what this certainty consists in" (Descartes 1999, p. 25). Thus certainty was a direct function of clarity and distinctness. Consequently, for Descartes "the only outstanding difficulty is in recognizing which ones [ideas] we conceive distinctly" (ibid.). As Peirce saw it, this "outstanding difficulty" presents us with the key problem. If we are uncertain as to what fits the criteria of clarity and distinctness, it seems improbable that our inquiry could end with certainty, unless we mean by "certainty" simply the absence of doubt. Descartes seemed to force the issue by relying on the principle of excluded middle in assessing the relation between truth and ignorance; he was unable, in virtue of his geometric approach, to conceive of a middle ground in which plausibility and probability might serve as alternative modes of describing belief or working "truths." Intuition and deduction were designed specifically to accommodate this absence of a middle ground, to ensure that beliefs were certain and necessary.

Peirce's most immediate objection was practical in nature; we simply don't find ourselves or others in the history of science in possession of absolute certainties. More often than not we find that our beliefs are transitional and provisional. This disagreement over certainty is tied in part to different conceptions of the role of perception in inquiry. For Descartes, perception was limiting and prevented us from achieving certainty and thus became a casualty of his initial doubt: "because our senses sometimes deceive us, I decided to assume that nothing was the way the sense made us imagine it" (Descartes 1999, p. 24). For Peirce, human inquirers cannot stand outside of experience, thus making perception, as we will discuss below, the key to both the origin and the end of any inquiry. The fallibility of perception, and reason, was not for Peirce a reason to dismiss its results altogether, but to remain attentive to experience over time so that the results could be corrected when found to be misleading or inadequate. Moreover, Peirce was not averse to Kantian transcendental arguments, a version of which Descartes seemed to offer in his defense of God's existence. The only condition adequate to Descartes' idea of perfection is a real God: "Thus the only remaining option was that this idea was put in me by a nature that was really more perfect than I was, one that even had in itself all the perfections of which I could have some idea, that is – to express myself in a single word – by God" (*Discourse*: 26). Peirce simply maintained that such transcendental claims, because they rested on one's description of experience, were likewise provisional not certain. They too would have to await the long run of inquiry for ultimate satisfaction.

Peirce's Reconstruction of the "method for guiding one's reason"

Peirce's revisions of the method of inquiry presented in Descartes' *Discourse* can be traced through his resistance to the three moments of method discussed above. Peirce reformulated the role of doubt; he proposed an alternative method to the intuitive-deductive approach to overcoming doubt; and he redescribed the outcome of inquiry such that certainty was not one of its characteristics. A short walk through these transformations should reveal both the continuity of interest Peirce shared with Descartes and his significant disagreements with Descartes' way of understanding human reasoning.

In light of his disagreements with the role of universal doubt in Cartesian rationalism, Peirce sought to revise his theory of inquiry to locate the specific ways in which doubt played a role in reasoning. Doubt remained for him the inception of inquiry. Such doubt, however, was not arbitrarily chosen but forced itself on the inquirer by experience or the "social impulse," and was recognizable by several traits. "We generally know when we wish to ask a question," Peirce stated, "and when we wish to pronounce a judgment, for there is a dissimilarity between the sensation of doubting and that of believing" (*W* 3:247). Furthermore, doubt always occurs against a background of habitual beliefs. This, as we noted, makes inquiry, in essence, historical rather than geometrical. On Descartes' deductive/geometrical model, one must eliminate all belief to clear space for an ahistorical truth that could, in principle, generate all other truths; "to rebuild the house where one lives," he argued, it is necessary first "to knock it down" (Descartes 1999, p. 18). Peirce's historicist model of inquiry begins with a house that, like his beloved Arisbe, is always already in the making; new beliefs are addenda generated in response to real doubts and are themselves open to revision in the future. For Peirce, cognition is not a set of mechanically linked steps but "arises by a continuous process" (*EP* 1:30).

In his early resistance to Cartesianism, Peirce emphasized the elimination of fake doubt and focused on the external causes of doubt: experience and the social impulse. Later, however, he drew a distinction between fake and "feigned" doubt. The latter mode of doubt involves imagined doubts in the sciences that seem plausible given a current set of beliefs. This shift provided a nuance to Peirce's theory of inquiry. Thus, although doubt should never be raised where there is *no* possibility of actual doubt, a feigned doubt can be useful in science when one deals with something that we *might* really doubt. Under these circumstances, doubt may be feigned or created, but it is nevertheless constrained both by previous scientific beliefs and by the facts at hand; the *dubito* is not an arbitrary act and therefore is not merely pretend or fake. Even so, the doubt that occurs at the inception of inquiry is *never* universal, because it is always a specific doubt in a specific context. Moreover, insofar as doubt plays a specific role in inquiry, it should, when circumstances allow, be developed as a practice. That is, the inquirer needs to become sensitive to the logic of doubt and to see clearly where questions arise within a systematic, scientific outlook on the world. Part of being a scientist, for Peirce, was being aware of anomalies and conundra in the way, for example, that Galileo suspected limitations in medieval accounts of motion. In other words, for

Peirce doubt must be cultivated in scientific inquiry: "The pragmatist knows that doubt is an art which has to be acquired with difficulty; and his genuine doubts will go much further than those of any Cartesian" (CP 6.498). While doubt is the irritant that initiates inquiry, belief is that which overcomes doubt. The move from one to the other Peirce identified as inquiry. Again, this movement for him was a continuous process and not the immediate leap that Cartesian intuition portrays.

Though Peirce rejected Cartesian intuition's individualism, lack of mediation, and claim to absoluteness and universality, he did not dismiss the idea that *something like* intuition might function as a feature of our reasoning processes. Working within the history that Descartes helped develop, Peirce argued for a version of Cartesian insight though in much modified form that took into account the concerns noted earlier. The mature form of this insight is described in Peirce's various accounts of critical common-sensism. There we find Peirce asserting that humans have an instinct for guessing right, not all of the time, but more often than not. Cognition is generated through perception and abductive reasoning but neither universality nor certainty follows. Thus, the initial insight must move on into an experimental process in which reasoning is continuous and not an aggregate of discrete steps. Without a faculty of intuition, there can be no single clear and distinct idea from which all else follows. As we noted above, there is an ongoing, developing history of ideas. Thus, though instinctive or common-sense beliefs have a high natural plausibility, they must nevertheless undergo the tests of experience; and they must do so in public fashion. "The elements of every concept," Peirce maintained, "enter into logical thought at the gate of perception and make their exit at the gate of purposive action; and whatever cannot show its passports at both those two gates is to be arrested as unauthorized by reason" (CP 5.212). For Peirce, instinct and abductive inference reveal that human inquirers have insight, but never an insight that is immediately certain and final. Abduction, he stated, "is an act of *insight*, although of extremely fallible insight" (CP 5.181).

To pass from their perceptual origins through to the "gate of purposive action," ideas that arise in abductive insight as hypotheses must pass through deduction and induction. Peirce's method for overcoming doubt involves all three stages. His rejection of Cartesian intuition and certainty thus led directly to several important features of Peirce's own discourse on method. To frame these features we might say that Peirce remained a "provisional moralist" in Descartes' sense. In Part Three of the *Discourse* Descartes proposed a "provisional morality" that upheld basic cultural habits and would allow him to proceed with his radical doubt until he came upon something he could believe with certainty. In a letter to Renier in May 1638 Descartes wrote that he would "apply this rule principally to decisions about living which cannot be deferred, and I use it only provisionally; for I plan to change my views as soon as I can find better ones, and I will not pass up any opportunity to search for them" (Descartes 1999, p. 69). Because he understood belief to *always* be in transition, at least from the vantage point of human experience, Peirce applied the spirit of Descartes' willingness to search for better views to all of inquiry. Whereas Descartes posited his provisional morality to find ways to overcome it, Peirce believed that provisionality was essential to the very nature of scientific inquiry. Such provisionality meant that no one person could foreclose on final truth.

In keeping with this provisionality, Peirce transformed inquiry from Cartesian individualism into a communal practice. Since, for Peirce, no immediate certainty could be achieved, certainty had to become a regulative hope of the long run of inquiry. The “long run” nature of the task meant that no one person could carry it out. Thus, a community of inquirers in a living history of ideas was required to make sense of the possibility of knowing and of approaching ultimate truth. Peirce sided with Descartes in rejecting philosophy’s appeals to skepticism and relativism, but he did so only on the basis of the possibility of controlled inquiry by a community of scientific inquirers, not on the basis of a priori certainty.

The rejection of immediate certainty also led Peirce away from Cartesian deductivism. For Descartes, as we saw, a single certainty coupled with deductive inference would suffice to produce a world-view. Descartes’ own method led him directly from the *cogito*, by way of the principle of clarity and distinctness, to the certainty of God’s existence. And once God was re-established from the initial doubt, everything else – including the compatibility of minds and bodies – could be controlled and sustained. Without the possibility of a single thread of argumentation leading to a host of “certainties,” Peirce found himself re-describing the nature of the process of cognition; not a “chain” of necessary propositions but a “cable” of replaceable strands of belief became the foundational metaphor for his account of reasoning.

This shift involved the fallibilism we mentioned earlier. Strands of a cable that are open to failure and replacement indicate that Peirce had shifted from deductivism to a richer conception of scientific inference. Peirce’s only source of “guarantee” was to be found in the ongoing observation and experimentation of a community of inquirers that was committed to truth-seeking. In Peirce’s world, whatever is known would have to be worked for; it would not appear merely by the grace of God. Peirce’s rejection of Descartes’ method was thus radical but not wholesale. He put doubt to work in a more controlled and specified way. Moreover, the shift from immediate intuition to a critical common sense and the shift from immediate certainty to a vision of truth that could only be attained in the infinite long run of inquiry carried out by a community of genuine and fallible inquirers marked related but alternative answers to some Cartesian questions. Peirce’s transformation of Cartesian rationalism as a mode of inquiry led directly to transformed conceptions of nature and the human self. Peirce’s world was no longer the stable and comfortable world about which *Candide* became cynical; his world was shot through with risk and failure, yet driven by a hope that some beauty, goodness, and truth could be achieved through the hard work of committed persons.

A Transformed Ontology

Peirce’s commitment to continuity, what he called his “synechism,” governed his ontological and cosmological claims just as it governed his account of reason. Thus, his understanding of nature differed from that of Descartes in ways analogous to the ways in which his understanding of reason differed from that of Descartes. Peirce saw this difference, in essence, as the difference between a realistic and a nominalistic account of nature. Peirce believed the whole of modern philosophy, under the influence

of Ockhamism, to be nominalistic: “all modern philosophy of every sect has been nominalistic” (CP 1.19).

Descartes, however, was not among those whom Peirce called “normal nominalists.” Normal nominalists were, by and large, empiricists who believed the world was composed of discrete entities or things and that reasoning was composed of atomistic sense impressions. For them, general ideas and principles were just words. At first blush, Descartes, like Leibniz after him, appears to be a kind of realist because he takes mind seriously as a feature of nature. However, as Peirce saw it, Descartes’ reification of mind still failed to acknowledge true generality or continuity. For Descartes, a mind is a *res cogitans*, a thinking *thing*, and things are conceived as individual existents. Peirce believed that Descartes, like other moderns, recognized “but one mode of being, the being of an individual thing or fact” (CP 1.21). On such a view, relations, laws, and general principles were not considered real because they were not individual, existent things. Or, if they were real, they would have to be conceived *to be* individual things. “The nominalist alone,” Peirce argued, “falls into the absurdity of talking of ‘single facts,’ or *individual generals*” (CP 6.593).

The consequences for science of this nominalistic outlook were important for Peirce. His focus on the importance of relations and on science’s inquiry into the laws of nature, which are nature’s habitual ways of acting, led directly to his realism and his synechism, the beliefs that generality and continuity are real, though they are not individual, existent things. Without the reality of generality, relations would be either unreal or “real” only as arbitrary assertions by individuals. This is the problem William James (see JAMES) faced in his essays on radical empiricism and that led him to assert the reality of relations as well as things. Peirce’s point was that a world *without* real relations would have difficulty holding itself together in an orderly fashion. Furthermore, Descartes’ use of “causality” as an ordering principle was, on his own nominalistic grounds, as Hume later showed, unreasonable. If causes were real in Descartes’ world, they would need to be individual, existent things, the very sort of individual thing neither Hume nor anyone else could find. The problem for Peirce was not that Cartesian nominalists do not *discuss* relations “but that they do not admit them as real constituents of the universe” (CP 5.82). This is evident perhaps insofar as we can see Descartes as one progenitor of mechanism through his emphasis on the conception of causality as mechanical force: “Already in that strangely influential hodge podge, the salad of Cartesianism, the doctrine stands out very emphatically that the only force is the force of impact, which clearly belongs to the category of Reaction” (CP 5.64). The category of Reaction, for Peirce, is what he calls “secondness.” And a world that is, ontologically speaking, essentially secondness excludes real laws, purposes, final causes, and the force of laws; it is a world of things in mechanical interaction. Such an exclusion fundamentally alters the practice of science.

Peirce stated that he “entirely approved the brief statement of Dr. F. E. Abbott in his *Scientific Theism* that Realism is implied in modern science” (CP 4.50). This approval was manifest in Peirce’s ongoing battles with thinkers such as Karl Pearson and Paul Carus concerning the nature of natural or scientific laws. Pearson was an early constructivist who maintained that a natural law is “essentially a product of the human mind and has no meaning apart from man” (Pearson 1892, p. 104). For

Peirce, it was precisely the reality of law that scientists sought to understand. Gravity was not an arbitrary description nor an entitative force, but a constraining habit concerning the interactions of physical things. Such a law did not *exist* but was *real in its generality*. It is not so much that Cartesian rationalism focused on contending or opposing this point; rather it simply adopted uncritically an Ockhamist ontology and overlooked the importance of the issue. The importance of this oversight cannot be overstated, for it led directly to Descartes' conception of the self as an individual, substantive *res cogitans*. And this idea as much as any other, from a Peircean point of view, has led philosophy in the direction of a number of dead ends and pseudo-problems: the mind-body problem, the problem of other selves, the problem of self-identity over time, and so forth. Indeed, it is just this Cartesian conception that has become the focus of the various strands of postmodernism in the last 30 years.

Descartes' meditations on the *cogito* led him to conceive the human self as essentially a thinking thing. To this thinking thing, by the grace of God, was attached a body. Indeed, it was precisely the reification of both mind and body coupled with the limited and limiting conception of causality as mechanical force that led to the so-called mind-body problem. Ironically, Western science, despite its methodological shift in a Peircean direction, still proceeds in large part with such a Cartesian conception of the self as accepted doctrine. Persons are often conceived to be reasoning substances that can achieve immediate self-knowledge in the way Descartes suggested. Moreover, they are often viewed as substances or mechanisms susceptible of simple external manipulation. The behaviorism of twentieth-century psychology is but one example of the reach of Cartesianism.

Peirce resisted Descartes' conception of the self, considering it to be as nominalistic as the rest of his metaphysics. "Every attentive reader of St. Paul is aware that according to him, man has a threefold being. We derive," Peirce argued, "the notion of the soul's being single from Descartes" (CP 7.580). Again, a person, according to Cartesian rationalism, is a substantive, isolated individual existing in a web of mechanical causes. From here it is a short step to the questions, or pseudo-problems, about the knowledge of other minds and the difficulty of self-identity over time that we mentioned earlier. For Peirce, the problem lay at the beginning in the nominalism that underwrote all of Cartesian ontology.

Peirce's realistic, synechistic, and semiotic conception of the self was radically different from the Cartesian view of the self. For Peirce, a personality "is some kind of coordination or connection of ideas" and "like any general idea, is not a thing to be apprehended in an instant. It has to be lived in time" (CP 6.155). The anti-Cartesian consequences of this view are several. First, the self is not an isolated substantive thing, but a living generality continuous with its environment, including other selves such that the "recognition by one person of another's personality takes place by a means to some extent identical with the means by which he [she] is conscious of his [her] own personality" (CP 6.158). Because the self is fully ensconced in an environment, this self-consciousness or self-awareness is not the isolated intuition of the Cartesian *ego*. Rather, as Vincent Colapietro (1989) has shown at length, the self, as Peirce saw it, knows itself by way of a semiotic process mostly through its encounters

with otherness in the world. The self appears to itself as a function of failure in action, of resistance from outside itself, and of community response to its conduct. Thus, Peirce stated, when a boy touches a hot stove after being warned not to, “he becomes aware of ignorance, and it is necessary to suppose a *self* in which this ignorance can inhere. So testimony gives the first dawning of self-consciousness” (CP 5.233).

The Peircean self, unlike the Cartesian self, does not come into the world ready-made and finished; it grows and develops. The self for Peirce is a growing “sign.” The generality of personality allows a self to be multifaceted, partially fragmented, and unfinished. This sort of openness and semiotic complexity provided the ground for the more involved interpretations of personhood and psyche in the twentieth century. As Peirce noted at the turn of the century: “The doctrine of Descartes, that the mind consists solely of that which directly asserts itself in unitary consciousness, modern scientific psychologists altogether reject” (CP 5.569). The continuity of the Peircean self also entailed that one’s embodiment is not a “problem” but a natural feature of the self. The body, through perception, gives us direct access to our environment and to other persons.

Finally, as a corollary to the self’s continuity with its environment, its temporal development, and its self-awareness through otherness is that, for Peirce, we are essentially communal beings not individual selves. To put it another way, our personalities can only be realized within communities. We are “signs”; we live in and through generalities or meanings that move out into the environment and social milieu and return to us transformed by interpretation. Self-realization depends on communication and semeiosis. The same point was further developed in a naturalistic setting in the work of John Dewey (see DEWEY) and George Herbert Mead (see MEAD), and came to have an impact through pragmatic theories of education and social development in the twentieth century.

In delineating these consequences, we see that Peirce’s transformations of and oppositions to Cartesian rationalism were ontological as well as epistemological. Continuity *and* difference were for Peirce both constitutive of the history of ideas. Thus, Peirce was a thoroughly postmodern thinker. At the same time, we should understand that he did not presume to have simply left the past behind; rather, he saw himself as standing in an intellectual tradition and transforming Descartes’ responses to some of the most daunting and interesting questions concerning human experience. Peirce’s transformations are not merely of historical interest; they offer a fresh and non-reductive way of looking at contemporary scientific practice. Much of Western science is still operating with Cartesian notions of certainty, causality, and nominalistic individuality despite the fact that these conceptions are inadequate to describe the actual practices and claims of many contemporary scientists. Moreover, in the moral and political realm, rights theorists and utilitarian thinkers still talk as if individuals were isolated selves and communities were aggregates of these selves. Only recently have a variety of “identity theorists,” working in a much more Peircean way, begun to challenge these conceptions at their root. A century later, Peirce’s transformations of Cartesianism still present us with insights yielding an opportunity to rethink many of our own cultural habits. Such is the pragmatic meaning of Peirce’s response to Cartesian rationalism.

References and further reading

- Apel, Karl-Otto. 1981. *Charles S. Peirce: From Pragmatism to Pragmaticism*, trans. John Krois. Amherst: University of Massachusetts Press.
- Buczynska-Garewicz, Hanna. 1987. "Peirce and the Cartesian tradition." In *Religion and Philosophy in the United States of America*, ed. Peter Freese (Essen: Verlag Die Blau Eule), vol. 1, pp. 78–85.
- Colapietro, Vincent. 1989. *Peirce's Approach to the Self: A Semiotic Perspective*. Albany: State University of New York Press.
- Descartes, René. 1999/1637. *Discourse on Method and Related Writings*, trans. Desmond Clarke. London: Penguin Books.
- Haack, Susan. 1992. "Extreme scholastic realism: its relevance to philosophy of science today." *Transactions of the Charles S. Peirce Society* 28, 19–50.
- Hausman, Carl. 1993. *Charles S. Peirce's Evolutionary Philosophy*. Cambridge: Cambridge University Press.
- Hookway, Christopher. 1985. *Peirce*. London: Routledge and Kegan Paul.
- Pearson, Karl. 1892. *The Grammar of Science*. London: Walter Scott.
- Skagestad, Peter. 1981. *The Road of Inquiry: Charles Peirce's Pragmatic Realism*. New York: Columbia University Press.