Monitor ISH (2022), XXIV/2, 37–55
Izvirni znanstveni članek
Original scientific article

Vadim Gershteyn[1]

No Pragmatism without Realism: Thoughts on the Popular Scholarly Exclusion of Charles S. Peirce

Abstract: Pragmatism belongs among the major intellectual schools in philosophy and is also one of the newest. Despite its relative popularity, pragmatism is difficult to define, and various definitions of pragmatism by scholars are contentious. One reason for the confusion over the meaning of pragmatism is the exclusion of its spiritual founder, the American scientist and philosopher Charles S. Peirce, from its most relevant contemporary discussions (especially in terms of the primacy of neo-pragmatism). Peirce has been excluded from the discussion of contemporary pragmatism in part because his fundamental ideas conflict with the contemporary philosophical beliefs of (neo-) pragmatism. A re-contextualization of Peirce's ideas points to a way of reinterpreting contemporary (neo-)pragmatism in the context of Scholastic realism: a more ancient philosophical school that Peirce was influenced by through his exposure to Duns Scotus. This paper draws on contemporary discussions in pragmatism to find a way in which Peirce's philosophy might inform current and future philosophical discussions.

Keywords: Peirce, pragmatism, American pragmatism, American philosophy, epistemology, cosmology, ontology, neo-pragmatism

[1] Vadim Gershteyn (vadim.gershteyn@gmail.com) is a doctoral student of Humanities at Institutum studiorum humanitatis, Ljubljana.

Ni pragmatizma brez realizma: misli o akademskem spregledu Charlesa S. Peircea

Povzetek: Pragmatizem je ena izmed najnovejših velikih filozofskih šol. Kljub relativni priljubljenosti je pragmatizem težko definirati, različne znanstvene definicije pragmatizma pa so sporne. Eden od razlogov za zmedo o pomenu pragmatizma je izključitev njegovega duhovnega utemeljitelja, ameriškega znanstvenika in filozofa Charlesa S. Peircea, iz najbolj relevantnih sodobnih razprav (zlasti v smislu primata neopragmatizma). Peirce je bil delno izključen iz razprave o sodobnem pragmatizmu, ker so njegove temeljne ideje v nasprotju s sodobnimi filozofskimi prepričanji (neo)pragmatizma. Rekontekstualizacija Peirceovih idej kaže na način za reinterpretacijo sodobnega (neo)pragmatizma v kontekstu sholastičnega realizma: starejše filozofske šole, ki je na Piercea vplivala predvsem preko Duns Skota. Ta prispevek se opira na sodobne razprave o pragmatizmu, da bi našel način, kako bi lahko Peirceova filozofija oplajala sedanje in prihodnje filozofske razprave.

Ključne besede: Peirce, pragmatizem, ameriški pragmatizem, ameriška filozofija, epistemologija, kozmologija, ontologija, neo-pragmatizem

Where is the "founder" of pragmatism, Charles S. Peirce, in its annals?[2] In reading historical accounts of American pragmatism, such as Louis Menand's *The Metaphysical Club* (2001), the budding scientist and philosopher Peirce plays an important—if not principal—leadership and organizing role in the development of pragmatism (as a student at Harvard University; and as a colleague of William James, Oliver Wendel Holmes, Jr., and others who were involved in the Metaphysical Club). However, when one reads contemporary theoretical accounts of American pragmatism, Peirce—and in particular Peirce's idea of the *semiotic* (or: continuum)—is conspicuously absent from a description of the content and influence of pragmatism. Why?

The shadow of Peirce looms large over Eduardo Mendieta's *Mediterranean Lectures in Philosophy*: *Three Pragmatist Lectures*, which was initiated as a conversation between American and Slovene academics (Mendieta is Colombian-American). Mendieta defines pragmatism (which is notorious for being difficult to operationalize beyond the truism that "what is true is useful")[3] by considering what pragmatism is and what pragmatism is not. Among the things that pragmatism is, according to Mendieta (2008, 29), is "a philosophy of social agents, not ideas that exist in some metaphysical realm." This is in line—but only partially—with Peirce's "pragmatist maxim," which states: "consider what effects which might conceivably have practical bearings we conceive the object of our conceptions to have. Then, our conception of these effects is the whole of our conception of the object" (Zamalea 2019, 54). To

[2] William James attributes pragmatism's founding to Peirce—as tortured as the notion of the founding of pragmatism is historically and conceptually—in a series of personal letters and as allusions to Peirce as a »figure of Corinthian darkness« in his lectures (Brent 1993).

[3] For criticisms of the pragmatist maxim, see: Scruton 2014.

support Mendieta's contention that a) pragmatism is *use*-oriented as its sole guiding principle and b) there is no "use" in metaphysics (and therefore metaphysics cannot be a focus of pragmatism), he quotes John Dewey: "we do not solve problems; we get over them" (Mendieta 2008, 22). Dewey's statement does not reject Peirce's method either (Peirce likewise views all problems as non-mysterious), but avoids Peirce's content-focus, which includes metaphysics because the supernatural is a part of life—if not the most fundamental part of life. So far, pragmatism (defined by Mendieta) is simply a philosophy that has what Richard Rorty-via-James calls "cash-value" in the *semiotic* matrix (or: continuum), which is isomorphic to a realm or world (or: world-realm); the contention of all post-Peircean pragmatists is that metaphysics—including belief in God—has no cash-value. This is a wrong objective statement and explains (partially) why Peirce, a non-materialist in the strong sense intended by James,[4] is excluded from popular discussions of pragmatism.

Among the things that pragmatism is not, according to Mendieta, is the belief systems that make up the philosophical doctrines of Platonism and realism. Following Rorty, Mendieta opts for Derridean deconstruction as a *post-hoc* pillar of pragmatism that—like G. W. F. Hegel's notion of consciousness—comes too late (and is possibly unhappy). The inclusion of Platonism as anti-pragmatism warrants a discussion insofar as Peirce's cosmology resembles an "evolutionary Platonism" (not unlike his influence Duns Scotus). However, the mention of realism in what pragmatism is *not* by Mendieta is even more crucial. In a surprising turn (that is nonetheless accurate to

[4] Peirce, James, and John Dewey all entertained beliefs that are non-materialist; of these included telepathy.

Peirce's orthodox, albeit atemporal intent)[5], Mendieta (2008, 44) later states that "pragmatists are realists that ask how an idea or institution can enhance the lives of citizens." Clearly, realism is not being used consistently or clearly if the pro- and anti-realist statements are contrasted. What is realism—then—and how does it play into Peirce's exclusion from the pragmatist *gestalt*?

There is almost no doubt that Peirce is what can be termed a philosophical realist, though a realist of what kind is up for debate (as there are multiple kinds of philosophical realism). Susan Haack (1988, 158), provides a concise definition for "innocent (or naïve) realism," which can be considered a proto-view of Peirce's (in that in its mature form Peirce's view encompasses many more evolutionary contentions and is therefore not "naïve"):

> *That there is a real world was the first thesis put forward in the name of innocent realism; and yes, what that means is that the world (the real world, not imaginary, fictional worlds) is independent of how anyone thinks it to be, mind-independent in the weaker sense. Many real things, those which are external, are also independent of how we think, are mind-independent in the stronger sense. But some real things, the internal or mental ones, are not independent of how we think, and hence are not mind-independent in the stronger sense, but mind-dependent in the weaker sense.*

Peirce's indubitable world-realm—Peirce (qtd. in Brent 1993, 28) claims it is "indubitable I was born in a stone-coloured wooden

[5] Peirce's "orthodoxy" in this statement refers to his pragmaticism, which he contended was truer to pragmatism's original intent despite being conceived after pragmatism launched as a philosophical movement due to a reasonable misunderstanding of Peirce's maxim by James before Peirce developed an archetonic to accompany the maxim in his later writings.

house in Cambridge, Massachusetts in 1839"—is one that is bathed in the metaphysical questions other pragmatists ignore. Peirce considers God and the paranormal to be appropriate hermeneutic units of analysis, leading some commentators to label (perhaps correctly) Peirce as a creationist (Oller 1984). There is also Peirce's idiosyncratic social conservatism to factor into his exclusion from theoretical scholarship from pragmatism—to which degree this social conservatism is 'ontological' rather than incidental is debated by commentators—that separates his interests from the "self-improvement" *ethos* (often or always with aid from the state) that occupies neo-pragmatists like Richard Rorty and Mendieta. Peirce, famously, talks about self-control as a condition of biological life, but self-control is not self-improvement (quite the contrary; even from a non-teleological Darwinist perspective). When Dewey contends we can change habits, Peirce argues we can only change habits to different habits: "better" ones (and the metric of 'better' can only be understood based on the standards of a sign-using in-group). In general, the best society human organisms can ever hope for is one predicated on harm reduction because society is a process of dysgenia (by its definition); Peirce recognizes this as an early adopter of the Christian strains of Darwinism.

Doctrinal differences between pragmatists aside, Peirce's orthodox pragmatism (later called pragmaticism) meets the single heuristic, which makes any type of pragmatism as a philosophical (anti-)doctrine tenable: pragmaticism describes the world-realm accurately and can predict events in it reliably. All life and (possibly) non-life (henceforth: *relatonae*) operates in a *semiotic* matrix, such as a world-realm. This world-realm is a continuum precisely because the only law of *relatonae* in this matrix is continuation. Peirce calls this 'the Law of Mind' but the use of the word *mind* is misleading. Fernando Zalamea (2012, 62) describes:

One of the strengths and major appeals of Peirce's semiotics is to let free the notion of »quasi-mind,« or interpretation context, where the semiosis occurs (the »objects« are also very arbitrary; they can be physical objects, concepts, or any kind of signs where the semiosis can … begin). Freeing interpretation environments from the psychological shades related to particular human »minds,« Peirce's semiotics turns unstoppably to a very wide range of universality. Since a quasi-mind can be either a protoplasm medium where semiosis grows in back-and-forth processes of liquefaction and cohesion, a nervous system where semiosis integrates cells excitation, fibers transmission and habit taking, or a cultural environment spanned by linguistic grids, or even the very cosmos where the laws of physics are being progressively determined, it is clear that Peirce's »general signs« can cover huge domains of reality.

A recent paper in evolutionary biology by Randolph Nesse (2005) can be used as an illustration of the power of Peirce's 'general signs' when applied retrospectively. There is a tendency regarding Peirce's ideas or philosophy where it has been vindicated after-the-fact by contemporary scientific scholarship. Joseph Brent (1993, 4) puts it:

What is there about Peirce's ideas that could conceivably justify considering his grand hypothesis seriously testing it by the methods of science, as he himself required be done? The answer lies in two levels of response to Peirce's work, especially in the last thirty years […]. In the first place, disconnected inquiries into various aspects of his work by specialists in such varied fields as the logic of relations, semiotics, psychology, sociology, mathematics, phenomenology, metaphysics, and literary criticism have resulted in remarkable agreement on the originality and usefulness of

> *Peirce's proposals. In the second, the realization that all of these various proposals were generated by the same method of thinking has led to serious consideration of the validity of [Peirce's] archetonic system taken as a whole.*

Nesse's paper is no exception to this pragmatic (and fruitful) heuristic. To start, Charles S. Peirce contends that life has metaphysical content because the *semiotic* (which can be termed as signs that operate within a continuum) is not physical but ontological (in pragmatic terms: *necessarily* explanatory to physicality [as phenomenologically experienced by entities]).[6] That is, one needs signs before anything else for *relatonae* to offer relays such as that entropy produces growth.[7] In a way that was wrongly interpreted as being positivist (including by the positivist Vienna Circle), Peirce observes that the habits of biological life (such as protozoa) are analogous to more complex organisms like humans. Therefore, Peirce concludes that protozoa think in the same way Martin Heidegger conceptualizes thinking. This observation should be contrasted with Peirce's (1955, 362) statement that God is responsible for the creation of the universe and (more complexly) that "God loves evil." Creation is a partially evil process for Peirce—though a necessary one that ensures continuity (which is the only constant of the universe).[8] Echoing Arthur Schopenhauer, Peirce is both pessimistic about what can

[6] The *semiotic* can be considered akin to what Roy Bhaskar (2008) states about ontology in general (because *semiotic* is an ontological proposal): "ontology is the means by which science is possible."

[7] For the contention that entropy produces growth (or is a modality of growth), see: Hidalgo 2014.

[8] Peirce's contention that laws do not exist as much as habits do is very similar to what is argued by Roy Bhaskar (2008).

be termed human progress and interested in the non-materialist cosmology that results (though not necessarily) from this pessimism. Furthermore, anticipating quantum Darwinists, Peirce contends that the universe evolves to perfection in the infinitely-long run but that—crucially—the long-run never arrives and cannot arrive because evolution is non-teleological.[9] Nesse's paper should be looked at from the perspective of Peirce: there are (only) local laws, and the primary (only) meta-law is continuity (Peirce's opinion on the triviality of laws, rather than habits, is shared by Roy Bhaskar). How creatures participate in and extend (their) life should be considered as an insurance of continuity, including in the plane of temporality (such as by having children).[10] In other words (methodologically): evolution is a proof-of-concept of itself working and one can deduce second principles in taking evolution (as such) as an axiom.

Second principles from evolution can be as follows: all decisions on the part of entities are evolutionary decisions in that they relate to survival and reproduction (and are therefore *relatonae* in a *semiotic* continuum). A continuum is defined by Peirce as "something any part of which however small itself has parts of the same kind" and "something whose possibilities of determination no multitude of individuals can exhaust" (Peirce in Iliff 2019, 6). Therefore, any decision on the part of entities can be looked at as evolutionary, i.e., affecting independent entities, even if it is not explicitly aimed at

[9] Peirce's view of evolution being that its affected elements "aim" towards teleological perfection without being able to achieve this in the infinitely-long run is argued by Carl Hausmann (1997) in *Peirce's Evolutionary Philosophy*.

[10] Edmund Burke (in Scruton [2021], 139–140) reminds us that society has a spatial *and* a temporal dimension as it is a "promise between the alive, dead, and the unborn".

affecting independent entities—for the same reason that Pyotr Kropotkin's theory of entity-cooperation can be looked as a modality of competition-avoidance. That all decision-making is evolutionary (and therefore: *economic*; more on this later) can be illustrated through the case study of defence mechanisms in organisms (e.g., Nesse's paper). Defence mechanisms are an expression of *semiotic* relations (relays) because an entity reacts to signs rather than stimuli (because of evolution from times when signs and stimuli were more primordially-related). For instance, Nesse (2005, 88) observes that defence mechanisms in humans, such as anxiety, are present in situations where they seem unnecessary. In other words, "cues indicate the presence of a threat," even if there is no threat to warrant the response on the part of an organism (Nesse 2005, 88). A *semiotic* system (continuum) is ingrained evolutionarily in what Robert S. Corrington (1993) calls 'sign-using organisms' (including humans): this is analogous to Noam Chomsky's (1979) linguistic theory of generative grammar (among humans), in terms of its innateness (Chomsky was directly inspired by Peirce), but Peirce says nothing about rationality or structure since the *semiotic* is organic and self-sorting (furthermore, language, according to Peirce—rather than Chomsky—is only a fraction of the meaningful expression of *semiotic*).

Because of the "background radiation" of the evolutionary *semiotic* to the actions of entities, a regulating defence system in an entity will express many false alarms because the lowest cost is desirable to any organism (Nesse 2005, 88). Therefore, it is optimal for organisms to avoid and alleviate averse experiences, but not to the extent of stifling development (ibid., 89). Signs are as important as stimuli in development, and this is why we (sadly) see that so many meaningful experiences can be simulated cognitively. Analogous to what Nicolas Taleb (2019) calls 'antifragility,' organisms "use

negative feedback to maintain stability" (Nesse 2005, 89). Nesse (ibid.) puts it more explicitly: "in simple homeostasis, the deviation of a controlled variable from its set point initiates responses that return the variable back to its set point in a process of stabilizing negative feedback." Therefore, all *relationae* is continuous or meant to ensure continuity through time, and all descriptions of the world-realm are descriptions of continuity (and, therefore, descriptions of time). *Semiotic* is what ensures actions on the part of entities are continuous because biological signs temporally link our ancestral evolutionary past (e.g., fighting off predators) to its manifestation in contemporary eras (e.g., anxiety).

The *semiotic*—which facilitates homeostasis of organisms by grounding action in an evolutionary matrix where signs are not arbitrary—is a precursor to the continuity that makes truth-statements on the part of humans possible (and actionable).[11] For instance, a red stop-sign is a signifier for the action 'stop' in a car, and all discussion of red stop signs (including by radical libertarians who believe stop signs are a violation of individual rights) implicates the act of stopping, rather than speeding up or staying at the same speed. In other words, because there are signs, there is meaning. Signs can appear independent of stimuli (signs can be arbitrary), but in fact signs usually do *not* appear independent of the stimuli that is Manifolded into human consciousness (to put it in Kant's terms)—though appearance is always partially off from reality (Peirce likes to give the example of a blind spot in the middle of the retina that can be

[11] That Peirce believed in objective truth is demonstrable from several of his statements. Among these is his assertion that inquirers must "certainly opine that there is such a thing as Truth. [...] Every man is fully satisfied that there is such a thing as truth, or [else] he would not ask any question" (Peirce in Haack 1988, 22).

stimulated with a simple experiment).[12] Peirce's semiotics (to use a term distinct from *semiotic*) is radically realist in a way Continental semiology, which utilizes similar language of signs and signification, is not. James Hoopes (1991, 3) describes:

> *Humanist scholars, more or less independently of Peirce, have been coming round to something like [Peirce's] description of language and thought as processes of sign interpretation, but they badly need his chastening realism. The last twenty-five years have brought many new methodologies. Among these are deconstruction and poststructuralism. Although there are important differences between them and although their adherents sometimes quite ardently oppose each other, these methodologies may be conveniently grouped under a broad rubric—the interpretative revolution. The spokespeople for these methodologies attribute an extraordinary degree of either freedom or transitoriness to human thought, language, and interpretation, with little explanation of how such a universe is possible or of how reasonably honest and thoughtful people could have so wrongly overestimated the constraints within which they live. These methodological radicals would do well to consider Peirce's semiotic realism, according to which interpretation proceeds under the weight of many natural, logical limits.*

[12] Charles S. Peirce (in Hoopes 1991, 39): "does the reader know of the blind spot on the retina? Take a number of this journal, turn over the cover so as to expose the white paper, lay it sideways upon the table before which you must sit, and put two cents upon it, one near the left-hand edge, and the other to the right. Put your left hand over your left eye, and with the right eye look steadily at the left-hand cent. Then, with your right hand, move the right-hand cent (which is now plainly seen) towards the left hand. When it comes to a place near the middle of the page it will disappear— you cannot see it without turning your eyes. Bring it nearer to the other cent, or carry it further away, and it will reappear. Thus it appears there is a blind spot in the middle of the retina."

Signs in a *semiotic* continuum are self-organizing and form orderly structures or what Justus Buchler (1966) terms Natural Complexes. Erwin Schrödinger states, "organisms avoid entropy by using energy to create and maintain order" (Nesse 2005, 89). Therefore, behaviour's organization is not determined by external variables but by the regulation of internal perceptions that convey data from sensory receptors (ibid.). *Semiotic* relations are internalized through generational and evolutionary development until all entities have a sign-vocabulary that is unique to an in-group of sign-users (in-groups include genus of protozoa)—in particular, natural kinds are formed through para-linguistic evolution.

According to Nesse (2005, 90), "maintaining homoeostasis is the most fundamental regulation task for life." Therefore, organisms must respond effectively to changing circumstances using signs in a *semiotic* continuum. Nesse (2005, 91) writes, "as the sun increases the temperature of desert animal, they move to cooler locations." Specifically, "feed-forward systems give an advantage by initiating adaptive behaviour more quickly" (ibid.). For example, "butterflies use the anticipated heat of each day to forage in the morning hours for the amount of water that they need that day" (ibid.). Nesse's observations should be favourably compared to the ideas of James Lovelock (described later), especially the Gaia hypothesis, which is—in the words of John Gray (2002, 32)—"consistent with the narrowest scientific orthodoxy."

The continuum of *relationae* that defines the word-realm is economic in the way that is intended by Ludwig von Mises (2007) if Mises' declaration of Human Action were ontologized to biological life more broadly. In other words, Nesse (2005, 92) contends that "defence mechanisms are much less expensive than dangers." Or: false alarms are inexpensive compared to dangers. Echoing Arthur Schopenhauer, Nesse (ibid.) writes, "most of life's

suffering arises from defence responses" and "people born without the capacity for pain die in early adulthood, tragically demonstrating the utility of a capacity for suffering." From Peirce's perspective that grounds *relatonae* in a *semiotic* continuum, all *relationae*'s individual relays (choices that "make a difference") can be conceived of as economic, and *semiotic* signs are economic indicators (including of potential loss). The "economic" ontology that Mises (via Peirce) inspires should be viewed through the lens of Peirce's late essay "Evolutionary Love," where he (rightly) decries American capitalism. However, Peirce's anti-capitalist sentiment is still an economic one *if* Mises is ontologized (because it applies an evaluative value to freedom from certain types of capitalist oppression). Furthermore, Peirce's critiques of American capitalism, including its "gospel of greed," echo the institutional critiques of Thorstein Veblen rather than Karl Marx (and these sentiments are surely in line with Peirce's proto-paleoconservativism—which is generally critical of capitalism). On the contrary, Marx (rather than Veblen) inverted the *semiotic* continuum of *relatonae* such that what is traditionally rewarded in an evolutionary matrix is replaced with an opposite (or analogue that is social). The *semiotic* (which—in a way—resembles a cosmic market) remains intact even if the cultural value associated with a sign changes. One can analogize this principle to how data analysis among noise can be meaningful if the same (meaningless) methodology is applied consistently.

The economic conception of the *semiotic* continuum can be alluded to in non-economic sectors, as well, such as medicine. Nesse describes that elevated bodily temperatures in organisms (including humans) help fight foreign infection, which leads to what is called the "the clinician's illusion" in which clinicians falsely perceive that the body's defence is a problem rather than

the solution to a foreign presence. For instance, respiratory depression may result from cough suppression from codeine, rather than an underlying sickness. Humans experience false alarms (like anxiety), because there is a level of sensitivity to when relays are processed as threatening. For instance, "too sensitive a system will result in vomiting after each meal" as there are slight, though not existential, dangers in all sorts of consumables (Nesse 2005, 95). Mirroring Peirce, Nesse contends "the organism does not actually calculate probability, it needs to only have a system that assesses the relative likelihood that the danger is present." This calculation is done automatically through the effects of evolution. Namely, "out of 100 episodes of flight, 99 are false alarms, and this is completely normal products of an optimal system" (ibid.). Or, to continue the example from medicine, when "doctors prescribe diuretics to decrease the fluid load, they are trying to compensate for the body's maladaptive defence against apparent dehydration" (ibid., 101). There is no *relatonae* in the continuum that does not seek hemostasis: this can also be viewed as the lesson of Hegel (without Marx).

Gray (2002, 32) describes Lovelock's Gaia hypothesis, which can be viewed as a macro-application of the primacy of homeostasis:

> *In James Lovelock's model of Daisyworld a planet containing only black and white daisies becomes one in which global temperature is self-regulating. Daisyworld is lit by a sun that grows hotter over time. White daisies reflect the sun's heat, thereby cooling the surface of the planet, while black daisies absorb the heat, so warming the surface. Without any element of purpose these daisies interact to cool their world despite the warming sun [...] all that is required to bring a self-regulating biosphere into existence are mechanistic and stochastic processes, which can be modeled in a computer simulation.*

Gray (ibid.) quotes Joel de Rosnay:

The simulation [...] starts with a low temperature. The black daisies, which absorb the heat of the sun better, survive, develop, and occupy a large area. As a result, the temperature of the soil increases, becoming more favorable to life. The black daisies reproduce at a higher rate but cover too much area, and if temperature increases above a critical point; the black daisies die off en masse. But the white ones adapt, develop, and colonize large areas, reflecting the heat and cooling the planet again. The temperature drops—too much. The white daisies die and the black ones return in profusion. After a certain amount of fluctuations, a "mosaic" of black and white areas begins to coexist and coevolve on the planet's surface. Individual daisies are born and die, but the two populations, through successive heating and cooling, maintain an average temperature favorable to the life of both species, and this temperature fluctuates around an optimal balance. No one set the temperature, it simply emerged [...] the result of the daisies' behavior and their co-evolution.

Peirce's *semiotic* operates in Gaia (a continuum) because the existence of things as they are—rational only through evolution, but not teleological and not necessarily intrinsic—implies self-regulation or self-control (not self-improvement). In what way does Gaia improve (itself)? What is improvement for Gaia? Gaia does not "care" for your hip or brain implant, at least not in aggregate. Therefore, in what way does Gaia respond to suffering instead of internalizing it? In what way does Gaia give us an imperative—and how legitimate is it to read imperatives out of Gaia (besides its self-preservation)? An answer to some of these questions is given in Lorraine Daston's recent meta-review *Against Nature* (2019).

Peirce's *semiotic* provides a theoretical framework for one of the greatest phenomena of our time: the phenomenological experience among people that the world-realm has changed "timelines". Peirce's cosmology is predicted on the Arrow of Time hypothesis, which, while intuitive, has been increasingly challenged by the Block theory (and its consequent determinism). Phenomenologically-perceived shifts in reality (circa 2012 onwards) where previously-established history and reality were perceived to have been altered may give credence to the Block theory, though not necessarily if other cosmologies are considered. More research remains to be done on the aggregated phenomenological alignment of changes in the *semiotic* interpretation of historical events (as one example) of the world-realm. These changes may or not be evolutionary (in a quantum or *cosmic* sense), but they are pragmatic because they are real. As Peirce implies, there is no pragmatism without realism, and no realism without pragmatism. Pragmatism must be employed in order to isolate what is real in a world-realm where lies have "cash-value". Commenting on why we need realism in order to pursue harm reduction as pragmatists, Thomas Sowell (1988, 134) writes: "lies are only effective if they are regarded as the truth." Peirce's realism is one way forward towards intersubjective healing when other approaches—exemplified in pragmatist and neo-pragmatist efforts of the 20th century—have not brought us the results theorists of pragmatism opine is the purpose of the discipline of philosophy in general and pragmatism in particular.

Bibliography

Bhaskar, Roy. 2008. *A Realist Theory of Science*. London: Continuum.

Brent, Joseph. 1993. *Charles Sanders Peirce: A Life*. Bloomington: Indiana University Press.

Buchler, Justus. 1966. *Metaphysics of Natural Complexes*. New York: Columbia University Press.

Chomsky, Noam. 1979. *On Language*. New York: The New Press.

Corrington, Robert S. 1993. *An Introduction to C. S. Peirce*. Lanham: Rowman & Littlefield.

Daston, Lorraine. 2019. *Against Nature*. Boston: MIT Press.

Gray, John. 2002. *Straw Dogs: Thoughts on Humans and Other Animals*. London: Granta Books.

Haack, Susan. 1988. *Manifesto of a Passionate Moderate*. Chicago: University of Chicago Press.

Hausmann, Carl. 1997. *Peirce's Evolutionary Philosophy*. Cambridge: Cambridge University Press.

Hidalgo, César. 2014. *Why Information Grows*. New York: Basic Books.

Hoopes, James. 1991. *Peirce on Signs*. Chapel Hill: University of North Carolina Press.

Iliff, Alan James. 2019. *Peirce's Mathematical Philosophy*. Boston: Docent Press.

Menand, Louis. 2001. *The Metaphysical Club*. New York: Farrar, Straus, and Giroux.

Mendieta, Eduardo. 2008. *Mediterranean Lectures in Philosophy: Three Pragmatist Lectures*. Koper: Poligrafi.

Mises, Ludwig von. 2007. *A Treatise on Human Action*. Indianapolis: Liberty Fund.

Nesse, Randolph. 2005. Natural selection and the regulation of defenses: A signal detection analysis of the smoke detector principle. *Evolution and Human Behavior* 26(1): 88-105.

Oller, John Jr. 1984. *C. S. Peirce's Neglected Argument*. Institute for Creation Research. Access: https://www.icr.org/article/cs-peirces-neglected-argument (20 August 2022).

Peirce, Charles S. 1955. Evolutionary Love. In *Philosophical Writings of Peirce*, ed. Justus Buchler, 361–375. Mineola, New York: Dover Press.

Scruton, Roger. 2014. *How to Be a Conservative*. London: Bloomsbury.

Scruton, Roger. 2021. *Confessions of a Heretic*. London: Notting Hill Editions.

Sowell, Thomas. 1988. *The Quest for Cosmic Justice*. New York: Basic Books.

Taleb, Nicolas Nassim. 2019. *Skin in the Game: Hidden Asymmetries in Daily Life*. New York: Penguin Press.

Zalamea, Fernando. 2012. *Peirce's Logic of Continuity*. Boston: Docent Press.