



Tom Rockmore

“Kant, Pragmatism and Epistemic Constructivism”

In: Krzysztof Piotr Skowroński and Sami Pihlström (Eds.) (2019).
*Pragmatist Kant—Pragmatism, Kant, and Kantianism in the Twenty-first
Century* (pp. 116–131). Nordic Studies in Pragmatism 4. Helsinki: Nordic
Pragmatism Network.


ISSN-L 1799-3954

ISSN 1799-3954

ISBN 978-952-67497-3-0

Copyright © 2019 The Authors and the Nordic Pragmatism Network.

This work is licensed under a Creative Commons
Attribution-NonCommercial 3.0 Unported License.

 For more information, see
<http://creativecommons.org/licenses/by-nc/3.0/>



Nordic Pragmatism Network,
Helsinki 2019

www.nordprag.org

Kant, Pragmatism and Epistemic Constructivism

Tom Rockmore
Peking University

1. Introduction

The philosophical debate progresses through formulating solutions to philosophical problems. This paper calls attention to Kantian and pragmatist contributions to a constructivist approach to cognition. Though they are related as forms of epistemic constructivism, Kant is not in any obvious sense a pragmatist and pragmatism is not a form of Kantianism. I will rather be suggesting that pragmatic constructivism goes further than Kantian constructivism, but that both fall short of what I will be calling a historical approach that remains to be worked out.

The paper begins with considering the relation of epistemic constructivism to forms of realism before turning to Kantianism and then to pragmatism in arguing two points. Though Kant is sometimes seen as a metaphysical realist, I further suggest that he rejects metaphysical realism in favor of epistemic constructivism. I suggest that, if Kant is an a priori thinker, then pragmatist a posteriori constructivism is preferable to Kantian a priori constructivism, but that both fall short of historical constructivism.

2. Constructivism vs. realism

Since this paper turns to comparing and contrasting Kantian and pragmatic views of “constructivism”, it is important to be clear about these terms. Since constructivism reacts to realism, we can begin with realism.

Realism, like ice cream, comes in many flavors, including aesthetic or artistic realism, empirical realism, naïve or direct realism, anti-realism, and so on. Aesthetic or artistic realism is a style favored by some artists. Social realism is sometimes adopted by Marxists on political grounds. The classical German idealists all favor types of empirical realism. Anti-realism is any form of the view that we do not and cannot know the real. G.E. Moore infamously claims, though he does not give any textual reference, that all idealists deny the existence of the external world. “Metaphysical realism” is any form of the claim to cognize reality or again the mind-independent world. Unless otherwise specified, by “realism” I will have in mind two points: there is a mind-independent world, or reality, also called the real, and realists think that, in appropriate circumstances, we can grasp the real.

Realism, though not under that name, goes all the way back in the tradition to Parmenides. According to Bertrand Russell, in virtue of his argument from language to the world, Parmenides is the first philosopher (Russell 1945, 150). It is more plausible that he is the first “modern” philosopher, that is the first one to hold an identifiably modern view about knowledge.

Metaphysical realism remains popular in the current debate in such different fields as physics and interpretation theory. Stephen Weinberg, the quantum physicist, thinks that unless science uncovers the structure of the real world, it is not worth doing (cf. Weinberg 1988). The conviction that “interpretation” yields knowledge beyond the endless interpretive debate is widely held in hermeneutics (Hans-Georg Gadamer, Martin Heidegger, Donald Davidson), aesthetics (Monroe Beardsley), legal interpretation (Antonin Scalia), and so on. In other words, and despite other differences, physicists, theorists of interpretation, and others agree that we can and in fact do know reality.

The view that we know reality goes all the way back in the Western tradition. Parmenides’s claim that thinking and being are the same is often understood as suggesting that reality exists and that in suitable circumstances we in fact grasp it, or, in another formulation, thought grasps reality (cf. Burnyeat 1982, 3–40). Different forms of this canonical view echo through the entire later tradition up to the present. For instance, in rejecting the so-called God’s eye view, in his internal realist phase, Putnam argues that, like the fable of the blind men and the elephant, different observers have different vantage points on the same reality.

Metaphysical realism, which has always been widely popular, is both attacked as advancing a claim impossible to defend and defended as a nec-

essary condition of cognition. Constructivism is a second-best approach that arises from the ruins of metaphysical realism. Those who think we do not and cannot cognize the real contrast realism with epistemic constructivism that I will be calling constructivism, or any form of the view that we know only what we in some sense “construct”.

Constructivism arises in ancient pre-Socratic philosophy. Parmenides’s claim for the unity of thought and being (cf. Laertios 28 B3; Clement of Alexandria 440, 12; Plotinus 5, 1, 8) can be understood in different ways and suggests no less than three crucial approaches to cognition: metaphysical realism, or the view that we know reality; scepticism, or the epistemic view that we do not and cannot know, for instance because we do not know reality; and constructivism, or the view that we do not know reality but know and can know only what we can be said to “construct”. Constructivism comes into the modern tradition through Hobbes, Vico (cf. Child 1953), and independently through Kant. Depending on how “constructivism” is understood, it is widespread throughout the modern debate (cf. Rockmore 2004). Contemporary constructivists include the psychologist Piaget, defenders of the Copenhagen approach to quantum mechanics, educational theorists, psychologists, avant-garde Russian artists, and so on. In what follows, I will be focusing on “constructivism” as a shared epistemic commitment in Kant, pragmatism, and others.

3. On interpreting Kant's critical philosophy

This brief description of the distinction between constructivism and realism provides a standard common to Kant as well as many, but not all, forms of pragmatism. I will discuss Kant before turning to pragmatism and then to remarks on both Kant and pragmatism. Obviously, we ignore Kant at our peril. Kant is clearly singularly important, one of the handful of really great thinkers, on some accounts even the single most important modern thinker. A measure of his importance is that, in different ways all, or nearly all, later innovations in the debate run through Kant. Though Kant is now and has always been enormously influential, it is no secret that there is very little agreement about his position. It seems safe to say that Kant is as difficult to interpret as he is important. In a sense, there are as many versions of the critical philosophy as there are readers of it.

There are many difficulties in reading Kant. Here are some examples. He is not a careful writer. He appears to be inconsistent since he often fails

to discard early texts when his view changes. He has trouble choosing between inconsistent alternatives. I come back to this point below.

Kant, who was aware that his position posed interpretive difficulties, suggested it is easy for those interested in the critical philosophy to grasp the whole, roughly, as Fichte suggests, the spirit of his position. Yet there is not now and never has been agreement about the whole of the critical philosophy. A further difficulty derives from his exaggerated claim that there was no philosophy worthy of the name before him. This suggests that he perhaps inconsistently reacts to such predecessors as Hume, Wolff, Leibniz, Plato, and others. Since he believed that he had forever brought philosophy to a high point and to an end, he absurdly insists nothing can be changed without reason itself falling to the ground. Yet later thinkers thought the debate was still open. Kant's successors were unwilling to accept the suggestion perhaps best known in the Young Hegelian claim about Hegel that, in the critical philosophy, philosophy itself comes to a high point and an end. Beginning with Reinhold, Fichte, and Hegel, his contemporaries and successors insisted that Kant belonged to the ongoing debate and sought to isolate the Kantian wheat from the Kantian chaff as it were.

Many, perhaps all, important thinkers evolve over time. Though Kant suggests his position is independent of the preceding tradition, he responds to key aspects of the philosophical debate. His response to Hume's attack on causality to defend Newtonian science is widely known. Elsewhere I have argued that in denying a reverse causal inference from effect to cause, in rejecting intellectual intuition, and in denying cognition of mind-independent reality, but not empirical reality, Kant responds to Plato. I do not want to repeat that argument here. Suffice it to say that the interest in metaphysical realism as the cognitive gold standard takes the form of representationalism, or the correct representation of reality, in modern thinkers including Descartes, Locke, and others (cf. Dickerson 2004). Kant's view of representationalism evolves from an initial commitment to epistemic representationalism that he later rejects in adopting an inconsistent constructivist approach.

4. Phenomenon, appearance and representation

To explain this point, it is useful to distinguish between three terms Kant uses inconsistently in framing his cognitive theory: "phenomenon", "appearance", and "representation". "Phenomenon" refers to the contents of

mind of whatever kind. "Appearance" designates an unknown and unknowable cause of which it is the effect. "Representation" accurately or again correctly depicts the cause of which it is the effect. All appearances are representations, but only some representations are appearances. The difference between an appearance and a representation is that the former denies and the latter affirms the so-called anti-Platonic backward inference from effect to cause.

Plato affirms intellectual intuition that Kant denies. Kant follows the Platonic rejection of a backward causal inference but denies intellectual intuition. He needs, for this reason, to explain cognition through another mechanism. Kant rejects as absurd the suggestion that there could be an appearance without anything that appears. He rather thinks that an appearance presupposes an unknowable cause, namely reality, also called the thing in itself, or noumenon, of which it is the effect (Kant 1998, B XXVII, 115).

Representationalism and constructivism are alternative epistemic approaches, that is alternative ways to solve (or resolve) the cognitive problem. Kant's early representationalist view of cognition presupposes a legible account of representation as well as a growing realization, visible in his writings, of the inability to understand "representation". If we examine his writings, the simplest, most adequate interpretation is that Kant begins as a representationalist before later slowly but steadily evolving into a constructivist. Kantian constructivism derives from his steady interest in cognition but growing dissatisfaction with a representational approach. In following Kant's own suggestion, there is a widespread but mistaken tendency to divide Kant's evolution into pre-critical and critical periods. According to this view, Kant, who was a pre-critical thinker, at the onset of the critical period became a critical thinker. Yet the situation is in fact more complicated. On inspection, Kant appears still to be committed to representationalism early in the critical period before turning, later in that same period, apparently during the preparation of the second edition of the *Critique of Pure Reason* against representationalism and towards constructivism as an acceptable alternative.¹

Kant's interest in a representational approach to cognition is signaled in the Herz letter (February 1782) early in the critical period. In his letter, Kant points to his identification with representationalism in writing:

¹ Since this is not a study of Kant, I leave open the question of whether the *Prolegomena*, which was written in the interval between the two editions of the *Critique of Pure Reason*, belongs to Kant's representationalist or on the contrary to his constructivist phase.

“I asked myself, namely, on what grounds rests the reference of what in us is called representation (*Vorstellung*) to the object (*Gegenstand*)?” (Kant 1999, 133). In a fuller treatment, it would be necessary to analyse this important document in detail. Suffice it to say here that the Herz letter shows Kant’s concern to justify representation as an effect caused by the cognitive object, or reality. Many observers, for instance Heidegger, think that, since this letter was written early in Kant’s critical period, it is reasonable to take the letter as pointing to the concern Kant was occupied with in the *Critique of Pure Reason* (cf. Heidegger 1997). If this is correct, then, at least for anti-constructivist readers of Kant, it provides a reason for preferring the first edition of Kant’s treatise to the second edition, when he has already clearly left representationalism behind in turning toward constructivism.

The mature Kant’s interest in a representational approach to cognition as late as the critical period suggests that he is committed to some form of epistemic representationalism. Since this is a widely favored modern cognitive approach, at this point Kant seems not to be breaking with representationalism as he is concerned with carrying it to a new and higher level. Yet this is at most only part of the story. On inspection, Kant’s references to representation in his writings tell a different tale. They depict a growing realization of the insuperable difficulty of and disillusionment with representationalism as an epistemic strategy that is replaced as early as the second edition of the *Critique of Pure Reason* through a turn to constructivism.

Descartes, who is a representationalist, claims to overcome any legitimate doubt in infallibly inferring from the mind to the world. Before the onset of the critical period, Kant, perhaps under the influence of Descartes, apparently takes the representationalist approach as a given. In a pre-critical text, *The Only Possible Argument in Support of A Demonstration of the Existence of God* (1763), he suggests that “the word ‘representation’ is understood with sufficient precision and employed with confidence, even though its meaning can never be analyzed by means of definition” (Kant 1992, 116). In the first edition of the *Critique of Pure Reason* when he is still committed to representationalism, he later writes, in seeming to equate appearances and representations that “all appearances, are not things, but rather nothing but representations, and they cannot exist at all outside our mind” (Kant 1998, A 492, 511). Yet his view of representationalism quickly changes. In the “Dohna Wundlacken Logic” (1797) in the critical period, Kant explicitly denies that representation can even be defined (Kant 1997).

And finally in the *"Jäsche Logic"* (1800), another text from slightly later in the critical period, he unequivocally claims that representation "cannot be explained" at all (Kant 1992, 440).

We can summarize this part of the discussion in putting Kant's turn from representationalism to constructivism in the historical context. I have been suggesting that we can usefully understand Kant's approach to cognition against a historical background stretching back to ancient philosophy. In Parmenides's wake, metaphysical realism nearly immediately becomes the cognitive standard. Plato follows Parmenides's suggestion that to know requires the capacity to grasp or again to cognize reality, in short the world. For Plato this entails that, as Kant also thinks, since we cannot rely on a backwards inference from effect to cause, appearances do not represent. Kant, who, unlike Plato, denies intellectual intuition, initially follows the modern concern with representationalism. Yet he later realizes that this approach fails to solve the post-Platonic version of the cognitive problem. The difficulty lies, as Plato already shows, in the insuperable difficulty of representing reality, or in Kantian language, in showing that the thing in itself can be represented. In other words, since Kant agrees with Plato's rejection of the backward causal inference, he rejects representationalism. More generally, Kant agrees with Plato but disagrees with modern thinkers since he concludes that it is not possible but rather impossible to cognize metaphysical reality. This is the meaning of Kant's suggestion that the thing in itself can be thought but can neither appear nor be known. In other words, since an appearance is the appearance of something, reality appears, that is appears in the form of sensation, but, since there is no intellectual intuition, it can neither be represented nor known (cf. Kant 1998, B 565–6, 535).

5. Kantian constructivism

If Kant had done no more than restate a form of the anti-Platonic approach, the critical philosophy would at most be the high point in a long series of modern forms of representationalism that finally fail to solve the cognitive problem. Yet Kant not only restates the traditional approach, but also independently proposes a basically new constructivist strategy for cognition.

I turn now to Kantian constructivism, his alternative solution to the cognitive problem after he seeks but later gives up his initial effort to formulate a representational solution. "Kantian constructivism" refers to

the so-called Copernican revolution in philosophy, a term that Kant never uses to describe his position, but that he briefly describes in the B introduction to the first *Critique*.

The Copernican Revolution is often mentioned but only rarely discussed in any detail. Hans Blumenberg, the author of an extremely detailed study of this theme, concludes after nearly 600 pages of analysis that Kant probably never read Copernicus (cf. Blumenberg 1987). Yet, even if true, this would not be decisive. We recall that Kant also did not have detailed knowledge of Hume, who is obviously central to Kant's project. It is also unclear if Kant ever read Plato.

Kant's constructivism only emerges after the failure of his initial solution. It is a second-best solution that is frequently mentioned but not well understood. Here are three reasons why, despite the massive Kantian debate, Kantian constructivism is still largely unknown. To begin with, he presents his new-found constructivism very rapidly without either the detail or the care it deserves. Second, his constructivism lies in an uncertain relationship to his representational approach that in the context and even now is extremely novel, an approach that is more often referred to than discussed, and which is rendered more difficult to grasp because of the obvious difficulty in interpreting his obscure reference to the Copernican revolution. And finally, Kant's effort to formulate a representational approach to cognition is sometimes taken as his main, indeed his only, cognitive approach.

Though Kantian Copernicanism is frequently mentioned, few writers devote more than minimal attention to Kantian constructivism. There are at least four reasons to support a specifically Copernican reading of the critical philosophy. To begin with, Kant, as noted, was a convinced Newtonian, committed to defending modern science against Hume's attack on causality. Second, Kant possessed a strong grasp of and contributed to contemporary physics. Like Voltaire, he was committed to Newtonianism. But, unlike Voltaire, Kant was obviously familiar with Newton's *Principia*. In the preface, which was added to the second edition of the *Principia* in 1713, Roger Cotes suggests, according to Blumenberg for the first time (see Blumenberg 1987) that Newton proved from appearances that gravity belongs to all bodies (cf. Newton 1775–1785, II, XIV). This point, that some see as a basic pillar of modern science, has recently been challenged (cf. Chomsky 2017). Further, Kant's contemporaries, earlier Reinhold (see Reinhold 1786–1787) then later Schelling (Schelling, 1958, 599), and, surprisingly, Marx (cf. Marx 2010, "The Leading Article" in No. 179 of the

Kölnische Zeitung, 201) drew attention to the link between the critical philosophy and the Copernican astronomical revolution. Finally, this relation can be verified from Kant's preface to the first *Critique*. In simplest terms, one can say that Kant generalizes Cotes's suggestion to relate Newton to Copernicus through a physical explanation of astronomical phenomena.

Kantian constructivism is described in a brief but important and well-known passage. This passage both points to Kant's Copernican turn as well as calls attention to constructivism as an alternative to representationalism. It is not too much to say that this alternative was earlier anticipated in Parmenides's suggestion of the identity of thought and being, but it only emerges as an alternative approach to cognition after more than two millennia of effort that, as Kant points out, record no progress, none at all, towards grasping an independent object, not towards grasping reality.

Kant here takes stock of the present state of the cognitive debate. Though Kant is "officially" an a priori thinker, it is not often pointed out that he very sensibly draws the lesson of many centuries of effort devoted to grasping reality. He proposes to abandon the traditional effort to grasp a mind-independent object in favor of a novel approach to cognition independent of any claim to grasp or otherwise know a mind-dependent object.

If modern constructivism is the acceptable alternative to ancient representationalism, then the emergence of constructivism marks a decisive turning in the cognitive debate. In his reference to constructivism that is as brief as it is important, Kant makes two points that when taken together constitute his so-called Copernican revolution. On the one hand, according to Kant, there has never been progress toward cognizing a mind-independent object. This point suggests the failure to represent or more generally to cognize reality as well as the dependence of Kant's supposedly a priori approach on the a posteriori, or on experience. On the other hand, since, according to Kant, efforts to cognize reality by any means, including representationalism, have failed, he suggests as an experiment, hence speculatively, that we invert the relation of subject to object. In other words, rather than, like so many thinkers, vainly continuing to seek to formulate a theory in which the subject depends on an independent object that we do not and cannot cognize, Kant proposes as an alternative to invert the subject-object relation in making the object dependent on the subject.

6. What is pragmatism?

It is a considerable understatement to say that Kant is very complicated. I do not claim that this is more than a plausible but simplified account of his approach to cognition. After this simple sketch of the critical philosophy, I turn now more briefly to pragmatism. It is unclear what the term means since it is unclear what criteria must be met to be a pragmatist. “Pragmatism” is used very widely but, like many widely utilized philosophical words, apparently has no fixed meaning. “Pragmatism” is currently used to refer to an exceptionally wide collection of thinkers including those pragmatists who descend from the classical American pragmatists as well as self-styled analytic or neo-analytic pragmatists.

In part because the pragmatist debate is still very much underway, differences between the views of the main representatives are important, in fact so much so as to threaten the idea that they all belong to a single philosophical tendency. I have discussed Kant against the background of the basic distinction between realism and constructivism. Different forms of pragmatism relate differently to different forms of constructivism and realism. Though there are exceptions, analytic pragmatism is broadly speaking metaphysically realist but non-constructivist, and classical pragmatism is constructivist but empirically realist.

We can focus this point in examining what I am calling classical and analytic pragmatism separately. It has long been known that the early American pragmatists, whom I am calling the classical pragmatists, hold disparate views. As is often the case with respect to a live philosophical tendency, the main participants often disagree. James, who was fiercely opposed to Hegel, differs in this respect from Peirce and Dewey. As he grew older, Peirce came to think that his differences with Hegel were mainly terminological. Dewey was throughout his career closer to Hegel than to Kant (cf. Dewey 2010). We recall that more than a century ago A. O. Lovejoy noted the existence of more than a dozen types of pragmatism (cf. Lovejoy 1908, 5–12).

The classical pragmatists, including Peirce and Dewey, and perhaps James, share an interest in constructivism as the appropriate cognitive approach. This is not the case for analytic pragmatists, who appear often to turn to pragmatism in pursuing agendas unrelated or at least not clearly related to such standard classical pragmatic concerns as constructivism. Classical pragmatists, who notoriously disagree among themselves, are comparatively unified compared to analytic pragmatists. So-called an-

alytic pragmatists, who for whatever reason are often concerned with repackaging analytic wine in pragmatist bottles, include among the pragmatists Kant, the so-called first pragmatist (cf. Macbeth 2012), Nietzsche, the later Ludwig Wittgenstein, W. V. O. Quine, Wilfrid Sellars, Richard Rorty, an epistemic skeptic, Hillary Putnam, Robert Brandom, who earlier described himself as a Hegelian and currently claims to be a pragmatist in linking pragmatism to Fregean semantics,² Huw Price, but not John McDowell, and so on. If everyone, or nearly everyone, is a pragmatist and no-one is not a pragmatist, the term becomes more or less meaningless.

7. Pragmatic constructivism

Pragmatism, like other important philosophical tendencies, assumes many forms. Our concern here is not with one or another type of pragmatism but rather with the relation between Kant and pragmatism. The strongly representationalist thrust in the modern debate is resisted by Kant, by classical pragmatists of all stripes, and by at least some analytic pragmatists.

For present purposes, I will understand pragmatism in all its many varieties as belonging to the post-Kantian effort to make out cognitive claims in denying representationalism while espousing various forms of constructivism. Representationalism, which is often attacked by pragmatists and non-pragmatists alike, is, on the contrary, apparently assumed as the cognitive standard by analytic pragmatists at both ends of the spectrum. This includes those, such as Rorty, who are committed to epistemic scepticism because we cannot know, or more precisely correctly represent, mind-independent reality, and those like Brandom, who favor inferentialist semantics on the other. But these are extreme instances, which are arguably not representative of analytic pragmatism and even less representative of classical pragmatism. More moderate pragmatists, on the contrary, such as Putnam, resist the siren calls of both scepticism and semantics in participating in the Kantian turn away from representationalism in turning toward constructivism.

² "One of the fundamental methodological commitments governing the account presented here is pragmatism about the relations between semantics and pragmatics. Pragmatism in this sense is the view that what attributions of semantic contentfulness are for is explaining the normative significance of intentional states such as beliefs and of speech acts such as assertions. Thus the criteria of adequacy to which semantic theory's concept of content must answer are to be set by the pragmatic theory, which deals with contentful intentional states and the sentences used to express them in speech acts" (Brandom 1994, 143).

Classical pragmatism, and by implication pragmatism of all kinds, is frequently described as a philosophical movement that includes those who accept some version of the Jamesian view that an ideology or proposition is correct if it works satisfactorily, where “to work” refers to the idea that our view of cognition is not refuted by the facts so to speak. The implicit suggestion that we can rely on independent facts is inconsistent with constructivism of any kind. In different ways, Peirce and Dewey are constructivists. Two participants in a recent volume about Dewey make nearly identical claims that apply to classical pragmatism in general. Kersten Reich suggests that constructivists “see humans as observers, participants, and agents, who actively generate and transform the patterns through which they construct the realities that fit them” (Reich 2009, 40). Kenneth Stickers similarly thinks that “our constructions of reality are not arbitrary but result from inquiry” (Stickers 2009, 83).

Peirce offers an interesting example of pragmatist constructivism in his view of truth, not as grasping reality, but rather as what we come to believe in the long run, including through the process of scientific discovery. Peirce, very much like Hegel, whom he may have in mind, suggests that we do not and cannot cognize metaphysical reality but rather only what is given over time in experience. His view of the so-called long run is linked to his view of “abduction”, a term he apparently coined to refer to the logic of scientific inquiry that proceeds through non-deductive inference in the context of discovery. There is an obvious difference between, say, the context of justification and the formulation of scientific theories. Abduction belongs to the context of discovery in which we generate theories that are only later assessed. In two passages that could have come from Hegel, Peirce says that “[a]bduction is the process of forming explanatory hypotheses. It is the only logical operation which introduces any new idea” (Peirce 1934, 5–5.172) and that abduction encompasses “all the operations by which theories and conceptions are engendered” (Peirce 1934, 5.590). Dewey’s insistence in his *Logic* on the pragmatic relation of theories to resolve specific problems,³ the view of ideas as instruments or tools that guide our actions and can anticipate future results in terms of which they can be tested and evaluated, can be regarded as a qualified restatement of the Peircean view.

³ John Dewey: “But in the proper interpretation of ‘pragmatic’, namely the function of consequences as necessary tests of the validity of propositions, provided these consequences are operationally instituted and are such as to resolve the specific problem evoking the operations, the text that follows is thoroughly pragmatic” (Dewey 1938, IV).

8. Conclusion: Pragmatic constructivism today

This paper has argued that Kant and pragmatism differ in many ways, but overlap in their shared conviction that, since representationalism fails, the road to cognition runs through constructivism. We can end with a remark about the utility of an approach to cognition through constructivism. There are at least three different kinds of constructivism that I will be calling logical or quasi-logical, social, and finally historical.

Logical or quasi-logical constructivism is perhaps most prominently featured by Kant. Kantian constructivism, which formulates an a priori account of the conditions of cognition in general, has been called into question in different ways, of which I will mention only two instances. Both instances concern the a priori status of the Kantian theory. On the one hand, as noted, Kant turns to constructivism in drawing the lesson of the failure of efforts to grasp a mind-independent object. In this way he introduces what can be regarded as an a posteriori element into what is in principle an a priori theory. On the other hand, Kant relies on his a priori conception of mathematics. In the meantime, mathematics has arguably lost its claim to certainty. This claim, which once seemed, like Ozymandias, likely to stand forever, was traditional when Kant was active. Yet it was refuted in the nineteenth century as not a priori but rather a posteriori through the discovery of non-Euclidean geometry (cf. Kline 1965). The emergence of other geometries has two consequences. It means Kant is wrong about the a priori status of mathematics, which, if the distinction between the a priori and the a posteriori exhaust the conceptual universe, is a posteriori. It further means that Kant is also wrong about his supposedly transcendental claim that we can discover a priori what is necessarily true a posteriori. In Kantian language we can say that cognition of any kind not only necessarily begins in but is also limited by experience.

In the meantime, Kant's effort to construct an a priori conception of the world (cf. Friedman 2013) and ourselves has given way to various post-Kantian forms of social constructivism. "Social constructivism", a term coined by Peter Berger and Thomas Luckmann, refers to the social situatedness, or form of contextualism, in which humans develop and knowledge is constructed (cf. Berger and Luckmann 1966). The rise of social constructivism, or a social conception of constructivism, suggests that, in virtue of the shift from the a priori to the a posteriori, notably through the anthropological development of the post-Kantian subject, Kantian constructivism has in the meantime been replaced by pragmatic constructivism.

Social constructivism marks a further development, but not the final step in the evolution of constructivism. Historical constructivism differs from both its constructivist relatives through its attention to the link between cognition and history, or cognition and the historical moment. If, as I believe, Hegel is right that we think out of and are restricted by the limits of the historical moment, then it follows that a further step in the cognitive process calls for a robust form of historical constructivism.

I have emphasized the relation of Kant and pragmatism to a historical form of constructivism. It might be objected that we should rather turn toward the future of philosophy in turning away from, in simply ignoring, the past. Yet it seems obvious that we need to understand the past to know what remains to be done.

In conclusion, I would like to suggest that the future of constructivism lies neither in a logical or quasi-logical approach to cognition, nor again in a social approach. It rather lies, after Kant, in further developing pragmatism, and in rethinking constructivism on a robust historical basis.

References

- Berger, Peter L. & Thomas Luckmann (1966). *The Social Construction of Reality*. New York: Random House.
- Blumenberg, Hans (1987). *The Genesis of the Copernican Revolution*, translated by Robert M. Wallace. Cambridge: MIT Press.
- Brandom, Robert (1994). *Making It Explicit*. Cambridge: Harvard University Press.
- Burnyeat, Myles (January 1982). "Idealism and Greek Philosophy: What Descartes Saw and Berkeley Missed". *Philosophical Review* 91:1, 3–40.
- Child, Arthur (1953). *Making and Knowing in Hobbes, Vico, and Dewey*. Los Angeles: University of California Press.
- Chomsky, Noam (2017). *The Dewey Lectures 2013: What Kind of Creatures Are We?*. New York: Columbia University Press.
- Clement of Alexandria (1919). *Stromateis*. G.W. Butterworth (transl.). Loeb Classical Library.
- Dewey, John (1938). *Logic: The Science of Inquiry, Logic: The Theory of Inquiry*. New York: Holt, Rinehart, and Winston.
- Dewey, John (2010). *Philosophy of Spirit, with the 1897 Lecture*, edited by John R. Shook & James A. Good. New York: Fordham University Press.
- Dickerson, A. B. (2004). *Kant on Representation and Objectivity*. New York: Cambridge University Press.
- Diogenes Laertios (1925). *Lives of Eminent Philosophers*. R. D. Hicks (transl.). Loeb Classical Library.

- Friedman, Michael (2013). *Kant's Construction of Nature: A Reading of the Metaphysical Foundations of Natural Science*. New York: Cambridge University Press.
- Heidegger, Martin (1997). *Kant and the Problem of Metaphysics*, trans. Richard Taft. Bloomington: Indiana University Press.
- Kant, Immanuel (1992). "Jäsche Logic", in: I. Kant, *Lectures on Logic*, trans. J. Michael Young, (pp. 521–641). New York: Cambridge University Press.
- Kant, Immanuel (1992 [1763]). "The Only Possible Argument in Support of a Demonstration of the Existence of God", in: I. Kant, *Theoretical Philosophy 1755–1770* (pp. 107–202). New York: Cambridge University Press.
- Kant, Immanuel (1997 [1792]). "Dohna-Wundlacken Logic", in: I. Kant, *Lectures on Metaphysics*, K. Ameriks (trans.), (pp. 431–520). New York: Cambridge University Press.
- Kant, Immanuel (1998). *Critique of Pure Reason*, trans. by Paul Guyer and Allen Wood, New York: Cambridge University Press.
- Kant, Immanuel (1999). *Correspondence*, ed. and transl. Arnulf Zweig. New York: Cambridge University Press.
- Kline, Morris (1965). *Mathematics: The End of Certainty*. New York: Oxford University Press.
- Lovejoy, A. O. (1908). "The Thirteen Pragmatisms". *Journal of Psychology and Scientific Methods* (January), 5:2, 5–12.
- Macbeth, Danielle (2012). "Varieties of Analytic Pragmatism". *Philosophia* 40:1, 27–39.
- Marx, Karl (2010). *Marx—Engels, Collected Works*, vol. 1. London: Lawrence and Wishart.
- Newton, Isaac (1779–1785). *Opera omnia*, edited by S. Horsley. London: Excudebat J. Nichols.
- Peirce, C. S. (1934). *Collected Papers of Charles Sanders Peirce*, vol. 5. Cambridge: Harvard University Press.
- Plotinus (1917–1930). *The Six Enneads*. Stephen MacKenna and B. S. Page (transl.). London: Warner.
- Reich, Kersten (2009). "Constructivism: Diversity of Approaches and Connections with Pragmatism", in: Larry Hickman, Stefan Neubert, and Kerstein Reich (eds.), *John Dewey: Between Pragmatism and Constructivism* (pp. 39–64). New York: Fordham.
- Reinhold, K. L. (1786–1787). "Briefe über die Kantische Philosophie". *Teutscher Zeitschrift*.
- Rockmore, Tom (2004). *On Foundationalism: A Strategy for Metaphysical Realism*. Lanham: Rowman and Littlefield.
- Russell, Bertrand (1945). *A History of Philosophy*. New York: Simon and Schuster.
- Schelling, F. W. J. (1958). *Schellings Werke*, vol. III. Munich: Beck.
- Stickers, Kenneth (2009). "Dialogue Between Pragmatism and Constructivism", in: Larry Hickman, Stefan Neubert, and Kerstein Reich (eds.), *John Dewey*:

Between Pragmatism and Constructivism (pp.67–84). New York: Fordham University.

Weinberg, Steven (1998). “The Revolution That Didn’t Happen”. *New York Review of Books* (October 8), 48–52.