ИССЛЕДОВАТЕЛЬСКИЕ ПРОГРАММЫ ЭПИСТЕМОЛОГИИ

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Some consequences of Kant's Copernican turn

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Kant turns from an early representational view of cognition to a later anti-representational, epistemic constructivist view, often simply referred to as the Copernican revolution or the Copernican turn. Kant's Copernican turn belongs to the modern, non-standard interest in epistemic constructivism. At least since Parmenides the standard approach to cognition requires knowledge of the real, reality or the world. In modern philosophy this approach is countered by the emergence of epistemic constructivism as a non-standard solution for the cognitive problem in Francis Bacon, Hobbes, Vico, and others, and independently in Kant. This paper briefly describes consequences of Kant's Copernican turn concerning at least five themes: (i) cognition, (ii) German idealism, (iii) the subject, (iv) the historical character of knowledge and (v) the success or failure of the philosophical tradition.

Keywords: I. Kant, Copernican revolution, Copernican turn, Parmenides, epistemic constructivism

> [M]y principles are the only means of avoiding the transcendental illusion by which metaphysics has always been deceived and thereby tempted into the childish endeavor of chasing after soap bubbles, because appearances, which after all are mere representations, were taken for things in themselves … [Kant, 2004, p. 44].

Kant turns from an early representational view of cognition to a later anti-representational, epistemic constructivist view, often simply referred to as the Copernican revolution or again the Copernican turn. Kant's Copernican turn belongs to the modern non-standard interest in epistemic constructivism. At least since Parmenides the standard approach to cognition requires knowledge of the real, reality or the world. In modern philosophy, this approach is countered by the emergence of epistemic constructivism as a non-standard solution for the cognitive

problem in Francis Bacon, Hobbes, Vico, and others, and independently in Kant. This paper briefly describes some consequences of Kant's Copernican revolution in respect to the standard approach to cognition.

Representation, construction and cognition

There are standard and non-standard philosophical approaches to cognition. Roughly speaking the standard approach is based on the non- or anti-constructivist claim to know the real, reality or the world, and the non-standard philosophical approach rejects the claim to know the real in favor of the view that we know only what we construct.

"Constructivism" is used in many ways. Russian constructivism, for instance, is an austere movement in abstract art founded in Russia by Vladimir Tatlin and Alexander Rodchenko around 1915 [see Nash, 1978]. There are different forms of epistemic constructivism. According to Ernst von Glasersfeld, a central name in this field, "[radical] constructivism is the view that [k]nowledge is not passively received by the thinking subject but is actively constructed" [von Glasersfeld, 2009, p. 264].

The standard approach to knowledge, or the view that knowledge depends on grasping the real, arose in ancient Greece and runs throughout the entire later tradition. This approach has dominated the debate from pre-Socratic times until the present and has never been more popular than at present. The standard approach was supplemented in modern times by epistemic constructivism. Epistemic constructivism originated in ancient mathematics and later came into modern philosophy. Mathematical constructivism began in the ancient Greek construction of geometrical figures with a straight edge and compass.

According to the standard approach, cognition requires a grasp of the real, reality, or the world. The non-standard constructivist approach arose in modern philosophy in the turn to epistemic constructivism introduced through Francis Bacon, Thomas Hobbes, Giambattista Vico and others, and independently through Kant and some of his successors. Since the emergence of constructivism, the debate has opposed partisans of what I am calling the standard, non-constructivist and the non-standard, constructivist approaches to cognition.

In different periods, Kant defends the standard, non-constructivist, and the non-standard, constructivist approach. Kant's critical philosophy develops from a standard, representational approach, or the claim that knowledge requires the correct representation of the real, to a non-standard constructivist approach that in his critical period presents a variation on the non-standard or epistemic constructivist view. From his later constructivist perspective, we do not and cannot know the real – in his terminology the thing in itself, or noumenon – since we know only what we "construct".

At different times Kant defends both the standard, anti-constructivist approach and the non-standard constructivist approach. In his early writings Kant favors a version of the representationalist approach widespread in early modern philosophy. Descartes, for instance, thinks that under appropriate conditions we can infer from ideas in the mind to the world. In a letter to Guillaume Gibieuf dated 19 January

1642, he writes: "I am certain that I can have no knowledge of what is outside me except by means of the ideas I have within me" [Descartes, 2012, p. 201].

Representationalism is a modified form of the standard philosophical approach that knowledge depends on correctly representing the world. Descartes and many other modern thinkers believe ideas represent, and in the proper circumstances we can correctly infer from them to the world. Kant, who was a representationalist before later abandoning representationalism for constructivism, does not define "representation" in his pre-critical period. In turning from a standard to a non-standard approach to knowledge, in his critical period he later concedes that he cannot define the term in question. In the Dohna-Wundlacken Logic, presumably based on lectures given in the 1790s, hence in the critical period, he states representation "cannot be explained at all" [Kant, 1992, p. 440]. In short, in his version of the non-standard, constructivist approach, Kant concedes that we can neither represent nor know a mind-independent object.

Kant's Copernican turn as a non-standard approach to knowledge

Constructivism arises in the modern tradition beginning in the early seventeenth century. Kant, who was active in the second half of the eighteenth century, does not seem to be aware of the modern rise of constructivist epistemology roughly a century and a half earlier. Though he mentions such modern predecessors as Francis Bacon, Hobbes and Vico, he does not link them to constructivism, and he does not mention Vico at all.

In his later, constructivist period Kant specifies two general characteristics for cognition: revolution and the secure path of a science. At present "revolution" is defined in different political and astronomical ways. The dictionary mentions the forcible overthrow of a government or social order in favor of a new system, or "an instance of revolving, for instance one revolution a second", as well as "a dramatic and wide-reaching change in conditions, attitudes, or operation", for instance the Copernican revolution in astronomy. Yet when Kant was active, "revolution" was understood in an astronomical and not in a political sense.

In our time it is disputed whether basic changes in knowledge result, as Kuhn thinks, from paradigm changes [Kuhn, 1962] or, as Shapin believes, through a series of small changes that, taken together, amount to a big change [Shapin, 1966]. Kant clearly holds a version of the former view. According to Kant basic changes in knowledge are not the result of a cumulative process of small modifications of pre-existing theories, but rather arise through a revolution, for instance the Copernican heliocentric revolution in astronomy.

Kant's conception of a revolutionary cognitive change is linked to his view of what he calls the secure path of a science. There are different types of knowledge, including logic, pure mathematics, pure natural science and the future science of metaphysics. These types of knowledge differ among themselves but share the fact that each is on what Kant calls "the secure path of a science" [Kant, 1998, p. 109]. Presumably this path leads to knowledge that cannot be reached except through following it.

Kant is not a historical but rather an a-historical or even anti-historical thinker. At present we live in a historical period that in physics is dominated by general relativity and quantum mechanics, though, through new discoveries, this may later change. Kant has a different view. He does not believe that the problem of knowledge can be dealt with for a particular period only, such as our time or historical moment. His references to the path of knowledge as "secure" suggests the problem of a particular type of knowledge is not limited in time, not historical and will not later be abandoned for another path. He is proposing through a conceptual revolution to solve (or resolve) the problem of knowledge not, say, for our time, or for a historical period, but rather permanently.

Kant describes his reasons for abandoning representationalism as well as his reasons for turning to constructivism in enigmatic, often cited, rarely-analyzed but influential remarks about the Copernican turn. According to Kant, the rise of modern natural science teaches that "reason has insight only into what it itself produces according to its own design" [Kant, 1998, p. 109]. In a famous passage, he suggests a similar approach in metaphysics: "Up to now it has been assumed that all our cognition must conform to the objects; but all attempts to find out something about them a priori through concepts that would extend our cognition have, on this supposition, come to nothing. Hence let us once try whether we do not get farther with the problems of metaphysics by assuming that the objects must conform to our cognition, which would agree better with the requested possibility of an a priori cognition of them, which is to establish something about objects before they are given to us. This would be just like the first thoughts of Copernicus, who, when he did not make good progress in the explanation of the celestial motions if he assumed that the entire celestial host revolves around the observer, tried to see if he might not have greater success if he made the observer to revolve and left the stars at rest" [Kant, 1998, p. 110].

Kant, who has already referred the secure path of a science, makes three further points in this passage. To begin with, there is his view of knowledge. Kant, who prefers a priori cognition to all other possibilities, takes pure mathematics, which he thinks is a priori, as his cognitive model. Kant combines his preference for a priori knowledge with a rejection of the standard view of knowledge. According to Kant, cognition is not possible if it must conform to objects, since we cannot find out anything about them a priori. We can take this to mean that we cannot cognize a mind-independent object, or the real. But cognition is possible if the object must conform to the subject. Though we cannot cognize independent objects, we can know objects constructed by, hence dependent on, the subject. In other words, cognition that is not possible on the standard model, since we cannot know the real, is possible on the non-standard constructivist model if the object is constructed by, hence depends on, the subject.

Second, Kant here silently relies on the view that we can know a priori what must necessarily be true a posteriori, for instance that the interior angles of a right angle triangle are equivalent to a straight line. This point combines the idea of what is useful from a speculative perspective with Kant's normative preference, following Descartes, for apodictic cognition. Finally, Kant draws attention to

the similarity between his view that the cognitive object depends on the subject and Copernican astronomy in cashing out his suggestion that basic changes in knowledge are revolutionary.

Kant clearly thinks Copernican heliocentric astronomy is revolutionary in a cognitive sense. Copernican astronomy marks a cognitive step forward that will not and cannot later be refuted or otherwise reversed. It will, hence, not only solve the problem of knowledge, but further, like the statue of Ozymandias, stand forever. According to Kant, his constructive approach resembles the Copernican view in that what we know is not independent of, but rather centrally depends on, the subject.

Kantian constructivism, Plato and the standard view

Kant's critical philosophy marks a turning point in the epistemic debate. To understand the consequences of the Copernican turn it will be useful to put the Kantian view of cognition in historical context.

Ancient philosophers routinely take earlier views into account. This practice later became suspect. The well-known joke about the difference between the history of philosophy and philosophy points to the view, widely entrenched since Descartes, that it is a mistake to understand philosophy in terms of its history. Many observers now think that we do better to turn away from preceding views to start over. Yet it seems difficult to measure the accomplishment of prior theories other than with respect to the problems they were intended to solve.

The standard approach arises in the pre-Socratic discussion, above all in the influential Parmenidean view that thought and being are the same. In a passage that echoes through the entire later tradition up the present, Parmenides describes the criterion of knowledge as the identity of thought and being: "to gar auto noein estin te kai einai" [Parmenides]. This claim can be interpreted in three main ways: as the traditional view that cognition is only possible in grasping the mind-independent real, or reality; or as the view that, since we do not and cannot know the real, the effort at cognition routinely understood as knowing the real ends in skepticism; or finally as the specifically modern, constructivist claim that, though we cannot grasp the world, we avoid skepticism since we know what we in some sense "construct".

All three views are worth discussing in more detail than there is space available here. Suffice it to say that, at least since Parmenides, the main cognitive view has always been that knowledge is only possible if we know the real [Burnyeat, 2012]. This notion has been popular over a very long time and remains popular even today. There seem to be two and only two main forms of the effort to know the real either directly or indirectly. One is the very influential Parmenidean view that to know requires that we know that has never been more popular than at present. A very different, indirect claim for knowledge of the real arises in the modern debate.

In the ancient tradition, Parmenides strongly influences Plato. The latter is the initial thinker of the first rank to argue there is knowledge since we know the real. Plato's claim for direct knowledge of the real includes a criticism of causal explanation that he replaces through the notorious theory of forms (or ideas). Plato seems to think that a view of knowledge requires a theory of forms that he discusses

in a number of dialogues, including the "Phaedo" and the "Republic", and that he criticizes in the "Parmenides", but that he is apparently never able to formulate satisfactorily. In the "Phaedo", he puts forward this theory as more plausible than the implausible causal view of modern science. In the "Republic", where he describes the theory of forms as a hypothesis based on current practice, Socrates says "we customarily hypothesize a single form in connection with each of the many things in which we apply the same name" [Plato, 1992, 596A, p. 265]. In the "Parmenides", he suggests the theory is in fact two theories and neither of them is satisfactory.

Plato's turn from modern science to the theory of forms presupposes his rejection on unclear grounds of a causal approach to cognition. His argument is based on a criticism of causal explanation that in turn depends on a backwards anti-Platonic inference from the effect to the cause. This is a familiar strategy in the modern tradition. Descartes, for instance, argues from an idea in the mind to the world. Yet, though the text is unclear, it is at least clear that for whatever reason, Plato, who thinks a backwards causal inference is invalid, rejects a causal approach to knowledge in instead invoking the theory of forms. He argues speculatively that, if there is knowledge of causes, it is because, first, there is an ontological distinction between appearance and reality, and, second, on grounds of nature and nurture some talented individuals can directly see, or grasp, the real, that is, the mind-independent form or idea that is the central presupposition of his approach to knowledge.

The way of ideas and the standard view

In different ways, Plato, Descartes, Locke and others depend on ideas to formulate a satisfactory approach to cognition. Plato substitutes forms (or ideas) for causality. Modern times often features a representational approach to cognition based on ideas. We can distinguish between the very old way of ideas associated with Platonic idealism, the old way of ideas espoused by Descartes, and Locke's new way of ideas. Locke, an empiricist, invokes the so-called new way of ideas to criticize the rationalist Descartes, who supposedly defends the old way of ideas. I will use the slightly different term "the way of ideas" to refer more broadly to rationalism as well as empiricism as distinguished from the very old way of ideas or Platonic theory of forms.

The Platonic theory of forms supposedly provides intuitive, hence direct, or immediate knowledge. Unlike the Platonic view, the modern analysis of knowledge is often indirect. The Platonic approach requires a two-place relation, including a subject that knows and forms, or objects, in short: the real that one knows. This changes in modern times that often features a non-intuitive, indirect relation to the cognitive object. According to the way of ideas, cognition requires a three-place relation: the subject that knows, the object one knows, and the representation, or cognitive intermediary between the knower who knows and the object one knows.

A rationalist seeks to know in inferring from the mind to the world. But an empiricist seeks to know in inferring from the world to the mind. Descartes, who is a rationalist, suggests we can correctly infer that some ideas are images of things in making a number of assumptions, including: first, some selected ideas in

the mind are at least a potentially reliable source of knowledge about the world; second, ideas in the mind are an effect of which the world is the cause; and, third, we can infer from the effect, or idea, to the cause, or the world, hence know the real.

The rationalist Descartes thinks knowledge depends on innate ideas that are not derived from experience. Some selected ideas match up with the world, hence justify the inference from the contents of the mind to the world. Lockean empiricism is partly based on rejecting Cartesian rationalism. The empiricist Locke thinks there are no innate ideas and that all ideas in the mind come from experience. He distinguishes between simple ideas that supposedly cannot be false, and complex ideas that are composed of simple ideas and can be false. We cannot create simple ideas that we put together either correctly or incorrectly to make complex ideas that, since they can be false, may or may not match up with the world.

Cartesian rationalism, Lockean empiricism, and all other versions of the way of ideas suffer from the same basic defect. Theories based on ideas rely on a presupposed but indemonstrable cognitive relation between the idea, or representation of the object, and the object to which they refer and supposedly represent. Yet, since we cannot compare an idea of reality to reality, we cannot demonstrate and simply do not know that the inference from the idea to the thing of which it is the idea is correct.

Let us sum up the argument to this point. We have so far discussed the ancient Platonic approach based on the theory of forms or ideas, and the modern alternative based on the way of ideas. Platonism rejects a backward causal analysis, hence a causal explanation of knowledge, in favor of a direct grasp of the real. Platonism is unacceptable since it relies on a speculative claim for knowledge without explaining how this is possible. The modern return to a causal analysis is also unacceptable. For as Plato apparently saw long ago in rejecting contemporary scientific causality in favor of the theory of forms, a causal approach is unable to demonstrate that we know the world through a backward inference from effect to cause. This result obviously counts against the Parmenidean formulation of the problem of knowledge. We recall that according to Parmenides, knowledge is possible if thought grasps, hence is identical with being or the real. But all standard efforts to show this point fail.

Kant, the Copernican revolution and the standard approach to cognition

The fate of the standard cognitive approach that to know requires a grasp of the real is unclear. Despite the best efforts of talented individuals over many centuries, including such first-rank thinkers as Plato, Descartes, Locke and others, it has never been shown it is possible to grasp the real. It has also never been shown this is impossible. The most widely known strategies including Plato's ancient theory of forms, modern rationalism and modern empiricism, what I have been calling the way of ideas, all fail. As Kant points out, there has never been progress toward knowing the real. Though the Parmenidean criterion that to know requires a grasp of the real remains as popular now as in ancient times as the gold standard, in practice it has always turned out to be fool's gold.

The reason for this continued popularity of the approach to cognition as knowledge of the real is the priority accorded to theory over practice. Philosophers who talk about practice are apparently unable to learn from it. Here as in many other ways, the author of the critical philosophy is a counter example. Kant, an a priori thinker, is paradoxically concerned to draw the lesson of experience (see, e.g., "On the common saying: That may be correct in theory but is of no use in practice" [Kant, 1996]. Yet this is unusual in a debate that mainly takes place as if Kant and other epistemic constructivists had nothing useful to contribute [Boghossian, 2006]. If that is correct, then perhaps the most important consequence of Kant's Copernican turn lies in the demonstration of a plausible alternative, to the standard approach.

Kant's argument in favor of epistemic constructivism is powerful but also flawed. Kant distinguishes between appearance and representation. Since according to Kant if there is an appearance, then something appears, we know at most only that the cause of the appearance exists, but not what it is. In other words, Kant is inconsistently committed to the existence but not to possible knowledge of reality that on his own theory he cannot know.

Kant and modern idealism as constructivism

I turn now to the relation of Kant to German idealism and to idealism. The history of philosophy unfolds through reading, criticizing, reformulating and in general wittingly and perhaps more often unwittingly building on prior theories. Kant's Copernican revolution influences the later debate in numerous ways, beginning in German idealism. His problematic conception of the thing in itself, his name for the real, is a crucial element in the post-Kantian reaction to the critical philosophy. Among Kant's contemporaries, Jacobi, Schulze (Aenesidemus), Fichte, Schopenhauer and others criticize this concept. Perhaps no important participant in the debate accepted Kant's view of the real. Kant's claim that we know reality exists but nothing else about it is inconsistent. It is inconsistent to make a cognitive claim when in theory none is possible. The notion of the thing in itself was widely rejected in the initial series of reactions to the critical philosophy. Jacobi famously objected: "Without the presupposition [of the "thing in itself",] I was unable to enter into [Kant's] system, but with it I was unable to stay within it" [Jacobi, 1787, p. 223].

Modern idealism, which rejects the claim to know the real as a necessary condition of knowledge, is any form of the constructivist approach to cognition. Epistemic constructivism comes into modern philosophy before Kant and affects the reactions to the critical philosophy in Kant's wake.

German idealism is not well understood. Many observers think that Kant is not an idealist and that German idealism only begins after Kant. Franks, for instance, believes that Reinhold is the first German idealist [Franks, 2005]. According to this interpretation, Kant, who is not an idealist, is later followed by post-Kantian idealists. This widely-shared view overlooks the fact that Kant as well as the post-Kantian German idealists share the Kantian concern with a constructivist approach to cognition. In other words, if the Copernican turn is an idealist approach to

cognition, and if the Copernican turn is central to the critical philosophy, then it follows that Kant is an idealist. With the possible exception of Schelling, who is apparently disinterested in the Copernican turn, hence not an idealist, the later German idealists, including Fichte and Hegel, are all critical Kantians, all committed to restating the Copernican turn and the critical philosophy in general.

Kant's Copernican turn and the subject

Kant and the post-Kantian German idealists and Kant share a constructivist approach to cognition but differ in many ways. An important instance lies in the conception of the subject. Constructivism directs attention to the subject in suggesting, as Kant points out in the analogy between the Copernican turn and Copernican astronomy, that cognition is human cognition. It is then not surprising that in the post-Kantian idealist debate, perhaps the most important of the many changes lies in the revision of the subject through an anthropological shift resisted by Kant.

Hume, like Locke, Berkeley and the other British empiricists, favors an anthropological approach to cognition. Kant was one of the first to teach anthropology in Germany that he valued as answering the crucial question: what is man? Yet, in clearly anticipating the rejection of psychologism shared by Frege, Husserl and others, he insists on the distinction between a psychological approach to cognition that he rejects and a logical approach to cognition that he embraces.

Kant rejects an anthropological approach to knowledge in deducing the conception of the subject as the last piece in the puzzle, as the coping stone so to speak of his Transcendental Deduction [see Zammito, 2002]. Kant's Copernican turn points to a logical conception of the cognitive subject that constructs the cognitive object in relying on a double input. This includes, on the one hand, the real that is the source of which the contents of the sensory manifold are the effect as well as the synthetic activity of the understanding, on the other.

In driving a wedge between philosophical and human conceptions of the subject, Kant's constructivist approach to cognition centers on a supposedly-deduced, but clearly fictitious philosophical subject. Beginning with Fichte, Kant's German idealist successors discard the philosophical subject in favor of the human subject, in other words in formulating a human approach to human knowledge. At the risk of conflating the logical and psychological dimensions of cognition, the post-Kantian idealists revise the Kantian conception of the subject from an anthropological point of view. The post-Kantian reformulation of Kant's Copernican turn rethinks the subject as human being, in Fichte as the human individual, and in Hegel as both an individual as well as the plural subject, or the famous "Wir" he discusses in the "Phenomenology of Spirit".

In the transition from Kant to Fichte, post-Kantian German idealism leaves behind the Kantian effort to describe the conditions of cognition whatsoever (überhaupt) for the very different effort to develop the Copernican turn beyond Kant. Kant suggests the subject cognizes the object it constructs at the considerable price of invoking the thing in itself, or world. Fichte claims to agree with Kant who

is misunderstood, and whose theory he merely wishes to restate independently in different form, In fact, he formulates a position inspired by but very different from the critical philosophy. In turning from that Kantian abstract conception of the subject to the finite human subject, Fichte, like many of Kant's contemporaries, decisively rejects the very idea of the thing in itself as "produced solely by free thought" and without any "reality whatever" [Fichte, 1982, p. 10].

Fichte is, like Kant, an epistemic constructivist. He indicates his agreement with Kantian constructivism in writing that "the [cognitive] object shall be posited and determined by the cognitive faculty, and not the cognitive faculty by the object" [Fichte, 1982, p. 4]. Fichte's conception of the subject derives from the Aristotelian view of activity (energeia). The claim that the subject, or in his terminology the self, (das Ich) is absolutely and merely active is Fichte's "absolute presupposition" [Fichte, 1982, p. 10]. Fichte's shift from the abstract philosophical subject to finite human being repositions cognition as explicable wholly and solely through the activity of finite human beings.

Elsewhere I have argued that Fichte goes too far in seeking but failing to derive everything from the subject. I do not want to repeat that argument here. Suffice it to say that one difficulty lies in the historical dimension of cognition. Though Kant and Fichte are interested in history, neither is a historical thinker. Kant's a priori conception of knowledge is unrelated to time and place. Fichte believes we become aware of ourselves to the extent that our actions are restricted by our surroundings, or social context but that history, like the laws of the mind, unfolds in a pre-ordained fashion, hence independent of human beings [Fichte, 2017].

From his historical perspective, Hegel thinks there is only limited cognition of an intrinsically rational world. According to Hegel, everything that is is rational, hence can be known. He famously, but obscurely claims "What is rational is actual; and what is actual is rational" [Hegel, 2005, p. 20]. Hegel's point is not that the real we do not know is rational. It is rather that the real for us that we construct and for that reason know is rational. This suggestion lends interest to Hegel's description of the modern state as inherently rational. Yet though in a sense unlimited, cognition is also limited in that each person necessarily belongs to a particular time and place from which no-one can free oneself. All knowledge, even philosophy, is limited in this way since, as Hegel says, "Here is the rose, dance here" [Hegel, 2005, p. 22]. It paradoxically follows that though we know what is in its infinite variety, we only know it from the perspective of the historical moment.

In distantly following Descartes, Kant holds that knowledge is a priori, hence apodictic. Hegel, on the contrary, thinks that cognitive claims are always subject to correction. Cognition arises through an ongoing series of adjustments of theories about experience that are tested and if necessary reformulated as a result of further experience. The interaction between the theory and further experience can take only two forms: either the theory and experience agree for the moment, though disagreement may arise at a later point, for instance through new discoveries, access to new information, and so on; or, if they fail to agree, the theory must be strengthened to explain what the initial theory explains plus at least one thing it ought to explain.

Kant's Copernican turn and the philosophy tradition

The Copernican turn is finally crucial to comprehend the philosophical tradition. Philosophical theories are formulated to solve philosophical problems, conundra and enigmas, hence practically-oriented. A theory succeeds or fails if it solves or otherwise disposes of, or again fails to dispose of a problem. The considerable interest of the Copernican turn is that it gives us a reason to think that, if it is judged by this criterion, then clearly the Western philosophical tradition has failed, why it has failed, and what now can reasonably be done to overcome this failure in finally progressing in its self-appointed task.

It is certainly plausible look at the philosophical tradition from different angles of vision. At different times different concerns loom larger in the philosophical debate. I believe that a careful look will show that the problem of knowledge is the main theme in Western philosophy. The entire tradition from ancient Greece until today unfolds as an ongoing effort to formulate a theory of knowledge. It is hardly an accident that Hegel, arguably the modern thinker best versed in the history of philosophy, thinks that the main philosophical problem is finally the demonstration of the ancient Parmenidean claim that the criterion of knowledge is as the pre-Socratic thinker asserted long ago the unity of thought and being.

Philosophy can be described in terms of what it is or at least pretends to be or rather in terms of what it has been. From the latter perspective philosophy with exceptions has mainly been an effort to demonstrate the Parmenidean view that knowing and being are the same, early in the tradition in the Platonic effort to intuit the real that, after the intervention of rationalism and empiricism, later collapsed in Kant.

There are obviously different normative views of philosophy. But, regarded from the Parmenidean perspective as an unremitting effort arising in the suggestion that knowledge is possible only through the grasp of the real, then philosophy very obviously failed. This effort, whose arguably most impressive formulation was nearly immediately formulated in the Platonic theory of forms, finally comes to a head in Kant, who is uniquely positioned at the junction between the concern over several millennia to demonstrate knowledge of the real, and the relatively new modern concern to demonstrate a constructive alternative if as seems likely we know only that we cannot know the real.

The Western tradition is Parmenidean since the pre-Socratic thinker is the source of the Platonic effort to intuit the real through the theory of forms. If Kant is correct then the Platonic effort to grasp the real that in his wake runs throughout the entire tradition, and that has apparently never drawn the lesson of Kant's own turn from representationalism to constructivism, is finally defeated by the creator of the critical philosophy. Plato offers the first important and most impressive attempt to know the real. The history of post-Platonic philosophy begins a long series of important efforts, none of which has borne fruit, to demonstrate knowledge of reality. If the main philosophical theme consists in the effort set in motion by Parmenides to know the real, then post-Platonic philosophy consists in the growing recognition that Platonism in any form fails. If this is the philosophical goal, then, as Kant clearly points out, philosophy itself fails. Kant is not the first

modern constructivist, but, owing to his key role as perhaps the central modern fig-ure, he sets the stage as it were for the debate to follow. The enormous interest of the Copernican turn lies its promise as a potentially viable strategy if it turns out, as Kant clearly suggests, that if the effort to know the real fails, constructivism offers a plausible alternative.

Two possible objections

I have argued two points. First, the ancient approach to cognition as grasping the real fails in any variation. Second, the constructivist alternative, though not clearly worked out, was already a possible alternative in pre-Socratic thought. Though there is no space to consider even obvious objections in detail, it will be useful to address two obvious themes to which this constructivist approach points: the relation of the objective and the subjective worlds, and the objectivity of cognition.

The two worlds are the objective world, or the real, and the subjective world, or human reality. According to Kant, though there are appearances, we cannot know how they relate to the real. In his internal realist phase, Putnam suggests that truth is an ideal concept or Grenzbegriff to which we approximate. Yet since we do not and cannot know the real the real, we cannot know we are approximating to it. in short, we cannot say anything about the relation of the subjective human world to the real world.

The second question relates to the objectivity of cognition from a constructivist point of view. A great many natural scientists as well as numerous philosophers believe that science uncovers the real. In our time qualified observers are convinced that we are close to or have in fact already reached the final theory. It is comforting to think that the cognitive quest has already come or will shortly come to an end in contemporary science. Yet there is no reason, none at all, to think this is the case, no reason not to think that as it always has natural science will continue to progress, no way to show that we have reached a level where our view of the real fully and inalterably corresponds to it.

Unlike the metaphysical realist, the constructivist, who thinks that no one has ever plausibly claimed to grasp the real, and who gives up any version of that familiar effort as a precondition to working out a constructivist approach to cognition, must find another way to justify the objectivity of claims to know. Descartes notoriously thinks that from the perspective of universal science the problem of objectivity can be decisively solved for all forms of knowledge. Yet this is an obvious delusion. There is no universal science. There are only sciences in the plural. Since science is not universal, the objectivity of cognitive claims is also not universal but rather relative. What counts as objectivity is not generalizable across domains but rather specific to a given domain. For a constructivist "objective cognition" is the result of working out and employing a series of rules governing the procedure of the different cognitive disciplines. Chemists decide for chemists; physicists decide for physicists; and, if there is an accepted procedure that governs what they do, then we can say that philosophers decide for philosophers.

Modern science provides virtually limitless examples. We do not need to convert to constructivism since for the most part modern science is already

constructivist. There are, for instance, many different answers to the Kantian question: what is man? Our views change over time as what we know about human being changes. In modern science, what we take to be human nature at any given time is the result of the construction of theories on the basis of the available empirical data in grasping indirectly in the long run what we cannot grasp directly. The construction, testing and reconstruction of our theories slowly yields an empirically-based view of human nature and the human world, not as they are but rather as the appear (or appear to be) in experience.

Conclusion: consequences of Kant's Copernican turn

In considering some consequences of the Copernican revolution, this paper has argued five points: first, Kant's central contribution lies in the Copernican turn. This brilliant insight, which lies at the epicenter of the critical philosophy, is more often mentioned than studied, certainly rarely studied in the detail it requires; second, the Copernican turn is above all important a viable alternative to the standard view of cognition; third, the German idealist tradition consists in a shared effort by different hands to formulate a viable version of epistemic constructivism; fourth, Kant's most important impact on post-Kantian German idealism lies in the Fichtean, hence post-Kantian revision of the concept of the subject. And, fifth, if knowledge of the real is the main thrust of the philosophical tradition, then Western philosophy fails. But, since constructivism is a plausible alternative, it can in principle be redeemed in developing the constructivist approach to cognition.

Though Kant did not invent epistemic constructivism (see, for the view that Kant invented constructivism J. Bruner [Bruner, 1986]) he gave it a powerful impulse in two ways. On the one hand, the Kantian form of epistemic constructivism strongly influences Fichte and Hegel, the post-Kantian German idealists, who, as Kantians, were concerned to provide an acceptable formulation of this cognitive approach. On the other hand, and in a more general sense, Kant's impact derives from his role as perhaps the single most influential modern thinker. I note in passing that though there is an immense Kantian secondary literature, agreement is apparently limited to a single point: Kant is an important thinker.

The influence of epistemic constructivism is widespread in the post-Kantian debate, indirectly in Marx, whose quasi-Hegelian historical approach is influenced i.a. by Vico [Marx, 1967, p. 378] and more directly in American pragmatism. Peirce's position arose through his study of Kant that increasingly led him in the direction of Hegel. As he grew older, Peirce came to think that the main difference between his and Hegel's views was terminological. Peirce shares Hegel's rejection of the claim that knowledge requires knowing the world. Suffice it to say that Peirce and Hegel both think that what we know is limited to the contents of experience in what Peirce cryptically called the long run. The long run provides what we take to be the real until for whatever reason we are forced to change our view. Hence, there is a measure of truth in Royce's view that the idealists were in fact whom people early in the twentieth century were calling pragmatists [Royce, 1919, p. 85].

Kant notoriously finds it difficult to choose among alternative views. We have already noted that his position evolves from his early representationalism to his

later anti-representational epistemic constructivism. The role of epistemic constructivism as a viable alternative to the standard view suggests three points. First, we can accept the Parmenidean unity of thought and being. But we can simultaneously reject the unavailing effort to grasp the real in favor of a constructivist account of the object as it emerges in experience. Second, the failure of all efforts to know the real over more than two and a half millennia suggests as Kant clearly saw that we cannot know the real. Yet we can avoid skepticism through a successful claim to know to construct a plausible account of human experience. And third, the dispute between the standard epistemic view and the nonstandard constructivist epistemic view that arises in modern times either has been or is in the process of being decided in favor of the latter.

The Copernican turn that lies at the heart of the critical philosophy is often mentioned, but only rarely studied, and less often studied in detail. Though Kant is discussed in an already immense and rapidly growing literature, if the Copernican revolution is an important piece of the puzzle, then he is arguably still not well understood.

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Некоторые следствия коперниканского переворота Канта

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Кант осуществляет переход от раннего репрезентационистского взгляда на познание к позднему антирепрезентационистскому взгляду, представленному в форме эпистемологического конструктивизма. Этот переход обычно определяется как коперниканская революция или коперниканский поворот. Кантовский коперниканский поворот принадлежит к философии модерна, предложившей нестандартный подход к проблеме познания. По меньшей мере со времен Парменида стандартный подход к познанию требовал знания реального, реальности или мира. В философии модерна этому подходу был противопоставлен возникший в раннее Новое время эпистемологический конструктивизм как нестандартное решение проблемы познания у Фрэнсиса Бэкона, Гоббса, Вико и др., и отдельно у Канта. В статье кратко рассматриваются следствия кантовского коперниканского поворота, касающиеся по меньшей мере пяти тем: 1) познание; 2) немецкий идеализм; 3) субъект; 4) исторический характер знания; 5) успешность или неуспешность философской традиции.

Ключевые слова: И. Кант, коперниканская революция, коперниканский поворот, Парменид, эпистемологический конструктивизм