Remote Learning Module for 29 April 2020

Lecture Notes: Kant's *Prolegomena to Any Future Metaphysics*

Last time we took a brief tour of Kant's *Critique of Pure Reason*, wherein he presents his "Copernican Revolution for Thought," arguing that the entire prior history of Modern Philosophy misunderstood the problem of knowledge so thoroughly that nothing short of a wholesale reorientation of the relation between ideas and things can liberate our thinking from the chains of skepticism, on the one hand, and dogmatism, on the other hand. Today, we will conclude our semester with an examination of Kant's *Prolegomena to Any Future Metaphysics That Will Be Able to Come Forward as a Science*—the short treatise he composed as an introduction to his new critical philosophy.

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— Preliminaries —

(1) The main purport of the entire work is to show how, given Hume's skeptical doubts concerning the understanding, that metaphysics is, after all, possible. What Hume had argued, in particular, by way of his skeptical solutions, was that causal connections, while they have subjective necessity (given our customs and habits), lack anything in the way of objective necessity. However, if we adopt the stance provided by the "Copernican Revolution" for thought that Kant presented in his *Critique of Pure Reason*, we can find our way out of Hume's *cul de sac*, and formulate new principles for knowing the world objectively. This will require, Kant proposes, that we distinguish between two points of view: the empirical, or *phenomenal*, point of view (from which we can speak objectively), and the transcendental, or *noumenal*, point of view (from which we can identify the limits of our understanding, before which our philosophical inquiries into the nature of things must halt).

(2) We begin with a review of the sources and nature of metaphysical knowledge (as these appear in the work of Kant's rationalist and empiricist predecessors). Metaphysics can't be empirical. Why? Because, as Berkeley so ably demonstrated, we can never "sneak a peek" at the world as it is in-and-of-itself so as to compare our models, our interpretations, with the "real thing." So, metaphysics must proceed from *pure reason* alone.

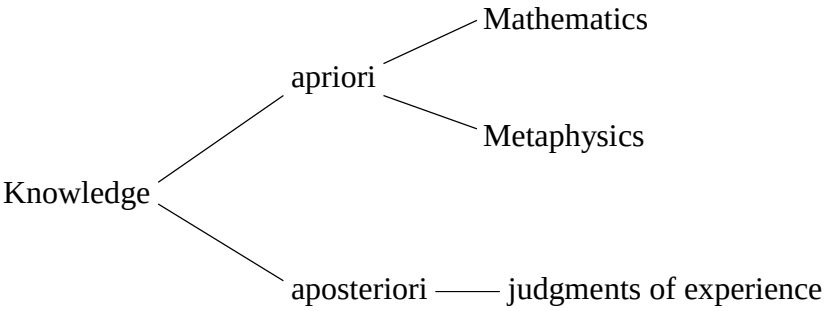
(3) Consequently, we must distinguish between two forms of judgments (just as both Leibniz and Hume had said): Analytic and Synthetic.

(a) *Analytic Judgments* are *expliative*: they depend on a recognition that their denial is or implies a contradiction—because they are framed in such a way that their subjects are contained in their predicates. Kant's example is, "All bodies are extended." His point is that the very idea of a body is that of an object extended in space; that is how we define a "body."

(b) *Synthetic Judgments* are *ampliative*: they go beyond our definitions; their denials are not contradictory. Kant's example is, "All bodies have weight."

(4) Now, turning to Synthetic Judgments, we find that some are indeed known *aposteriori*, that is, their truth or falsity depends on what we actually experience. However, according to Kant, none of his predecessors saw that some Synthetic Judgements are known *apriori*, that is, independent of experience. In the *Prolegomena*, Kant considers two species of these ***synthetic apriori*** judgments: the truths of mathematics and metaphysics.

Thus, we have:



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— Mathematics —

(5) Mathematical judgments are synthetic, but nevertheless, *apriori*, because they are true everywhere and everywhen. It is not a matter of definition that the sum of 7 + 5 = 12 (nothing in the definitions of these numbers necessitates the truth of the sum, yet it is always true, and never false). So too, that the shortest distance between two geometrical points must be a straight line.

(6) Leibniz had held that space is not real but produced by the imagination reflecting on relations among monads. Newton held, on the contrary, that space is an absolute reality, independent of our reflections on spatial relations. Kant, however, asserts that neither Leibniz nor Newton got the matter right: space is a way the human mind organizes experience: the geometer does not investigate the properties of external objects, but the modes of human intuition, that is, the conditions for the possibility of our experiencing objects. We shall return to this concern about the relation between geometry and physics at the end of today's lecture; stay tuned.

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— Natural Science —

(7) Here, then, we can see the point of Kant's distinction between phenomena and noumena: phenomena are how things appear to us; noumena are how things are in-themselves. Berkeley was, on Kant's view, an *empirical idealist*, while Locke was a *transcendental realist*. That is, Berkeley supposed that the objects of our empirical intuitions are our ideas, while Locke supposed we can transcend the appearances of things, and know how things are in themselves. Both views are wrong, according to Kant; instead we should distinguish two points of view: *empirical realism* (the phenomenal point of view, from which we can know how things must

appear to us) and *transcendental idealism* (the noumenal point of view, from which we can discern the limits of our understanding).

(8) Thus, our *synthetic apriori* knowledge concerns the principles of all possible experience; such knowledge cannot be referred to things-in-themselves, but only to appearances *as* objects of experience. Let's recall the analogy we used for thinking about Descartes' claim that all clear and distinct ideas are true, since the objective reality of an idea consists in the it's conformity to its object. We considered that our ideas of equilateral triangles are more clear and distinct than our ideas of the topology of the United States, and that therefore real triangles must be exactly as we conceive them, but not so the topology of our national geography. Kant is asking in turn: What features must a two-dimensional array possess in order for us to regard it as a picture of something in the first place?

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— Metaphysics —

(9) Given the distinction between phenomena and noumena, it follows that what we can learn from our analyses of pure reason are the *grounds for the possibility of empirical experience*; we must therefore, Kant argues, subject our metaphysical claims to critique, and to do this means to demonstrate the illegitimate extension of pure reason to noumena, that is, to things-in-themselves.

(10) *Substance*: we can know that in order to regard a predicate as applying to a *thing* (not merely a *grammatical* subject), that thing must be a metaphysical subject—a substance. But we err if we think we can transcend the limits of possible experience, and come to know substances-in-themselves.

(11) *Psychological Ideas*. This is particularly true in the case of the Cartesian Ego, or the thinking subject. The cogito is not an absolute substance, but, according to Kant, simply the ground we must assume for the possibility of internal sense. We have no evidence, no experience, of the ego, the self, directly—that is, we don't intuit our egos first, and then ask what they do (Descartes' project); rather the concept of the ego derives from the possibility of experience: the ego is the ground we posit when saying that we are confused, or guilty, or have a headache, or doubt.

(12) *The Paralogisms*. While we may think we can fashion arguments for concluding that a thinking being (a Cartesian ego) must be a separate substance, such arguments are in fact spurious. Our self-thinking is simply a condition for the possibility of experience. Consequently, we can have no satisfactory reason for concluding that, as thinking things, we are:

(a) Self-subsistent substances (that is, things with properties);
(b) Simple (that is, not wholes, composed of parts);
(c) Diachronically identical (that is, the self-same over time); or
(d) Self-conscious ("cogito ergo sum" has no purchase on reality).

These notions are conditions for experiences of self-identity, but they cannot be applied transcendentally, that is to being a self-in-itself (that is, to a *noumenal* self).

(13) *Cosmological Ideas.* Because we cannot extend the limits of pure reason beyond the grounds for the possibility of experience, we cannot know whether the world is eternal or had a beginning in time; nor can we know whether things are ultimately simple or composite; nor can we know whether everything that happens is determined, or whether there are causes from freedom; and finally, nor that there is a necessary being (God) or not.

(14) *The Antinomies*. For each of our cosmological ideas, valid logical arguments can be given for both thesis and antithesis, for example that (a) the world is eternal, and (b) that the world had a beginning in time. Here is a brief digest of the first and fourth antinomies.

The First Antinomy

Thesis: The world began in time, and is limited in space.	**Antithesis**: The world had no beginning; space is infinite and absolute.
1. If the world had had a beginning, then up to every given moment, an eternity has already elapsed.	1. Suppose the world had a beginning; then there was a time before which, it was not (empty time).
2. This is impossible, because the infinity of a series consists in its *not* being completed through successive synthesis.	2. But this is impossible, because no *becoming* can be "empty time"; all becoming takes *some* time.

The Fourth Antinomy

Thesis: There belongs to the world either as to its parts or its cause an absolutely necessary being.	**Antithesis**: An absolutely necessary being nowhere exists in the world, nor outside the world as its cause.
1. The sensible world is a *series* of alterations.	1. Either there is necessarily a beginning which is absolutely necessary or the series of causes is unconditioned (has no beginning).
2. Every alteration stands under a condition which makes it necessary.	2. Causality is contingent: for each event, everything is preceded by a time in which something contingent determines the cause to act.
3. The sequence must terminate at something strictly unconditional, i.e. absolutely necessary.	3. The whole cannot be necessary if no part of it is necessary, and no part is necessary.

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— Space & Time Revisited —

Euclid's Axioms and Postulates

- *First Axiom*: Things which are equal to the same thing are also equal to one another.
- *Second Axiom*: If equals are added to equals, the wholes are equal.
- *Third Axiom*: If equals be subtracted from equals, the remainders are equal.
- *Fourth Axiom*: Things which coincide with one another are equal to one another.
- *Fifth Axiom*: The whole is greater than the part.
- *First Postulate*: To draw a line from any point to any point.
- *Second Postulate*: To produce a finite straight line continuously in a straight line.
- *Third Postulate*: To describe a circle with any center and distance.
- *Fourth Postulate*: That all right angles are equal to one another.
- *Fifth Postulate*: That, if a straight line falling on two straight lines make the interior angles on the same side less than two right angles, the two straight lines, if produced indefinitely, meet on that side of which are the angles less than the two right angles.

The Clarke-Leibniz Debate (1715-1716)

An exchange of letters between Samuel Clarke, defending Isaac Newton's conception of space and time, and Leibniz, who disputed Newton's ideas.

- *Leibniz's First Argument:*

God does not need a "sense organ" (Newton's "God's boundless uniform sensorium") to perceive objects; and space cannot be an absolute reality, or it would possess a greater reality than substances themselves. "...the postulation of an infinite, subsistent non-substance (an "unthing" as Kant later called it) is simply a monstrosity."

- *Leibniz's Second Argument:*

Motion and position are real and detectable only in relation to other objects. Motion or position cannot be detected in relation to space itself, since space itself represents no object. Therefore empty space, a void, and so space itself, is an unnecessary hypothesis.

- *Clarke's Reply:*

Motion is detectable in relation to space itself, for an object accelerating or rotating alone in a void betrays the effect of forces (inertial and centripetal) that exist in relation to no other object.

- *Leibniz's Third Argument:*

There would be no reason, and so no sufficient reason, for God to create the universe one way rather than as any one of its spatial counterparts, i.e. up rather than down, right rather than left, or east rather than west. Therefore, spatial relations are symmetrical relations among objects that are equivalent and do not exist apart from objects.

- *Kant's Reply:*

Asymmetrical objects and their mirror-imaged counterparts (i.e. right-handed and left-handed "incongruous counterparts") are genuinely and physically different. No rotations in three-dimensional space, e.g. of right and left hands, can turn one into the other. Since the objects

differ only in their spatial relationship--i.e. they could be rotated into each other through a fourth spatial dimension--they reveal that space itself is real and independent of the objects.

Kant's Theory of Space and Time

- *Ontology:*

Kant postulates that space and time do not really exist beyond human experience, but are "forms of intuition" (i.e., conditions of perception, imposed by our own minds). This enables him to reconcile Newton and Leibniz: agreeing with Newton that space is absolute and real for objects in experience (i.e., for phenomenal objects open to science), but agreeing with Leibniz that space is really nothing in terms of objects as they exist apart from us (i.e., with things in themselves).

- *Epistemology:*

Unlike Hume, Kant denies that the axioms of geometry are self-evident or true in any logically necessary way. They are logically "synthetic," which means that they may be denied without contradiction. That is a significant claim because it implies that consistent non-Euclidean geometries are possible (involving the otherwise consistent denial of one or more of the axioms of Euclid, as Bolyai, Lobachevskii and Riemann actually accomplished). Nevertheless, Kant holds that the axioms of geometry are known *a priori* (i.e., that they are known to be true independently of any experience) because Euclidean axioms depend on our "pure intuition" of space, namely space as we are able imaginatively to visualize it. Only if non-Euclidean space can be visualized would Kant be wrong.

- *Cosmology:*

Kant does not think we can know, or even imagine, the universe as either finite or infinite, in space or in time, because space and time are only forms of perception and cannot be imagined or visualized as absolute wholes. The universe, as the place of things-in-themselves, is not in space or in time and so is neither finite nor infinite in space or in time. Thus there cannot be an *a priori*, rational or metaphysical, cosmology.

General Relativity: Space and Time after Einstein

- *Ontology:*

Kant was wrong: space and time really exist beyond human experience, but only relative to masses in motion (there is no absolute, Euclidean metric to which all physical events conform: space curves locally and times are desynnchronized for objects moving in non-uniform inertial frames).

- *Epistemology:*

Kant was wrong: non-Euclidean space can not only be visualized, but measured (the sun, for example, warps local spacetime by approximately four seconds of arc per century)--suggesting that Kant had the relation between what can be conceived and what can be visualized backwards.

- *Cosmology:*

Kant was wrong: although the First Antinomy purports to show the impossibility of conceiving the universe as either finite or infinite in-itself (because both contradictory metaphysical

absolutes can be argued and justified with equal force, it follows that neither can actually be proven), Einstein answered Kant by proposing a consistent non-Euclidean (Riemannian) universe that is finite but unbounded (i.e. without an edge).

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On Friday, you'll receive the final examination in your MTSU email in boxes. Please return your responses by Wednesday, the 6th of May; this should be ample time, given that the normal response time would have two hours on the 6th. Speaking of which, try not to spend much more than two hours on this test—its intent is primarily to afford you an opportunity to coalesce and, yes, to synthesize your understanding of the main currents of philosophical thinking in the Modern Period. Be well everyone, and, remember: social distancing, however phenomenal, does save noumenal lives, thereby keeping our empirical and transcendental egos metaphysically united.