

**Kant I**  
PHIL410

Prefaces and Introductions  
The Synthetic A Priori

Reading: Prefaces: Avii-Axiii, Bvii-Bxxx (pp. 1-14); Introduction: B1-3, A6/B10-A16/B30 (pp. 15-24)

ONE: METAPHYSICAL GROPPINGS  
TWO: THE SYNTHETIC A PRIORI  
THREE: COPERNICAN REVOLUTION

Kant's Copernican Revolution

- This includes the following points:
  - o Problems in metaphysics
  - o Problems in empirical knowledge
  - o Kant's diagnosis of the problems
  - o Kant's remedy for the problems
- See also the list of metaphysical gropings, below.

The problem with metaphysics is that it has yet to become a science.

- Metaphysics is the study of the basic nature of reality.
  - o This study typically focuses on concepts such as those of *object, event, causality, necessity*, etc.
  - o Descartes, for example, develops a metaphysic according to which there are two kinds of thing (or what he calls "substance"), thinking and extended.
  - o The primary tool for metaphysical investigation is *reason*, though the senses also play a significant role. The primacy of reason, here, is due to the fact that the basic structure of reality is not obviously to be read directly from sensation. (Thus Hume; compare Descartes's discussion of the ball of wax.)
- Kant is not exact in his account of what is necessary for a study to be called a science, but he does give us several important indicators.
  - o From Bvii, we get the following:
    - A science should be capable of sustained progress (not "faltering" as soon as it "turns to its purpose").
    - A science should not continually redefine its first principles ("retrace its steps and enter upon a different path").
    - A science requires an orderly method capable of practice by all participants.

- Otherwise, a “science” is merely “groping about”, and not a science at all.
  - Kant refers to the disorderly state of metaphysics as a sign that it has yet to reach science-status.
    - See the Sampler of metaphysical views (gropings), below.
    - These views illustrate Kant’s claim that metaphysics fails to meet the standards of science (as above).
  - The key to science (which, evidently, entails satisfaction of the above conditions) is proper recognition of the contribution of our mind to the composition of the empirical. (See below, under “remedy”.)
- The problems in metaphysics are also illustrated by the “antinomies” to which reason is subject. (See Preface A.)
  - It turns out that when it examines our basic metaphysical concepts, reason is led to certain conundrums.
  - These include questions such as ‘is there a first cause or not?’, ‘is space finite or not?’, and ‘are we free or determined?’ (See further notes on the Antinomies.)
  - These questions prove impossible to answer without contradiction, given the traditional understanding of reason and its role in knowledge.
- Thus Kant’s call for a “critique” of “pure reason”. I.e., he intends to determine what is the role of reason in knowledge, so that metaphysics can finally become a science.

The problem in empirical knowledge is skepticism.

- Skepticism is the failure of knowledge. Given, for example, Descartes’s understanding of the requirements of knowledge, it turns out that we can have practically none!
- See also Hume on causation and our understanding of the workings of the world, which amount only to so much “habit”.
- More specifically, traditional approaches to metaphysics and epistemology cannot explain the “Synthetic A Priori.” They cannot, that is, explain how it is possible for us to know any necessary or universal truths about the empirical world.
  - The truths that we most wish to know are perhaps the Natural Laws, such as Newton’s law of gravitation, for example. Such laws are both *necessary* and *universal*. That is, Newton’s law of gravitation is necessary insofar as it is *not possible* for material (massive) objects to fail to conform to it; and it is universal insofar as it applies equally to all material things.
  - Kant maintains that these propositions are *synthetic*.
    - What this means:
      - Kant distinguishes the *analytic* proposition from the synthetic, roughly, by whether the *predicate* of the proposition is “contained” in its *subject*.
      - Thus, for example, the concept of *bachelor* includes that of *male*, so that the proposition ‘All bachelors are male’ is analytically true.

- On the other hand, the concept of *cow* does not contain that of *brown*, so that the proposition ‘The cow is brown’ is not analytic but “synthetic”.
- The idea to “synthesis” is that two different concepts are “synthesized” or combined to create a new one: cow + brown = brown cow. With analytic statements, synthesis is not required because one concept is already contained in another.
  - Thus the proposition that the force of gravity is equal to  $g(m_1m_2/r^2)$  is said by Kant to be *synthetic* because its subject (the force of gravity) cannot obviously be said to contain its predicate (being equal to  $g(m_1m_2/r^2)$ ).
- But how can we expect to know such facts?
  - Many necessary and universal claims are merely analytic, such as ‘All bachelors are male.’
    - This makes it easy to explain how we might know them to be true. All that is required is that one understand the concepts involved.
    - But these claims are *trivial, uninformative*. Such knowledge requires no access to and tells us nothing about the empirical world. I.e., I don’t have to go out and check, by observation, all the bachelors to know that they are all male. And the sentence is true whether there are bachelors or not.
  - However, it is difficult to see how we could come to know a *synthetic* truth that was also universal and necessary.
    - Since they are universal and necessary, it seems that we cannot learn them directly from experience, as per Hume.
      - This is due to the fact that we do not have sensation of *universality* and *necessity* per se.
      - This is particularly evident with respect to necessity: We may see one object collide with another; but we do not *see* the “necessity” (Hume’s “necessary connection”) with which that second object then is compelled to move.
    - The only alternatives are these:
      - We learn synthetic a priori truths *a priori*, by reason.
      - We do not know any synthetic a priori truths.
    - Kant thinks that we know plenty of such truths, including all the truths of geometry.
    - What we must explain, then, is how we could come to know something *a priori* that also happens to be about the empirical world.
- The problem is illustrated in the problems faced by Descartes.

- Descartes thinks that the role of reason in empirical knowledge is to grasp the intrinsic nature of material objects.
- But once he distinguishes between rational representation (thought, ideas) from reality (the intrinsic nature of material objects), he faces an evidently unanswerable question: how do we know that representation matches reality?
- Descartes, as we saw, is not sure that mathematical propositions, e.g., are true (because he fails to demonstrate that the Rule of Reason is true); nor, then, can he be sure that they are true of the empirical order. It is this last point that concerns Kant.

#### Kant's Copernican remedy (Preface B)

- The general form of success in Science
  - Success in logic (accidental): there has been success in the development of a science of logic, though this is to some extent accidental.
    - In logic, there is no question of “ontological significance,” ordinarily. So logicians were content, for the most part, to study their subject without falling into difficulties about what their subject was “about”.
    - That is, the problem of getting an extra-mental reality to correspond with a certain mental construct is not a significant problem, here, because logic is readily understood as a study of mental structures.
  - Success in mathematics
    - Note characterization at Bxiv: “cognition through the application of concepts to intuition”
    - I.e., success in mathematics begins when mathematical objects are construed as primarily mental objects, not extra-mental things.
  - Success in natural science (i.e., physics)
    - Success in the natural sciences begins when we approach nature “not in the capacity of a pupil who lets the teacher tell him whatever the teacher wants, but in the capacity of the appointed judge who compels the witnesses to answer the questions that he puts to them.” (Bxiii-xiv)
    - That is, as is inherent in the experimental method (which alone saw the beginning of true scientific advance), we must begin with strict, rational hypotheses about the behavior of nature, attributing to nature, in effect, a structure that we conceive it to have.
    - For example, as long as we were content to try to abstract from experience alone, our efforts to understand the motions of the planets were bound to failure. For it appears to us that the sun moves, not the earth. When Copernicus attributed to the solar system *his thought* that the earth was moving and not the sun, Nature in this instance yielded her secret, so to speak.
    - This is a somewhat fanciful illustration, but it serves to make Kant's point: some elements in experience (and thus the empirical

world) must be seen as a contribution *of ours* if we are fully to understand them. The “revolution” in Copernicus’ thought was his insertion into our understanding of our experience an element conceived by him and not otherwise found there. This is the thought, “we’re moving, not it.”

- More generally, scientific process requires the postulation of hypotheses not immediately evident in observation. *All scientific theory* is of this sort: it is *incapable of observation* and, in effect, *derives entirely from us*. This is due to its *universal* and *necessary* form.
- Success in metaphysics
  - What is metaphysics?
    - Metaphysics characterized at Bxiv: “a speculative cognition by reason that is wholly isolated and rises entirely above being instructed by experience. It is cognition through mere concepts (not, like mathematics, cognition through the application of concepts to intuition), so that here reason is to be its own pupil.”
  - What can we hope for, in metaphysics? What would make metaphysics a *science*?
    - Either metaphysics becomes a science, or it remains in its deplorable “groping” state.
    - Metaphysics will become a science if and when the same supposition as above is made: when we look in the subject-matter for the contribution of reason (our contribution).
    - Kant puts this in terms of “cognition” and “conformity”:
      - “... if our cognition must conform to objects”, then it is difficult to see how we could come to know them in the way we do. In particular, it is difficult to see how we could come to have synthetic a priori knowledge of them.
      - “... if objects must conform to our cognition”, on the other hand, then it is conceivable how we might know them a priori. That is, only if the empirical order takes the form of our thought is it possible to explain how we have synthetic a priori knowledge of it.
    - Our metaphysical concepts are **Empirically Real**, for Kant.
      - This means that our basic metaphysical concepts are, in fact, true of and correspond to empirical reality.
    - Our metaphysical concepts are, however, **Transcendentally Ideal**: that is, the empirical reality of space and time and objects and causation is not how reality in itself is. Rather, it is how in-itself reality *appears* to us, both in sensible and in rational terms.
- Note, moreover, that the principles of science are typically of synthetic a priori form. This illustrates the connection between the mind and empirical reality. Since our minds contribute to the structure of that reality, we can know that structure a priori and a priori knowable propositions will tell us something about the empirical world.

- What this means for experience.
  - Experience, according to Kant, is a mixture of rational and sensory representation.
  - A good deal of what we take ourselves to experience through the senses is in fact a contribution of the mind.
    - We don't ever "see" necessity or universality. Yet we experience the world in these terms.
    - Nor, strictly speaking, do we ever directly see (or hear, taste, etc.) a persisting object. But, again, when we walk around a building or tree, that is how we experience it – as a persisting object.
    - Kant will also argue that space and time are not the *content* ("matter") of sensation, but, rather, their a priori form or structure. (To the Aesthetic.)

(See the Study Guides for further notes and definitions.)

A sampler of metaphysical theories (illustrative of "groping"):

- Thales: the world is made of water.
- Anaximander: the world is made of some indefinite stuff which, when in motion, becomes either hot (fire) or cold (air, earth, and water).
- Anaximenes: the world is made of air.
- Heraclitus: everything is in constant change.
- Parmenides: there is only one object and it never changes.
- Zeno (student of Parmenides): motion is impossible.
- Democritus: there are many objects, in constant motion.
- Plato: material objects are the decaying, imperfect, illusory copies of the ultimately real things (the Forms), which are themselves immaterial and abstract.
- Aristotle: all things are a combination of form and matter.
- Aquinas: only God is fully real; other things are only partly real.
- Descartes: there are two kinds of thing, thinking and extended (three, counting God).
- Leibniz: there is only one kind of thing, thinking ("monads" whose spatiotemporal perceptions occur in "pre-established harmony").
- Spinoza; there are infinitely many different kinds of thing, though we are aware of only two; these infinite "attributes" are all only different aspects (facets?) of the same one thing, namely God.
- Berkeley: there is only one kind of thing, thinking; all things exist as sub-thoughts of God.
- Hume: we don't know that anything exists, at bottom; nor do we know anything about how anything interacts (causation is completely mysterious); fortunately we are in the habit of thinking otherwise, in both cases, though the content of these thoughts is obscure ...
- Hegel: the only real thing is a giant, on-going thought which is not yet complete (nor, thus, completely defined).
- Schopenhauer: *will* is the only real phenomenon.
- Marx: the only real kind of thing is material.

- Nietzsche: the *will to power* is the only real thing.
- W.V. Quine: sets and physical particles are real.
- David K. Lewis: "I accept a principle of Unrestricted Composition: whenever there are some things, no matter how many or unrelated or how disparate in character they may be, they have a mereological fusion."
- Because the best efforts of so many have led to so little agreement, and because there is apparently no systematicity in the study of our basic, rational representation of reality, Kant proposes a "Critique" of reason to determine what, exactly, it can tell us. Thus, his study is primarily epistemological: what is the nature of reason and what is its contribution to human knowledge, especially empirical knowledge? However, his study is also metaphysically significant, since it will involve an examination of basic metaphysical concepts, such as *object* and *cause*.