

10.4 The New Method Applied: The Conditions of Possibility of Knowledge

10.5 Homework

- Readings:
 - *Prolegomena*, paragraphs 6-13 (First edition: pp. 590-596 / Second edition: pp. 673-679)
 - *Prolegomena*, paragraphs 14-21 (pp. 596-601 / pp. 679-684)
 - *Prolegomena*, paragraphs 40-56 (pp. 612-623 / pp. 695-706)
- Study Questions:
 1. What does it mean that space and time are the “forms of our sensible intuition”? Explain how the view that space and time are forms of human sensibility accounts for the fact that pure mathematics is possible as a science.
 2. How does Kant explain the fact that nature appears to us as a law-governed whole? In your answer, make sure to explain the difference between “things in themselves” and “objects of experience”. Also, make sure to explain the crucial role that the categories of the understanding play in the constitution of experience. You may want to illustrate the way in which experience is constructed according to Kant with an example.
 3. What is the difference between the ideas of reason and the categories of understanding? Provide definitions and examples of each.
 4. What are the three main ideas of reason?
 5. Explain the dialectic associated with one of the ideas of reason.

10.5.1 Conditions of Knowledge, Conditions of Experience

- As we have seen, the Critique aims at determining the conditions of possibility of scientific knowledge, that is to say, the conditions under which objectivity is constituted.

The idea is that *scientific knowledge is possible just because the external objects conform to our cognitive framework, whatever they are beyond the way in which we understand them.*

A priori, metaphysical reasoning is legitimate only when restricted to the determination of how science is possible, that is, when restricted to the determination of the cognitive framework through which we construct our experience of the external objects.

- Now, our knowledge of an object is always made of two parts:
 - an intuition, coming from what Kant calls sensitivity (what we often call sense perception)
 - some concepts, by which we organize our experience

Kant: “Concepts without intuition are empty; intuitions without concepts are blind.”
- The Critique thus aims at determining what, within our intuition and within our concepts, are a priori:
 - The Forms of our Intuition
 - The Categories, or Concepts of our understanding
- Note on vocabulary:
 - Noumenon (pl: noumena): the external objects as they are beyond our experience – “the things in themselves”
 - Phenomenon (pl: phenomena): the external object as they are constituted in our experience – what we would call “the appearances”, even if it is misleading here because the term has some negative connotations that do not apply to the notion of phenomena in the context of Kant’s philosophy.
- Kant’s *transcendental idealism*:
 - Kant’s view is that the external things appear to us, not as they are in themselves, but as “the representations which they cause in us by affecting our senses”.
 - Such a view is not mere idealism because Kant does not deny the existence of the things in themselves.

- Such a view does not turn the whole sensible world into mere illusion either. Kant wants to show how our sensations are constructed in our intuition and our understanding into “representations”. But the crucial point is that the things in themselves *conform* to the framework within which we construct our experience. Such experience thus becomes *objective*.

So: Kant’s transcendental idealism neither denies the existence of the world outside of our minds, nor reduces our perception of such a world to mere illusion.

—→ *We want to determine the forms of our apprehension of the world – the forms of our intuition and the categories of our understanding – that make it possible for us to have some objective experience (by contrast to mere subjective perception).*

10.5.2 Space and Time: Forms of Sensible Intuition

- The problem: How is pure mathematics possible? The problem relies in that:

1. pure mathematics in a priori, not empirical, and certain
2. pure mathematics is synthetic
3. pure mathematics must exhibit its concepts in intuition (by contrast to philosophy which is discursive – or derive its notions from concepts)

It cannot be an intuition of the external objects, of the things in themselves, for then mathematics would be empirical. How can we conceive of an intuition which is not empirical?

- The Solution: Mathematics must exhibit its concepts in *pure intuition*.

Kant argues that the only way this is possible is if the intuition considered in the intuition of the *forms of our sensibility*, that is to say, the framework through which we perceive the sensible world.

- The argument:

We need to explain the possibility of pure mathematics. Pure mathematics rely on some intuition that is not empirical. Then it must rely on what’s left of an empirical intuition, once the empirical content is

stripped out of it. What is left within our intuition of external objects when the objects are not there? Once the empirical content is removed from our intuition, what is left is just the framework of our intuitions, the way in which we shape our intuitions, what Kant calls the forms of our sensibility – our ‘sensibility’ is our capacity to receive intuitions by the means of our senses.

- Now, what are the forms of our sensible intuitions? Space and Time

If we strip a given sensible representation of its empirical content (of everything which comes from our experience), what is left at the end is just space and time.

Everything that is intuited through human sensibility is in space and time.

Geometry is the science of Space, arithmetics is the science of units of time.

- Conclusion on the possibility of pure mathematics:

The conclusion is that pure mathematics is neither empirical, neither pure fiction. Instead, it is the science of the forms of our sensibility, of our sensible intuition, which precedes any actual appearance of external objects. As such, it is objective.

Only this view can account for both the scientific status of pure mathematics and its application to the world of empirical objects. Space and Time – the basis of all pure mathematics – are not properties of the things in themselves. Rather, they constitute the framework in which sensible objects appear to us.

—→ *Kant’s view is that everything that we perceive through our sensations is perceived within a spatio-temporal framework. Such a framework does not belong to the things in themselves, but constitutes the forms of human sensibility instead. According to Kant, this view is the only one which explains the possibility of pure mathematics as a science bases on intuitions which are not empirical.*

10.5.3 The Categories of the Understanding

- The Problem: How is natural science possible? The problem relies in that:

1. Natural science consists in the science of nature. What is “Nature”? Nature is the *existence* of things insofar as it is determined according to universal, necessary law. So, natural science consists in the science of the laws of nature.
2. We can gain any knowledge of the laws of nature neither a priori (we cannot know about the laws of nature *before* we have some experience of nature), nor a posteriori (no experience can provide knowledge of universal, necessary laws).
3. Natural science thus appears impossible. But *it exists*: as a matter of fact, we do possess knowledge of universal, necessary laws, E.g. “substance is permanent”, “every event is previously determined by a cause according to constant laws”.

So, how is natural science possible?

- The Solution:

1. First we must realize that natural science is not science of the *things in themselves*, but of the *objects of experience*, that is to say, the things in themselves as they appear to us. There is simply no way around the fact that there is no science of what cannot be experienced.
2. Second, we must understand that the universal and necessary laws of nature are not laws that govern the things in themselves (independently of our experience of it). Rather, they are *the laws under which the experience of objects is possible*. They form the *cognitive framework* through which we constitute our experience. That substance is permanent, or that everything has a cause, are not properties of the things in themselves, but rather are laws, or principles, thanks to which we construct the objects of experience.
3. This explains why we can *know* that there are laws of nature, and even know it a priori (from reason alone). This is because laws of nature do not belong to the external things in themselves. Rather, they are part of our own cognitive framework. But surely our own cognitive framework is knowable a priori.

→ *Trying to derive the notion of cause from our experience has proved to be an impossible task – as Hume has very well shown. That said, skepticism about cause is not the solution here. As a matter of fact, we humans all share a conception of the external world as a law-governed*

whole. This notion thus must have some objective ground. Kant claims that it is part of the cognitive framework, that all humans share, and thanks to which we constitute our experience. The ideas of universal and necessary laws of nature is a necessary condition for the constitution of objective experience.

- From Judgment of perception to judgments of experience: application of the pure concepts of the understanding, or categories.
 - Judgments of perception is only subjectively valid: I take them to be valid only for me, now. E.g. the stone is warm
 - Judgments of experience is objectively valid: I take them to be valid for everybody, always. E.g. The sun warms a stone

All judgments of experience are initially mere judgment of perception, and are then turn into objective, universal judgments (judgments of experience).¹ The question is then: what turns a judgment of perception into a judgment of experience? In other words, how does a judgment gain objectivity?

Here is how it works:

1. Through our sensibility, we get empirical intuitions, of which we become conscious.
2. Through our understanding, we provide our own concepts – the categories – that specify how our perceptions can enter our conception of nature as a unified, law-governed whole. Such concepts are not derived from experience: they are the conditions of possibility of objective experience.

These concepts are the categories. Unity, Cause, or Substance, are not notions that correspond to properties of the things in themselves. Instead, they are some of the notions through which we conceive of the world.

- The Categories: The table of categories provide the list of the 12 pure concepts through which we constitute the objects of experience. They

¹Be careful here: Kant is not saying that all judgments of perception can be turned into judgments of experience, just that all judgments of experience started off as judgments of perception, but some judgments of perception will remain so

correspond to the types of judgment that we can make (see the table of judgments in your book).

- Quantity: Unity, Plurality, Totality
- Quality: Reality, Negation, Limitation
- Relation: Substance, Cause, Community
- Modality: Possibility, Existence, Necessity

Again, these are the concepts by which we form a conception of the external world as a law-governed whole.

—→ *“The sum of the matter is this: The task of the senses is to intuit – that of the understanding is to think. But to think is to unify representations in one consciousness. This unification originates either merely relative to the subject and is accidental and objective, or is absolute and is necessary and objective....Experience consists in the synthetic connection of appearances (perceptions) in one consciousness insofar as this connection is necessary. For this reason, pure concepts of the understanding are those under which all perceptions must be subsumed before they can serve in judgment of experience, in which the synthetic unity of the perceptions is represented as necessary and universally valid”*(par. 22)

10.5.4 Ideas of Reason

Now that we have explained how both mathematics and natural sciences are possible as sciences – the former being grounded in the forms of the intuition, the latter on the categories of the understanding – we can go back to our initial question, which was to investigate to what extent metaphysics can be a science.

- What is metaphysics: reason reasoning on itself

Metaphysics is the investigation of concepts from the point of view of reason alone. That is to say, instead of analyzing our knowledge coming from other sources, reason analyzes itself, independently of any input from experience.

- As mentioned before, the investigation of the possibility of metaphysics is important because it is a natural tendency of reason

To go beyond the immanence of experience is a natural tendency of reason. This is because experience is always here and now, partial, incomplete. Reason is craving for completeness, totality. Now, the totality of experience cannot, by definition, be experienced. Hence the tendency to do metaphysics, that is, the tendency to speculate and reason about global questions of existence.

- The objects of metaphysical thinking are the ideas of reason, which have to be contrasted to the categories of the understanding

Ideas of reason: “necessary concepts, whose objects cannot be given in any experience”, E.g. “God”, “Self”, “Free Will” – that is, beings that are supposed to represent the *ultimate grounds* of everything else, that are supposed to give us a way to conceive of our experience of the universe and of ourselves as complete.

The ideas of reason are the material of dogmatic metaphysics.

- The distinction between categories of the understanding and ideas of reason is crucial: while the former are given in experience, the latter evade empirical confirmation or disconfirmation.

The result is that any examination of the ideas of reason is necessarily *dialectical*: contradictory statements can have valid proofs. This is why dogmatic metaphysics has been a failure. *It is always possible to give valid arguments on both sides of the debate!*

- The ideas of Reason, and their corresponding dialectic:

The idea of complete subject (Substances, Self)	Paralogism of Pure Reason
The idea of complete series of condition (Cosmos)	Antinomies of Pure Reason
The idea of complete totality of the possible (God)	Ideal of Pure Reason

1. Paralogism of Pure Reason: substance and the self

Reason demands that we find ultimate, permanent subjects of things.

- It is generally admitted that we only experience accidental properties with our outer intuition (external objects) and never experience the ultimate subject of all properties (external substances).
- Kant claims, contra Descartes, that the same applies concerning the idea of self – he follows Hume on this. We experience a series of “thoughts”, never the “I” that Descartes objectified. In addition, such experience ends with death. So, from experience, we can derive neither the existence nor the permanence of the self or soul.
- It follows from this that the existence of the external world and of the self are equivalently problematic or unproblematic:

- (a) That the external world and the self appear to us (in our outer and inner intuition, respectively) is “evident”
- (b) That the external world and the self exist apart from my faculty of representation is equally problematic from a metaphysical point of view.
- (c) But that the external world and the self appear to us within our representation is equally *un*problematic.

—→ *All arguments for the existence of a transcendent self, beyond the realm of experience, are fallacious arguments: paralogsms, relying on the confusion between the experience of our inner feeling of ourselves and the concept of a objective, permanent self.*

2. Antinomies of Pure Reason: cosmos

Kant identifies four antinomies of pure reason, corresponding to the four classes of categories:

- (a) The world is limited / infinite in space and time
- (b) The world consists in the simple / the composite
- (c) There are in the world free causes / only natural causes
- (d) There is a necessary cause of everything / everything is contingent

These are *antinomies*, that is to say, both thesis and antithesis can be established by equally clear, rational proofs. The result is that reason is “at odds with itself”.

Kant’s solution to the antinomies is the following:

- Concerning the first two, both the theses and antitheses are false, since they take space and time to be transcendent beings, while they are the forms of our intuition.

- Concerning the last two, both the theses and antitheses could be true, but they are mistakenly taken to be contradictory. To reconcile both views, we need to distinguish between the level of the phenomena (the appearances) and the level of the noumena (the things in themselves). One has to grant that, at the level of the phenomena, there isn't any free cause, and there isn't any necessary cause. But the level of the phenomena does not exhaust existence. In other words, the way in which the world appear to us is not necessarily reflective of the things in themselves. So, the existence of Freedom and of God, is still possible at the level of the noumena, as ultimate causes for the appearances.

3. Ideal of Pure Reason

The idea of a supremely perfect being is the paradigm of an idea of reason resulting from the demand for completeness. The problem here again relies in that reason tries to formulate argument in favor of the postulation of a transcendent being beyond the realm of experience.

In the *Prolegomena*, Kant does not enter into the details of his analysis of rational theology. For now, it suffices to say that Kant denies that the existence of God can be proved by any rational argument – ontological, cosmological or argument from design. The question of God is left to faith.

- The regulatory role of the ideas of reason

We have seen that the ideas of reason should not be taken to correspond to external things, since such things would fall beyond the realm of experience. That said, reason, and its ideas play an important cognitive role, i.e. the regulative role of requiring completeness of knowledge. The idea of completeness is the *horizon*, the momentum of our investigation of the objects of experience.

10.6 Conclusion

- Kant: a methodological revolution in metaphysics and epistemology which aims at settling down the controversy between empiricists and rationalists, between skeptics and dogmatics
- Kant's revolutionary idea is to change our point of view: instead of thinking that knowledge arises from the fact that our cognition conforms to the external world, he proposes that knowledge arises from the fact that the things in themselves conform to our cognition, thus allowing for *objective experience*.
- Metaphysics is restricted to the determination of the conditions of possibility of knowledge, that is, the conditions of possibility of objective experience, or again, the a priori framework through which we constitute our experience.
- Such a priori framework is made of the forms of our intuition (space and time) and the categories of our understanding (among which the categories of substance and causality)
- Everything else, and in particular the question of the true nature of the things in themselves, of the self, the cosmos and God, is unattainable for our reason. They pertain to the domain of faith, on which the principles of our action will be based.