Class 25: April 26
Kant's *Critique of Pure Reason*, Transcendental Aesthetic (AW 729-737)

I. Toward the Transcendental Aesthetic

Previously, I outlined the goals of Kant's *Critique of Pure Reason*.
To make room for metaphysics, he argues that, like much of mathematics and physics, it consists of synthetic *a priori* judgments.
Since these judgments are synthetic, and not analytic, they do not follow simply from conceptual analysis.
Since these judgments are *a priori*, they can not be learned from experience.
Hume's claim that we can not learn them from experience led him to skepticism.
Kant starts with the claim that we know them, and works backwards, or transcendentally, to the conditions that must obtain in order for us to have such knowledge.
Such conditions will be the necessary structures of our logic, or reasoning.

As I mentioned, we will not have time to examine all of the First Critique.
We will look at the first two parts: the transcendental aesthetic and the transcendental analytic.
These two parts correspond to two distinct functions of our psychology.
In the transcendental aesthetic, Kant discusses how objects, and the world, are given to us.
In the transcendental analytic, Kant discusses how our minds understand, or determine, that which is given.
We are presented with a world having certain properties.
Kant calls this aspect of human cognition our sensibility.
Then, we cognize that world according to certain concepts.
Kant calls this aspect of human cognition the understanding.
By examining the properties that form the foundations of all our experiences, we will find the necessary properties of our experience.
By examining the concepts that determine all our understanding, we will find the necessary properties of our thought.

II. Intuition

Let's start with a few definitions.

> The effect of an object on our capacity for representation, insofar as we are affected by the object, is *sensation*. Intuition that refers to the object through sensation is called *empirical* intuition. The undetermined object of an empirical intuition is called *appearance* (A19-20/B34, AW 729b).

Not all intuitions must be empirical.
But, in empirical intuitions we can divide the matter from the form.
The matter is what corresponds to sensation.
If I am holding a pen and looking at it, I am given some appearance in intuition.
Additionally, this appearance has certain abstract properties, a form.
The particulars of the form of this appearance are unique to my experience of the pen.

But the general properties of the form of appearances are properties of all such experiences.
All experiences take place in space and in time.
My experience of the pen is necessarily given in intuition in both space and time.

Some intuitions contain no empirical matter.
These are pure intuitions.
We can consider pure intuitions by performing what might be thought of as Lockean abstraction.
It is the kind of abstraction that Berkeley did not disallow, the consideration of some properties of an idea, rather than others.
We can consider pure intuitions by thinking about intuitions without any matter.

> If from the representation of a body I separate what the understanding thinks in it, such as substance, force, divisibility, etc., and if I similarly separate from it what belongs to sensation in it, such as impenetrability, hardness, color, etc., I am still left with something from this empirical intuition, namely, extension and shape. These belong to pure intuition, which, even if there is no actual object of the senses or of sensation, has its place in the mind *a priori*, as a mere form of sensibility (A20-1/B15, AW 730a).

Note Kant's method here
While we arrive at our consideration of pure forms of intuition by a method something like abstraction, Kant does not claim that our knowledge of space (and time) is derived from abstraction.
We are discovering that knowledge of space and time is necessarily presupposed in any empirical intuition.
The psychological process of considering abstraction is different from the transcendental argument.

III. The Intuition Installment of the Copernican Revolution

Kant claims that there are two underlying forms of all intuitions: space and time.
We represent objects as outside of us using our outer sense.
All objects outside of us are represented as extended in space; space is the form of outer sense.
We represent objects according to our inner sense as in time.
Kant argues that both space and time are, and must be, presupposed in our experiences.

> The representation of space must already be presupposed in order for certain sensations to be referred to something outside me (i.e. referred to something in a location of space other than the location in which I am)...We can never have a representation of there being no space, even though we are quite able to think of there being no objects encountered in it. Hence space must be regarded as the condition for the possibility of appearances... (A23-4/B38-9, AW 730b-731a).

Similarly, time must be presupposed for all experiences.

> Simultaneity or succession would not even enter our perception if the representation of time did not underlie them *a priori* (A30/B46, AW 733a).

Note how Kant's argument for the presupposition of space and time recalls Plato's argument for the doctrine of recollection, or *anamnesis*.
In *Phaedo* 74 et seq., Plato argues that our knowledge of equality can not come from looking at equal

things.
All things are unequal in some way.
Even if we were to find some perfectly equal things, like atoms, our concept of equality could not come from our experiences with them.
Thus, we must presuppose an idea of the equal in our claims that two objects are equal, and can not learn that concept from unequal objects.
Similarly, Kant is arguing that our experiences with objects presuppose that they are given in space and time.

The argument for space and time being *a priori* forms of intuition is thus Kant's Copernican revolution applied to intuition.
The idea of a possible experience occurring outside of space or time is nonsense.
Instead of despairing of learning of space and time from experiences which presuppose it, Kant inverts his account to make space and time subjective forms of intuition.
They are ways in which we structure the world of things in themselves, not ways in which the world exists in itself.
They are properties of appearances, which are the objects of our empirical intuition.

IV. Transcendental Idealism and Empirical Realism

Taking space and time to be forms of intuition, Kant extends Hume's claims about causation.
Hume reinterpreted 'cause' as referring to a mental phenomenon.
Kant takes space and time to be forms of our intuition, rather than things in themselves.
Consequently, Kant is able to take objects in space and time to be empirically real.

> Our exposition teaches that space is *real* (i.e. objectively valid) in regard to everything that we can encounter externally as object, but teaches at the same time that space is *ideal* in regard to things when reason considers them in themselves, i.e., without taking into account the character of our sensibility. Hence we assert that space is *empirically real* (as regards all possible outer experience), despite asserting that space is *transcendentally ideal*, i.e., that it is nothing as soon as we omit [that space is] the condition of the possibility of all experience and suppose space to be something underlying things in themselves (A28/B44, AW 732b).

The twin doctrines of empirical realism and transcendental idealism are at the center of Kant's philosophy.
We can say nothing of the noumenal world of things in themselves, not even that they are in space and time.
Berkeley's empirical (or material) idealism made the mistake of denying an outer, material world on the basis of the transcendence of the noumenal world.
The rationalists, as transcendental realists, made the mistake of asserting knowledge of things in themselves.
Kant's claim is that we can have significant knowledge of an external world (of appearances) without claiming any knowledge of the noumenal world.
Space and time are properties of our representations of the world, and not the world as it is in itself.

Kant's transcendental exposition of space and time explains how we can have certainty of both geometry and pure mechanics.

Geometry is the study of the form of outer sense, of pure, *a priori* intuitions of space.
Pure mechanics is the study of the form of inner sense, time.

> Only in time can both of two contradictorily opposed determinations be met with in one thing: namely, *successively*. Hence our concept of time explains the possibility of all that synthetic *a priori* cognition which is set forth by the - quite fertile - general theory of motion (A32/B48-9, AW 734a).

Arithmetic, too, depends essentially on construing addition as successions in time.
But, constructing numbers in intuition requires the synthetic unity of apperception behind the categories of the understanding.
I'm not sure that that sentence makes any sense, but we will get to Kant's view on numbers, later.

V. From Intuition to Understanding

We saw that Kant separates two faculties of cognition: sensibility (the faculty of intuition) and understanding.
There are two pure forms of intuition, space and time, which are not things in themselves, nor properties of things in themselves, but presuppositions we must impose on all our possible experience.
The faculty of intuition is what gives us appearances.
But, appearances are just the raw data, the content, of experience.
Our intuitions are passive.
The raw data of intuition is processed in the understanding by the imposition of concepts.

> All our intuitions, as sensible, rest on our being affected; concepts, on the other hand, rest on functions. By *function* I mean the unity of the act of arranging various representations under one common representation (A68/B93, AW 738b).

This act of arranging what is given in intuition is what Kant calls synthesis of the manifold.
This synthesis is then cognized by the structured application of concepts in the understanding.
If the synthesis is empirical, then we have an ordinary empirical cognition, like the judgment that it is raining.
If the synthesis is pure, then we can arrive at pure concepts of the understanding, which are nevertheless the conditions of possible experience.
Intuition and understanding thus work together to produce experience.

> Thoughts without content are empty; intuitions without concepts are blind (A51/B76, AW 737b).

The transcendental aesthetic consists of Kant's explications of the pure intuitions of space and time.
The transcendental analytic is the much-longer explication of the categories of the understanding, how we impose our conceptual apparatus on what is given in intuition.

What is given in intuition is not necessarily structured by the understanding.
We are given appearances without any conceptual structure.
We are just given appearances in space and time.

> Appearances might possibly be of such a character that the understanding would not find them to conform at all to the conditions of its unity. Everything might then be so confused that, e.g., the sequence of appearances would offer us nothing providing us with a rule of synthesis and thus corresponding to the concept of cause and effect, so that this concept would then be quite empty, null, and without signification. But appearances would nonetheless offer objects to our intuition; for intuition in no way requires the functions of thought (A90-1/B 123, AW 744a).

In order to think about appearances, we have to cognize them.
We cognize using whatever conceptual apparatus we have.
That conceptual apparatus is subjective, in that it belongs to us individually.
But it is also objective, if not noumenal, because the world of objects is precisely the world of appearances, what is given in intuition.