Immanuel Kant,
Analytic and Synthetic
Prolegomena to Any Future Metaphysics
Preface and Preamble
Innate vs. a priori

Philosophers today usually distinguish psychological from epistemological questions.

Psychology deals with factual questions about the human mind: How do real human beings come to believe what they do?

Epistemology deals with normative questions: Which of our beliefs are actually justified? What do we actually know?

Compare: moral claims vs. claims about how people actually behave

Innate principles: ideas or beliefs which are hard-wired into the human mind (psychological question)

a priori knowledge: beliefs whose justification doesn’t come from experience (epistemic question)

Could there be...

...innate ideas which don’t amount to a priori knowledge?
...a priori knowledge which is not innate?
Immanuel Kant (1724 - 1804)

- born and raised in Königsberg, Prussia
- never traveled, lived by strict routine (apocryphal?)

- a philosopher’s philosopher
- wanted to demarcate autonomous sciences of metaphysics and morals

- known for his depth, but also for his obscurity

- was a “late bloomer”
Kant’s Prolegomena, Is Metaphysics Possible?
Preface
The Critique of Pure Reason

- In his mid-40s, Kant was a well-established, if conventional scholar. But then Hume “disturbed [Kant’s] dogmatic slumbers.”
- Kant spent a decade in isolation, developing a new foundation for metaphysics.
- Like Hume’s *Treatise*, Kant’s *Critique* was largely ignored and misunderstood.
- Unlike Hume, Kant gradually came to be seen as a great philosopher in his later years.
Why write the Prolegomena?

- The *Critique* was long, dry, and difficult.
  - Kant says this was necessary, because the goal was to actually develop a science of metaphysics.
  - Additionally, his goal was to develop it by a “synthetic,” or progressive, method—starting at the foundations and building up.

- The *Prolegomena* will be easier to follow, but this has costs.
  - Kant is only promising a science of metaphysics, without actually providing it.
  - He is following an “analytic,” or regressive, method—which assumes the metaphysical results and then moves backwards to discover their sources.

- Important note: In this context, the meaning of “analytic” and “synthetic” is different from what Kant usually means.
Is metaphysics possible?

- We’ve seen in Descartes and Leibniz:
  - A priori proofs of God’s existence
  - A priori proofs of the universal laws of cause and effect
  - A priori proofs of indivisible monads, of material and immaterial substances, of essences

- Kant is worried. In the 150 years since Descartes, natural science has made tremendous progress. And mathematics has been in great shape for millennia.

- In contrast, a priori metaphysics hasn’t reached any definite conclusions.

- Before we can make progress in metaphysics, we have to ask: How is a priori metaphysics even possible?
Hume’s skeptical challenge

- Hume argued that we cannot get the idea of necessary connection from experience—only constant conjunction.

- But Hume also argued that causal relations cannot be known a priori, since they are not mere Relations of Ideas.

- Kant sees this as a general problem for metaphysics:
  - On one hand, metaphysical truths would have to be a priori.
  - But on the other hand, it’s hard to see how you could have a priori knowledge of anything other than Relations of Ideas.

- Kant hopes to answer Hume’s skeptical challenge—not accept it, as Hume did.

- The first step is to refine Hume’s distinction between Matters of Fact and Relations of Ideas.
Review of Locke slide: The extent of our comprehension

- We need to know our own limits.

- This will be useful for finding a middle ground between skepticism and overconfidence.

- This is just like how a sailor should know the length of his line.

- Questions: What does the ‘line’ in this metaphor represent? What about the ocean?
Kant’s *Prolegomena*,
A posteriori synthetic cognition

Preamble
Analytic vs. Synthetic

In an analytic judgment, the predicate is contained in the subject.
- The contrary is a contradiction in terms.
- Analytic judgments are merely explicative. They don’t say anything substantive. They are empty tautologies.
  - Examples: All bachelors are bachelors. All bachelors are men. Gold is a yellow metal.

In a synthetic judgment, the predicate adds something to the subject.
- The contrary may be wrong, but it is not a contradiction in terms.
- Synthetic judgments are ampliative. They actually say something substantive.
  - Examples: Most bachelors have roommates. Gold has an atomic number of 79.
A judgment is *a priori* if its justification does not rely on the content of your experiences (i.e., if it isn’t based on empirical evidence).

- Examples: Bachelors are unmarried. Triangles have interior angles which sum to 180 degrees. $5 + 7 = 12$.

A judgment is *a posteriori* if its justification does rely on the content of your experiences.

- Examples: Most bachelors have roommates. Triangles are used as yield signs. I have 5 dimes and 7 nickels in my pocket.

Question: What about ‘I have a headache’? ‘I am a thinking thing?’
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<th>analytic</th>
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<tr>
<td><strong>a priori</strong></td>
<td>Relations of Ideas</td>
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<tr>
<td><strong>a posteriori</strong></td>
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<td>Matters of Fact</td>
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**Kant vs. Hume**

Is synthetic knowledge possible a priori?
How is synthetic a priori knowledge possible?

- We can have a posteriori knowledge of synthetic truths.
  - For example, we can know that the cat is on the mat by observing that it is.

- We can have a priori knowledge of analytic truths.
  - For example, we can know that all bachelors are men a priori because this proposition simply follows from the definition of ‘bachelor.’

- But how could you know synthetic truths a priori? That is, how could you gain substantive knowledge of the world without appealing to empirical evidence?
How is a science of metaphysics even possible?

- If metaphysical truths are analytic, then metaphysics is just a set of trivial definitions.

- But metaphysical claims about monads and God and essences seem impossible to confirm through experience.

- So, if knowledge of substantive metaphysical truths is possible, synthetic a priori knowledge must be possible.

- So, if knowledge of metaphysical truths is so much as possible, a priori knowledge of synthetic truths must be possible.
Example: Kant on Hume’s problem of induction

- Kant agrees that experience only presents us with the conjunction of events, not their connection.
  - So, knowledge of causation cannot be a posteriori.

- Kant also agrees that causal judgments (e.g. ‘if ball 1 moves thus and so, then ball 2 moves thus and so’) are not analytic.

- Kant’s idea is that causal judgments are synthetic a priori. That is, they amount to genuine a priori knowledge (not just blind habit), even though they are not analytic.
  - This appears in the Second Part of the *Prolegomena*. 
Kant on geometry and arithmetic

- Kant: We know that a priori knowledge of synthetic truths must be possible, because it is actual.

- 7+5=12: My concept of the sum of 7 and 5 does not include my concept of 12, in the sense that my concept of bachelor contains the concept of man.

- The shortest path between two points is a straight line: My concept of shortness is quantitative, while my concept of straightness is purely qualitative. So my concept of the shortest path between two points does not contain the concept of straightness.

- Question: Does this seem convincing to you?
Descartes review: Imagination vs. understanding

- Triangles...
  - can be imagined.
  - can be understood.

- Chiliagons, myriagons...
  - cannot be imagined.
  - can be understood.

- So, understanding ≠ imagination.

- Imagination represents spatial extension.
Concepts and intuitions

- **Concepts**: representations of the pure understanding

- **Intuitions**: sensory representations, including representations of the imagination

- synthetic: the concept of the predicate isn’t contained in the concept of the subject
Kant’s goals in the *Prolegomena*

Kant says he will try to answer four questions:

1. How is pure mathematics possible?
2. How is pure natural science possible?
3. How is metaphysics in general possible?
4. How is metaphysics as a science possible?

In the First Part, Kant will argue that “pure mathematics” (i.e., a priori arithmetic and geometry) is possible only if we accept *transcendental idealism*.

He will then argue that transcendental idealism answers Hume’s skeptical doubts about causation, and makes metaphysics possible in general.

We’ll focus on the First Part, because it is the most concrete illustration of transcendental idealism.