

Philosophy 427
Intuitions and Philosophy

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Class 3: Positivism

Rationalist Foundations

- We saw that Descartes had difficulties establishing his definitions as given.
- Worse problems infect his postulates.
- Descartes's project is just one attempt to construct rational foundations for all knowledge.
- Perhaps a better set of foundations would be successful.
- That is, are the problems we saw emblematic of foundationalism, or just specific to Descartes's formulation?

Locke

- Also seeks firm foundations, and clear and distinct knowledge
- Bases all knowledge on sense experience
- The human mind starts as a tabula rasa
- Locke avoids relying on Descartes's contentious proofs of God's existence, his allegations about the connections between ideas and objects, about formal and objective realities, and about causation.
- “These simple ideas, the materials of all our knowledge, are suggested and furnished to the mind only by those two ways above mentioned, viz. sensation and reflection” (Locke, 34).
- Hume: “But though our thought seems to possess...unbounded liberty, we shall find upon a nearer examination that it is really confined within very narrow limits, and that all this creative power of the mind amounts to no more than the faculty of compounding, transposing, augmenting, or diminishing the materials afforded us by the senses and experience” (*Enquiry*, §2).

Building a smaller house

- Berkeley denied the existence of a material world.
- Hume denied any knowledge of God, and other metaphysical claims.
- “When we run over libraries, persuaded of these principles, what havoc must we make? If we take in our hand any volume--of divinity or school metaphysics, for instance--let us ask, Does it contain any abstract reasoning concerning quantity or number? No. Does it contain any experimental reasoning concerning matter of fact and existence? No. Commit it then to the flames, for it can contain nothing but sophistry and illusion” (*Enquiry*, §12).

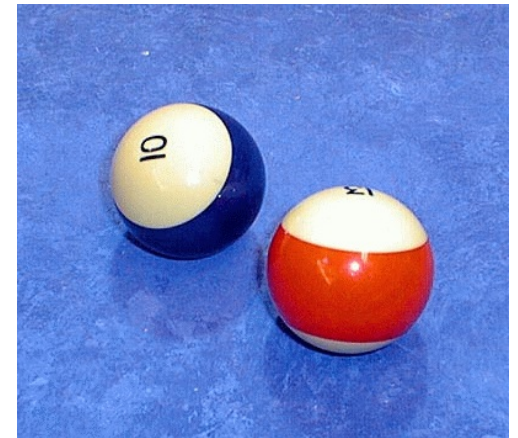


Hume's widespread and profound skepticism

- Scientific generalizations which do not limit themselves to past observations go beyond sense evidence.
- Physical laws like Newtonian gravitation, or the gas laws, go beyond experimental evidence.
- We have no sense impressions of causal connections

The problem of induction

- Here is an instance of the problem:
 - I1. I have seen one billiard ball strike another many times.
 - I2. Each time the ball which was struck has moved, motion was transferred.
 - IC. So, the struck ball will move this time.
- The conclusion of this argument does not follow from the premises.
- We can add a third premise ensuring the uniformity of nature.
 - I3. The future will resemble the past.



On the smaller empiricist house

- By limiting the extent of what we call knowledge, the empiricists improved their chances of deriving all knowledge from sense experience.
- But, empiricist principles deny that we have very much knowledge at all.
- Perhaps the most secure area of knowledge, mathematics, seems most distant from sense experience.
- Mathematics seems especially distant from sensation in the post-Cartesian world, since the development of analysis led to algebra replacing geometry as the foundation of mathematics.
- Descartes over-reached on his foundation, but was able to build a massive structure, including all of mathematics and the new science, as well as the old religion.
- The empiricists appear to have a firmer foundation, but a smaller edifice.

Positivism and empiricism

- British empiricism plus logic?
- A systematic justification for our scientific beliefs, relying only on sense experience
- Hume and Locke were content to imagine how all our knowledge could be grounded in sense experience.
- The positivists tried actually to trace the line between science and sense data.
- The new logic of Frege, Russell, and Wittgenstein gave Hume's claim that mathematics is the relation of ideas a plausible interpretation.
- Carnap's 1928 *Aufbau: The Logical Structure of the World*.
 - ▶ attempts to develop scientific theory, using the tools of logic, out of sense-data, or sense experiences.
 - ▶ If the project were to succeed, Descartes's dream of a firm foundation for science could be achieved without appeal to anything like rational insight (or intuition).

Against Hegelian idealism

- Pseudo-problems, pseudo-questions, meaningless language, and controversial epistemology
 - A. The meaning of life
 - B. The existence (or non-existence) of God
 - C. Whether the world was created, with all its historical remnants and memories, say, five minutes ago
 - D. Why there is something rather than nothing
 - E. Emergent evolutionary theory, and the *elan vital*
 - F. Freudian psychology
 - G. Marxist theories of history
- Verificationist theory of meaning: for a sentence to be meaningful, it must be verifiable on the basis of observation.
- Any sentence which is unverifiable, like any of the examples A-G above, is meaningless.
- The challenge for the positivists was to clarify what it meant to verify a sentence.

Wittgenstein's *Tractatus*

- The culmination of the enterprise of logical analysis begun by Frege
- Wittgenstein seeks the limits of language, in distinguishing between what can and what can not be said.
- Melchert on the difficulty of this project, p 610-1.
 - ▶ How can we think about the boundary of thought?
 - ▶ What is outside of the boundary is inaccessible to us.



The picture theory

- Both the world and our language consist of independent atomic elements, which are combined according to strictly logical principles.
- The world is a collection of independent states of affairs.
 - ▶ So, if I am standing to the right of you, we have, let's say, two atomic facts (my standing and your standing) and a logical relation (to the right of) between those facts, §1.2 and §2.06 (p 615).
- Language consists of atomic statements of those facts, connected (into more complex statements) by logical principles.
- The structure both of language and of the world is governed by strict logical rules, like those depicted in the truth tables which he originated in the *Tractatus*, §4.31.
- Language provides a picture of the world, and mirrors the world by providing logical structure which is somehow related (isomorphic to) to the structure of the world, 2.16 (p 612).

Analysis and atomism

- My standing in a place is not an atomic fact, it is a complex fact.
 - ▶ I am a complex
 - ▶ standing is a complex
 - ▶ you are a complex
- The true analysis of the world will involve analyzing these complexes into their simple (atomic) components.
- Wittgenstein never gives a clear example of an atomic fact.
 - ▶ The color of a spot in my field of vision?
- The representations of atomic facts are the foundational elements of the *Tractatus*.
 - ▶ the postulates of Euclidean geometry
 - ▶ or of Descartes's synthetic presentation of the *Meditations*
- A theory of the world that analyzed all of the myriad complexes into their atomic elements would present a veridical and secure picture of the world.
- Analytic philosophy

Logical truth

- In propositional logic, all logical truths are tautologies, complex statements which are true no matter the truth values of their component variables.
- We might, with Descartes, characterize these statements as necessary truths.
 - ▶ the certainty of logic and mathematics provided essential support to his claim that our minds have substantial content built into their structures.
 - ▶ From the claim that logic and mathematics are innate, it is reasonable to ask whether there are other innate ideas, including the idea of God.
- Wittgenstein calls them nonsense.
- The only statements that can picture the world are those that have sense, that can be either true or false, that can picture accurately or not.
- Tautologies are empty of content, §4.46 (p 617).
- There can never be surprises in logic, §6.1251 (p 618).

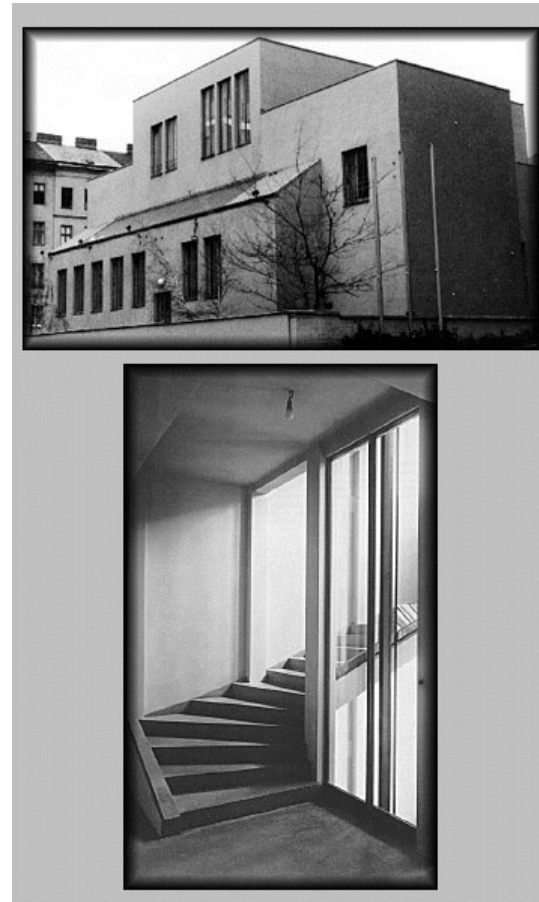


Tautologies resist foundations, §6.127

- If they can not be placed into an order, they are outside of the realm of knowledge.
- But, they are not unknowable in the way that, say, God's goodness would be unknowable, or whether we have free will.
- They are unknowable because they are too thin to be objects of knowledge.
- They don't picture any fact.

Wittgenstein's house

- Notice the affinity between Wittgenstein's project of providing limits to thought (or expression) and Hume's smaller house.
- Like Hume, Wittgenstein wants to carefully circumscribe what we can know, and justify that, and only that.
- For our purposes, the more interesting project is the justification, rather than the circumscription.



Positivism, in the wake of the Tractatus

- Vienna Circle:
 - ▶ Rudolph Carnap
 - ▶ Otto Neurath
 - ▶ Moritz Schlick
 - ▶ Herbert Feigl
- Berlin Circle, around the physicist Hans Reichenbach
- The young A.J. Ayer visited Vienna from England and wrote about the movement he found there.
- The positivists saw the picture theory as accommodating a scientific view of the world.
- Scientific laws, for example, were mere generalization over, and reducible to, the separable atomic facts.

Principle of Verification

- All our legitimate claims are traceable to a core set of claims which refer only to things or events that we can experience.
- There is a class of empirical propositions of which it is permissible to say that they can be verified conclusively. It is characteristic of these propositions, which I have elsewhere called “basic propositions,” that they refer solely to the content of a single experience, and what may be said to verify them conclusively is the occurrence of the experience to which they uniquely refer... Propositions of this kind are “incorrigible,”...[in that] it is impossible to be mistaken about them except in a verbal sense (Ayer, *Language Truth and Logic*, p 10).
- “There is nothing in these circumstances which is allowed to count as one’s being factually mistaken” (36).
- “There is nothing fallible about the experience itself. What may be wrong is only one’s identification of it” (38).
- All and only meaningful statements will be analytic, observable, or derivable (using logic) from observable axioms.

Holism I

- “It is obvious that truth in general depends on both language and extralinguistic fact. The statement “Brutus killed Caesar” would be false if the world had been different in certain ways, but it would also be false if the word “killed” happened rather to have the sense of “begat.” Hence, the temptation to suppose in general that the truth of a statement is somehow analyzable into a linguistic component and a factual component. Given this supposition, it next seems reasonable that in some statements the factual component should be null; and these are the analytic statements. But, for all its a priori reasonableness, a boundary between analytic and synthetic statements simply has not been drawn” (Quine, “Two Dogmas of Empiricism,” 70).
- This problem with the analytic/synthetic distinction is connected to the interconnectedness of individual statements, their involvement with a broader theory, in contrast to Wittgenstein’s atomism.

Holism II

- “In the language of science, and for similar reasons even in prescientific discourse, a single statement usually has no experiential implications. A single sentence in a scientific theory does not, as a rule, entail any observations sentences; consequences asserting the occurrence of certain observable phenomena can be derived from it only by conjoining it with a set of other, subsidiary, hypotheses” (Hempel, “Empiricist Criteria of Cognitive Significance: Problems and Changes,” 56).
- The meaning of a single expression is “elliptical”, incomplete on its own.
- It requires, for its meaning, reference to an entire linguistic framework, a theoretical context which forms the background to that expression.
- Semantic holism: the unit of empirical significance is not the individual sentence, but the entire theory.

Problems of atomism in the *Tractatus*

- 6.3751. It is clear that the logical product of two elementary propositions can neither be a tautology nor a contradiction. The statement that a point in the visual field has two different colors at the same time is a contradiction.
- Consider
 - ▶ 1. The spot is red and blue.
 - ▶ 2. The spot is red.
 - ▶ 3. The spot is not blue.
 - ▶ 4. The spot has a color.
 - ▶ 5. The spot is green.
- 1 is a contradiction.
- 2 and 5 are incompatible.
- 2 entails 3 and 4.
- That is, there are logical relations among these propositions, even though they are elementary.
- See Jerrold Katz, “The Problem in Twentieth-Century Philosophy.”

Crumbling foundations

- We have looked at the most ambitious foundationalist programs, both rationalist and empiricist.
- The rationalist program ran into troubles immediately, giving contentious definitions and indefensible postulates.
- The empiricist program assumed that there are atomic facts to which all of our knowledge could be reduced.
- But, for both kinds of projects, the starting points do not seem to have the authority that their proponents impute to them.
- If the foundations are weak, we are back to the position of Descartes, at the beginning of the *Meditations*, unsure of what to believe.