

Knowing and the Known:

An Introduction to the Philosophy of Social Science

Lecture 2: Positivism and Neopositivism

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Road map

1. the European Enlightenment as a knowledge project
2. verification and falsification
3. the "neo" in neopositivism

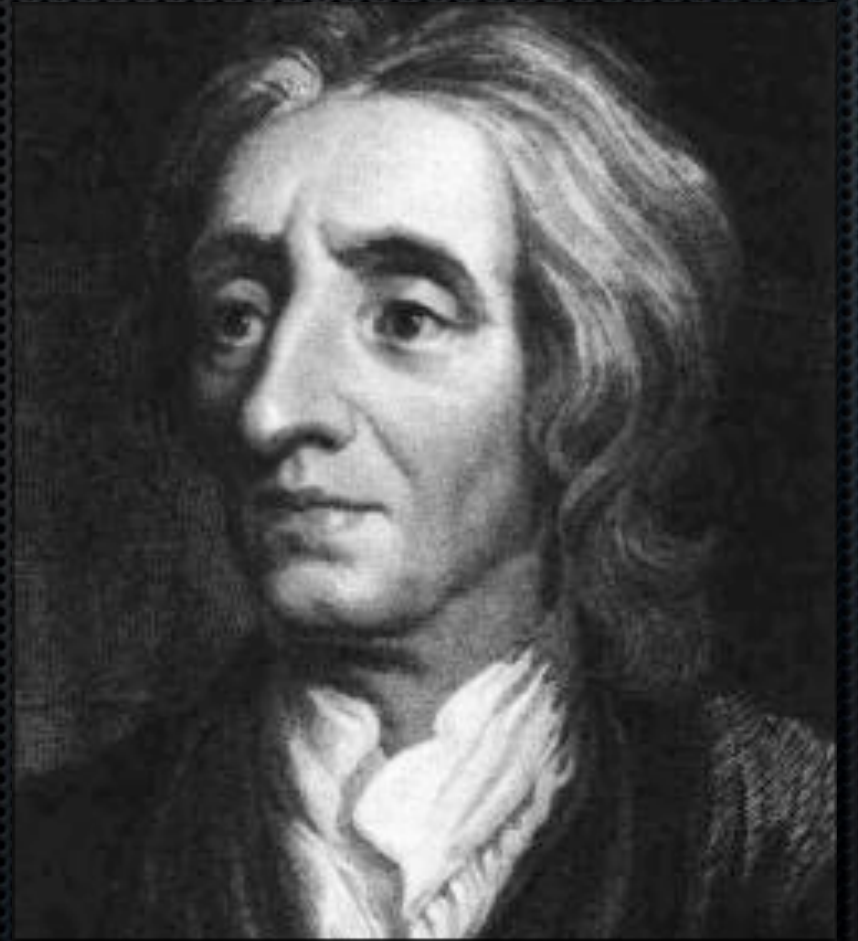
Descartes

- ✦ religion and science
- ✦ quest for absolute certainty...
- ✦ ...through radical doubt
- ✦ needs God to restore worldly knowledge
- ✦ leaves us with anxious individuals



Empiricism

- ground knowledge in sense experience
 - Locke: “no innate ideas”
 - reduce complex notions to sense-perceptions
 - experimental techniques a refined form of sensation
- no easy way to account for unobservables (Hume key here)
 - the self
 - causality



Rationalism

- ✦ ground knowledge in the basic operations of (human) reason and mind
 - ✦ Kant: *a priori* notions, like space and time and causation
 - ✦ experimental techniques reveal laws...
 - ✦ ...philosophy formalizes those laws and makes them available
- ✦ critiques empiricism for being relativist
- ✦ depends on assent to the analysis of reason

KNOWLEDGE

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graph TD; KNOWLEDGE --> rationalism; KNOWLEDGE --> empiricism; rationalism --> Descartes; rationalism --> Kant; empiricism --> Hume; empiricism --> Locke; Kant --- Hume; subgraph science; Kant; Hume; end
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rationalism

empiricism

Descartes

Kant

Hume

Locke

"science"

Wittgenstein

- ✦ the only valid knowledge comes from empirical science
- ✦ philosophy and logic are tools for separating metaphysics and truth
- ✦ “the world is the totality of facts, not of things”



Logical Positivism: The Vienna Circle

- empiricist in its privileging of empirical knowledge
- rationalist in its privileging of the logical form of linguistic references
- relentless in its critique of metaphysics
 - no such thing as ethical/aesthetic knowledge
 - nothing unobservable could possibly be real
- unlike Wittgenstein, a focus on the *sayable*





Wittgenstein's house

Vienna, Austria



Wittgenstein's house

Vienna, Austria



Wittgenstein's house

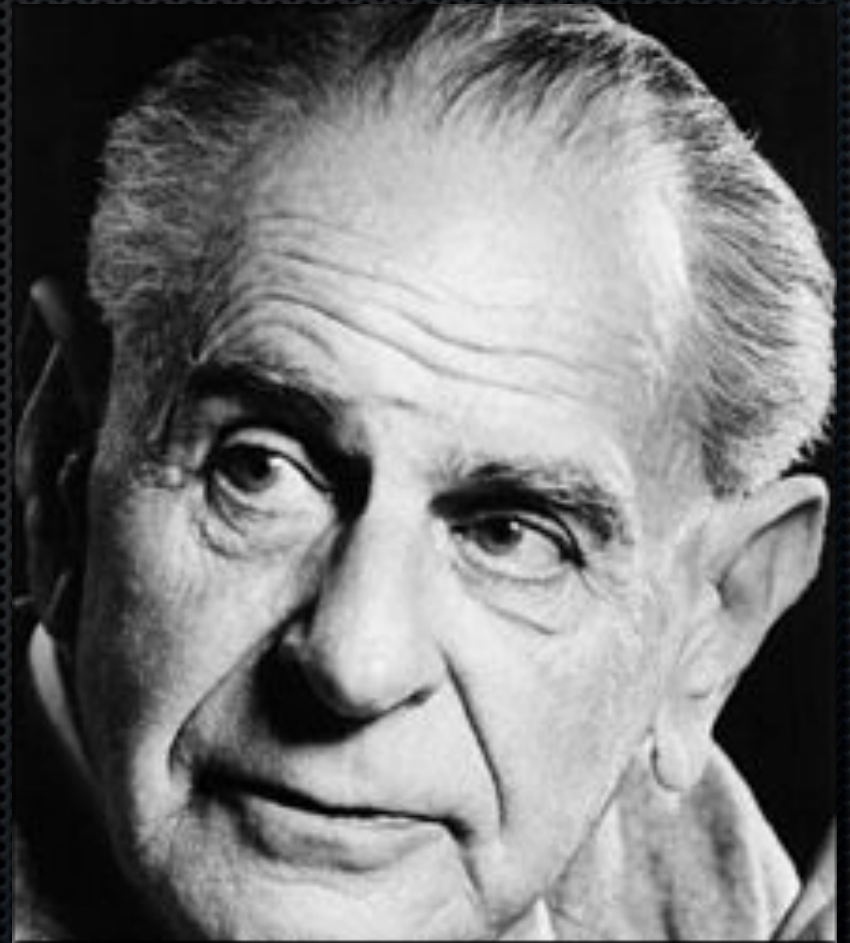
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Verifiability and demarcation

- ✧ unverifiable statements *have no sense*
 - ✧ verifiable = observable implications
 - ✧ empirical evidence determines whether a statement is true
 - ✧ logical form of the statement gives *truth conditions*
 - ✧ purest logical form can be probabilistic
- ✧ science can be definitively bounded

Falsifiability

- ✦ inverts the positivist position
- ✦ Popper: *all* knowledge is conjectural; *none* is certain
- ✦ empirical testing is continual
- ✦ retains the emphasis on observable implications
- ✦ converts metaphysics into a source of hypotheses



The practice of science

- ✧ history of science is not a linear story
 - ✧ falsification doesn't always drive changes
 - ✧ now-accepted theories often start out "falsified"
 - ✧ shifts in background assumptions and techniques
- ✧ falsification is thus falsified by the history of scientific practice...
- ✧ ...*even though scientific practice is successful*

The commonsensical hybrid

- ✦ Popper captured and wrote the self-narrative of many practicing natural scientists
- ✦ migrated or was imported into the social sciences
- ✦ there is no *necessity* in Popper for quantification
 - ✦ quantification is harmonious with older positivism
 - ✦ older positivists ended up in exile in the United States
- ✦ thus, *neopositivism*: falsification plus the analysis of logical form, and a preference for numbers

Neopositivism

- ✦ rests on two basic philosophical claims:
 1. valid knowledge mirrors the world
 2. valid knowledge is knowledge of observables
- ✦ hypothesis-testing by specifying observable implications *makes no sense* without these
- ✦ thus there are *wagers* here about how the mind is connected to the world