Constructing the World

Lecture 1: A Scrutable World

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Plan

*1. Laplace's demon

2. Primitive concepts and the *Aufbau*

3. Problems for the *Aufbau*

4. The scrutability base

5. Applications

Laplace's Demon

"An intellect which at a certain moment would know all forces that set nature in motion, and all positions of all items of which nature is composed, if this intellect were also vast enough to submit these data to analysis, it would embrace in a single formula the movements of the greatest bodies of the universe and those of the tiniest atom; for such an intellect nothing would be uncertain and the future just like the past would be present before its eyes."

Pierre-Simon Laplace, 1814

Laplacean Truths

- Laplacean truths = fundamental laws and current positions of all fundamental entities
- Laplacean intellect = an intellect vast enough to submit these data to (ideally rational) analysis

Laplace's Demon Revisited

"For a Laplacean intellect who knew all the Laplacean truths, nothing would be uncertain."

Laplacean Scrutability

- For all true propositions *p*, a Laplacean intellect who knew all the Laplacean truths would be in a position to know *p*.

Problems for Laplace's Demon I

- Indeterminism: physical truths at a time not enough?
- Mental truths: physical truths across time not enough?
- Self-locating truths: objective truths not enough?
- Negative truths: positive truths not enough?
- Moral truths, mathematical truths, metaphysical truths?

Expanding the Base

- Fix: expand the base.
- Add e.g.
  - physical truths across time
  - mental truths
  - indexical truths
  - a that's-all truth
  - ...

Empirical Scrutability

- There is a compact class of truths such that for all true propositions *p*, if a Laplacean intellect knew all the truths in that class, it would be in a position to know *p*.

[compact = small set of concepts, no trivializing mechanisms]

Problems for Laplace's Demon II

- Paradox of complexity: The demon's mind is as complex as the universe containing it.
- Paradox of prediction: The demon will know its own future actions.
- Paradox of knowability: A single unknown truth *q* yields an unknowable truth *q and no-one knows q.*

Conditionalizing

- Fix: put the demon's knowledge in conditional form.
- Then the demon needn't inhabit the universe that it is scrutinizing.

Conditional Scrutability

- There is a compact class of truths such that for any true proposition *p*, a Laplacean intellect would be in a position to know that *if* the truths in that class obtain, then *p*.

A Priori Scrutability

- There is a compact class of truths such that for any true proposition *p*, it is knowable a priori (by a Laplacean intellect) that if the truths in that class obtain, then *p*.

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Primitive Concepts

"For all our complex ideas are ultimately resolvable into simple ideas, of which they are compounded and originally made up, though perhaps their immediate ingredients, as I may so say, are also complex ideas."

John Locke, 1690

Wierzbicka's Natural Semantic Metalanguage

- substantives: *I, you, someone, people, something, body*
- determiners: *this, the same*
- quantifiers: *one, two, some, all, many/much*
- evaluators: *good, bad*
- descriptors: *big, small*
- augmentors: *very, more*
- mental predicates: *think, know, want, feel, see, hear*
- speech: *say, words, true*
- action and events: *do, happen, move, touch*
- existence and possession: *there is/exist, have*
- life and death: *live, die*
- time: *time, now, before, after, long time, short time, for some time, moment*
- space: *place, here, above, below, far, near, side, inside, touching*
- logic: *not, maybe, can, because, if*
- similarity: *like*

A Sample Analysis

X *lied* to Y =

- X said something to person Y;
- X knew it was not true;
- X said it because X wanted Y to think it was true;
- people think it is bad if someone does this.

The *Aufbau*

- In *Der Logische Aufbau der Welt* (1928), Carnap proposes a single nonlogical primitive: recollected phenomenal similarity
- He ultimately proposes that we can dispense with this primitive, yielding only logical primitives
- All other expressions can be defined in terms of these primitives.

Carnap's Construction of the World

- Carnap defines qualia in terms of phenomenal similarity
- He defines spacetime in terms of qualia
- He defines behavior in terms of spacetime
- He defines other minds in terms of behavior
- He defines culture in terms of behavior and other minds.

Definability Thesis

- There is a compact class of primitive expressions such that all expressions are definable in terms of expressions in that class.

Definitions

- Definitions
  - e.g. ‘For all x, x is a bachelor iff x is an unmarried man’.
  - Must have an appropriate logical form.
  - Must meet conditions of adequacy: truth, analyticity, apriority, necessity, conceptual priority, finiteness, ...?

Definitional Scrutability

- There is a compact class of truths such that for any truth S, S is logically entailed by truths in that class along with adequate definition sentences.

A Priori Scrutability

If definitions are required to be a priori, then Definitional Scrutability entails a version of A Priori Scrutability

- There is a compact class C of truths such that all truths are logically entailed by C-truths along with a priori truths.

Likewise for Analytic Scrutability, Necessary Scrutability, etc.

Carnapian Scrutability

- All truths are definitionally scrutable from truths in logical vocabulary (plus phenomenal similarity).
- There is a world-sentence that entails everything: e.g.
  - ∃x ∃y ∃z ... (Rxy & Rxz & ~Ryz ...)

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Problems for the *Aufbau*

- Goodman: definition of qualia fails
- Quine: definition of spacetime fails
- Newman: logical construction is vacuous
- Quine: no analytic/synthetic distinction
- Kripke: names inequivalent to descriptions
- Many: most expressions are undefinable

Responding to the Problems

The first three problems are problems only for Carnap's very limited bases

- Expand the base!

The last two (or three?) problems are problems only for Carnap's definitional entailment relation

- Weaken the relation!

A revised Aufbau thesis

Where Carnap said

- All truths are definitionally entailed by logical/phenomenal truths

It's still viable to say

- All truths are a priori entailed by a compact class of truths

Problems for Definitions

- The counterexample problem: For many terms in natural language, all purported definitions appear to have (actual, conceivable, possible) counterexamples

- So those definitions aren't true, a priori, necessary.

The Case of Knowledge

- Knowledge = justified true belief

  Counterexample: Gettier

  - Knowledge = JTB not inferred from falsehood

    Counterexample: fake barns

    - Knowledge = 12-clause Chisholm definition

      Counterexamples: still coming...

Definitions and A Priori Entailment

- So: 'know' may not be definable in more primitive vocabulary
- But this is compatible with the claim that 'know'-truths are a priori entailed by truths in a more primitive vocabulary

Gettier Case

- G = 'S believes with justification that *p*. S has no evidence concerning *q*. S forms a belief that *p or q*, based solely on a valid inference from *p*. *p* is false but *q* is true.'
- K = 'S does not know that *p or q*'.
- Then: 'If G, then K' is arguably a priori

Analysis without Definitions

- So: a priori scrutability doesn't require definitions.
- It requires only casewise analysis: a priori conditionals regarding specific scenarios
- Modeled by an intension (mapping from scenarios to truth-values), not a definition
- Counterexample arguments threaten definitions but not intensions/scrutability.

Scrutability of Reference

- Concept possession goes along with a conditional ability to determine reference given empirical information and reasoning.
- Given enough information about the world and enough reasoning, we're in a position to know the extensions of our terms (and the truth-values of our sentences).

Kripke's Antidescriptive Arguments

- Modal argument: 'N = the D' isn't necessary

  Concerns necessity, not apriority

  No objection to a priori scrutability

- Epistemic argument: 'N = the D' isn't a priori

  An argument from counterexample

  No objection to a priori scrutability.

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Scrutability Base

- Scrutability base: A class of truths from which all truths are scrutable
- Minimal scrutability base: A minimal class of truths from which all truths are scrutable.
- Scrutability thesis: There's a compact scrutability base.

Compactness

- What is it for a class of truths to be compact?

  (i) Involve a small finite class of expressions, or of families of expressions

  (ii) No trivializing mechanisms

- Better definitions are welcome (but it won't matter too much in practice).

Candidates for Scrutability Base

- phenomenal truths
- microphysical truths
- spatiotemporal truths
- nomic truths
- indexical truths
- that's-all truth
- normative, intentional, ontological, secondary quality, quiddistic truths?
- logical and mathematical expressions/truths

Multiple Bases

- There will be many scrutability bases, and even many minimal scrutability bases.
- Is there a privileged scrutability base?
- Perhaps: invoke a grounding relation more fine-grained than a priori entailment

Primitive Scrutability

- All truths are scrutable from truths involving only primitive concepts.
- Primitive concepts are those that are primitive with respect to the conceptual grounding relation.

Fundamental Scrutability

- Fundamental scrutability: All truths are scrutable from metaphysically fundamental truths.
  - Metaphysically fundamental truths are the metaphysical grounds for all truths.

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Roles of Scrutability

Why is the scrutability thesis interesting?

It has many applications.

Epistemology

- The scrutability thesis is a watered-down version of the knowability thesis (all truths are knowable): its plausible core?
- Some scrutability theses have anti-skeptical applications

Metaphysics

- Fundamental scrutability can be used to adjudicate what is fundamental and what is true
  - E.g. if mental sentences are not scrutable from physical truths, then physical truths do not exhaust the fundamental truths, or mental sentences are not true.

Modality

- One can use a generalized scrutability thesis to construct the space of epistemically possible worlds, or scenarios
  - E.g. maximal consistent sets of sentences in a generalized scrutability base.
- Useful for many epistemological purposes
- Tied to metaphysically possible worlds?

Meaning

- One can use a generalized scrutability thesis to define intensions (cf. 2D):
  - functions from scenarios to extensions
- Nice properties (cf. Fregean sense)
  - A is true at all scenarios iff A is a priori
  - ‘a’, ‘b’ have same intension iff ‘a=b’ is a priori

Other Applications

- Content: Define narrow contents?
- Science: A framework for structuralism, a chain of reductive explanation?

Implications

- If (versions of) the scrutability thesis are correct, then it greatly limits:
  - Kripke on names
  - Putnam and Burge on externalism
  - Quine on analyticity and apriority
  - ...

Metaphilosophy

- Conditional on knowledge of base truths and ideal reasoning, everything is knowable.
- It is not obvious that all philosophically relevant base truths are knowable, or that our reasoning is sufficiently ideal. But it is not out of the question.

Conclusion

- In a scrutable world, truth may be within reach.