Philosophy 427
Intuitions and Philosophy

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Fall 2011

Class 8
On Reflective Equilibrium

Content and Methods

27 Slides to Blow Your Minds

The Epistemological Importance of Reflective Equilibrium

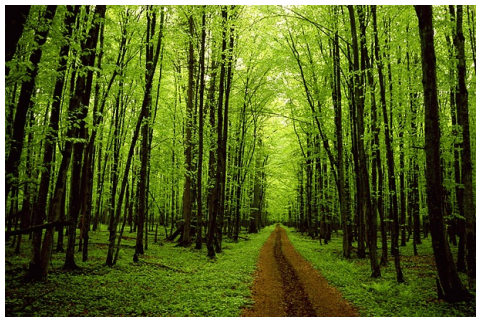
- Balancing general claims (theories) with particular ones
  - evidence
  - intuitions!
- Goodman on Deduction and Induction
- Papineau on Scientific Methodology
- Rawls on Ethics
- Chomsky on Linguistics

Goodman's Riddle

- Sellars argued that the justifications of our beliefs could not be based in the infallibility of some foundational experiences or claims.
- Goodman's riddle concerns how to characterize the relation between a particular statement, an observation, and a general theory.
  - The riddle is evidence for the claim that such a relation is not easily characterized.
- Our epistemic confidence arises from the rationality of science.
- We successfully perform inductions and we successfully perform deductions.
- A traditional epistemologist might claim that deductions are certain, and that there is some fundamental problem with inductions.
- Goodman argues that induction and deduction are justified in the same ways.

Justification

- "How do we justify a *de*duction? Plainly by showing that it conforms to the general rules of deductive inference. An argument that so conforms is justified or valid, even if its conclusion happens to be false... Principles of deductive inference are justified by their conformity with accepted deductive practice. Their validity depends upon accordance with the particular deductive inferences we actually make and sanction. If a rule yields unacceptable inferences, we drop it as invalid. Justification of general rules thus derives from judgments rejecting or accepting particular deductive inferences" (63-4).
- We do not have *a priori* insight into the correctness of abstract, general principles of deduction.
  - We have simple beliefs, intuitions, about which inferences are acceptable.
  - We formulate deductive principles which accord with these inferences.
  - We accept inferences which follow the deductive principles we construct.
- Precisely the same method is applied in cases of induction.
  - "An inductive inference, too, is justified by conformity to general rules, and a general rule by conformity to accepted inductive inferences. Predictions are justified if they conform to valid canons of induction; and the canons are valid if they accurately codify accepted inductive practice" (64).



Goodman's Tree

- There are some similarities in our environment (elms, maples, oaks).
- We introduce a general term, 'tree' to apply broadly
  - to the elms and maples and oaks
  - not to the mountains or cats or grass
- We look for some explanation of what makes something a tree, we look to determine some essence or unifying principles.
- Once we have found unifying principles, we can use them to determine whether borderline cases are, in fact, trees.
  - pomegranate shrubs
- In some cases, we will discover that terms we have chosen do not apply to all the objects we thought they did.
- 'Fish' does not apply to whales, even if we originally introduced it to apply to all sea creatures.
  - Scientists discovered regularities and uniformities among the more-hidden properties of mammals and other fish which override their more obvious properties.

Circularity

- A coherentist epistemology says that a belief is justified if it is consistent with our other beliefs.
- But false sets of beliefs could be coherent, or consistent.
- Sellars: How could justifications begin?
- Goodman's account of justification appears to be circular.
  - We justify our particular claims or beliefs in terms of general principles (whether inductive or deductive) from which they follow.
  - We justify our general principles in terms of the specific claims they yield.
  - We seem to be in the same trap as the coherentist.
- "This looks flagrantly circular... But this circle is a virtuous circle. The point is that rules and particular inferences alike are justified by being brought into agreement with each other. *A rule is amended if it yields an inference we are unwilling to accept; an inference is rejected if it violates a rule we are unwilling to amend*. The process of justification is the delicate one of making mutual adjustments between rules and accepted inferences; and in the agreement achieved lies the only justification needed for either" (64).

Virtuous Circles?

- Against Goodman, calling a circle virtuous doesn't remove the problem.
- In Goodman's favor, we need a new epistemological approach.
  - The notion of a virtuous circle might be worth pursuing.
- The crystal ball's entreaties to believe the crystal ball are viciously circular.
- The scientist's claims to believe the dictates of science are virtuously circular.
- The problem of distinguishing between legitimate and illegitimate science is called the demarcation problem.
- If we were to solve the demarcation problem, then we could (perhaps) accept Goodman's claim that the justification of inductive practices is virtuously circular.
- The problem of induction is replaced by the demarcation problem.
  - What makes science good?
  - What makes any belief justified?

Science and Philosophy

- We are seeking guiding principles for the management of all of our beliefs, including philosophical ones.
- The lessons from philosophy of science translate to philosophy.
  - holism and the web of belief
  - We do not isolate science from our ordinary reasoning.
  - Philosophy is not distinct from science.
- There is no metaphysics, apart from science.
- There is no epistemology apart from scientific method.
- Scientific theories will tell us what exists.
- The scientific method is the only method that matters.
- We are all scientists, even in our everyday life, and our methods, if they are to be the best methods, must not differ from the scientific method.

Holism and Logic

- How do we manage a belief that contradicts ones we already hold?
- Any theoretical claim can consistently be retained in the face of contrary evidence by making adjustments elsewhere in our system of beliefs.
- Given a theory and a contravening, incompatible claim, we have to choose which hypothesis to cede.
  - A contradiction within a large theory merely tells us that there is a problem in the theory.
  - It need not tell us where the problem lies.
- A theory is a set of sentences:
  - T: $S_1 \bullet S_2 \bullet S_3 \bullet ... \bullet S_n$
- In the case we are considering, T yields some claim O.
  - $T \models O$
- But, we get new information:
  - $\sim O$
  - So: $\sim(S_1 \bullet S_2 \bullet S_3 \bullet ... \bullet S_n)$
  - So: $\sim S_1 \vee \sim S_2 \vee \sim S_3 \vee ... \vee \sim S_n$
- That's as far as the logic will take us.

Party Weekend

- Imagine that we believe that there are going to be no parties this weekend.
- Then we receive a flyer for a gathering on Friday.
- We could resolve the contradiction which results from adding the belief we gain from the flyer to our belief set in various ways.
  1. We could check the date on the flyer; maybe there is a confusion about the data.
  2. We could give up our belief about there being no parties this weekend.
  3. We could redefine the term ‘party’ such that the gathering is not a party.

  et al.
- As a logical matter, we don’t know which of the sentences of the theory to reject.
- We need methods for weighing the evidence, for choosing among those options.
- Those methods are governed by various abstract principles.

The Under-Determination of Theories by Evidence

- A further problem
- Theories are generally under-determined by evidence.
- Evidence often provides correlation without indicating causation.
  - Facebook users get lower grades in college.
  - Does Facebook use causes lower grades?
  - Are people who use Facebook already likely to be less successful?
- We have choices among theories.
- We discount theories that refer to ghosts.
- We invoke principles of parsimony, or Ockham's razor
  - Do not multiply entities beyond necessity.
  - "What the arguments show is that different theories will always be consistent with the data. But they do not rule out the possibility that, among these alternative theories, one is vastly more plausible than the others, and for that reason should be believed to be true... Certainly practising scientists do not regard [under-determination] as blocking their access to the theoretical truth. They recognize that we can always in principle concoct alternative explanations for any given body of data; but they simply discount as not worth taking seriously those complex alternatives that need to invoke hidden planets, or hidden forces, or other truth-hiding conspiracies. In effect, scientists are taught, in the course of their scientific training, that only certain sorts of theory are possible candidates for the truth; and once they have data that rule out all but one of *these* theories, they quite happily ignore all the other conspiratorial theories that remain consistent with the data" (Papineau).
- We need other abstract principles as well to solve the demarcation problem.

The Immanent Virtues

- When faced with inconsistency, we have various ways to restore order.
  - consistency
  - rational belief
- Quine calls the guiding principles for theory construction ‘immanent virtues’.
  1. Conservatism
  2. Modesty
  3. Simplicity
  4. Generality
  5. Refutability
- We’ve seen these principles applied in two areas.
  - Ethics
  - Linguistics

Thursday's Idiotfest

Article	Topic	Presenter
Tversky and Kahneman	Representativeness, 1124-1127	Mike
Tversky and Kahneman	Availability, 1127-1128	Emir
Tversky and Kahneman	Adjustment and Anchoring, 1128-1130	Lindsay
McNerney	Cognitive Biases, 12-19	Russell
McNerney	Emotion and Reason, 19-27	Susannah
McNerney	Intuitions, 27-39	Jack
McNerney	Positive Psychology, 39-50	Julia
McNerney	Mistakes We Make, 50-57	Amanda