PHL 201
Introduction to Philosophy

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Lectures Thirty-eight & Thirty-nine

Inference to the Best Explanation

- My history
- My teaching
- My research
- The surprise e-mail
- Current research focus

The “Harman Problem”

- Gilbert Harman
- “There is, of course, a problem about how one is to judge that one hypothesis is sufficiently better than another hypothesis. Presumably such a judgment will be based on considerations such as which hypothesis is simpler, which is more plausible, which explains more, which is less ad hoc, and so forth. I do not wish to deny that there is a problem about explaining the exact nature of these considerations.”
- Doesn’t he provide an answer?
- Vague
- Abstract
- Can compete
- Incomplete (“and so forth”)

The First “Glass Problem”

- David H. Glass
- “Despite its intuitive plausibility, IBE faces two key challenges. First, how exactly is IBE to be understood and made precise? There are various conceptions of the nature of explanation, but assuming some of these are suitable for IBE this still leaves the question as to how one explanation should be compared against another so that the best explanation can be identified.”
- Restatement of the “Harman Problem”
- Formula for explanatory success?
- Preciseness

The Second “Glass Problem”

- “Second, what is the connection between explanation and truth? Is there any reason for thinking that the best explanation is likely to be true? Or to put it another way, does IBE track truth? Of course, no approach should be expected to lead to the truth in every instance, but if IBE is to be accepted as a rational mode of inference, there must be some reason for thinking that it provides a good strategy for determining the truth.”
- Does IBE lead to the truth?
- This problem is the key!

The “Bad Lot” Problem

- Bas van Fraassen
- “Inference to the Best Explanation[‘s] … purport is to be a rule to form warranted new beliefs on the basis of evidence, the evidence alone, in a purely objective manner. It purports to do this on the basis of an evaluation of hypotheses with respect to how well they explain the evidence, where explanation is again an objective relationship between hypothesis and evidence alone.”
- “It cannot be *that* for it is a rule that only selects the best among the historically given hypotheses. We can watch no contest of the theories we have painfully struggled to formulate, with those no one has proposed. So our selection may well be the best of a bad lot.”
- Historically the most significant problem

The “History of Science Problem”

- Privilege — van Fraassen
- “The first consists in the claim of privilege for our genius. Its idea is to glory in the belief that we are by nature predisposed to hit on the right range of hypotheses.”
- Samir Okasha
- “I agree with van Fraassen that privilege is an extremely difficult position to defend, if only because the number of times scientists have failed to ‘hit on the right range of hypotheses’ in the past. If there is an innate predisposition to guess the truth, it is not one that manifests itself very often.”
- “Peter Achinstein
- [I]f you look at the success of theories historically, using any criteria of goodness, including “loveliness,” the induction will be pessimistic. Indeed, even Whewell’s two favorite theories (Newtonian gravitation, and the wave theory of light) turned out to be false, despite the fact that, according to him, they completely satisfied the requirements of consilience and coherence.”

Overall Strategy

- Address the “Bad Lot Problem”
- Address the “History of Science Problem”
- Address the “Harman Problem”
- Address the “Truth-tracking Problem”

The “Bad Lot” Problem

- Sometimes we know we have a bad lot
  - Semmelweis
  - Police detective
- Generic rival explanation
- *Force majeure*
- Good evidence it the best we’ve got

The “History of Science Problem”

- Newtonian gravitation
- Evidence in Newton’s time
- New discoveries
  - Waves
  - Relativity paradigm
- Evidence in our time
- Two different arguments — different evaluations
- Evidence for “grand” theories
- Evidence for normal science

The “Harman Problem”

- Skills
- Exercising a skill
- Describing a skill
  - Recognizing a face
  - Hitting a 95 mph fastball
  - Recognizing a world class Bordeaux
- Tacit knowledge