

Philosophy 203
History of Modern Western Philosophy

Russell Marcus
Hamilton College
Spring 2016



Class #21
The Problem of Induction

Business

- Folders: I'll clear out stuff from absences later.
 - Maybe add an absentees sub-folder?
- Philosophy Majors:
 - Ancient
 - Modern
 - Contemporary or Philosophy of Science or The Language Revolution
 - Symbolic Logic or Critical Reasoning/Thinking
 - Three Seminars
 - 550: Thesis
 - Two Electives
- Seniors take 550 in the fall
- Juniors should try to finish all requirements except for the 550 and one-two seminars (though three is do-able)
- Sophomores: Logic, Ancient, Modern [check], electives, *maybe* a seminar

Next Fall

- Ancient
- Logic
- Race, Gender, and Culture
- David Foster Wallace (seminar)
- Contemporary
- Seminars
 - American Philosophy
 - Justice
- Also some cross-listed courses which can count for electives

Topics in Hume

- **1. Causation and Induction**
- 2. Free Will and Compatibilism
- 3. The Bundle Theory of the Self

Team Activity

Effects and Causes

- “The effect is totally different from the cause, and consequently can never be discovered in it. Motion in the second billiard ball is a quite distinct event from motion in the first, nor is there anything in the one to suggest the smallest hint of the other. A stone or piece of metal raised into the air and left without any support immediately falls. But to consider the matter *a priori*, is there anything we discover in this situation which can beget the idea of a downward rather than an upward or any other motion in the stone or metal?...When I see, for instance, a billiard ball moving in a straight line towards another, even suppose motion in the second ball should by accident be suggested to me as the result of their contact or impulse, may I not conceive that a hundred different events might as well follow from that cause? May not the first ball return in a straight line or leap off from the second in any line or direction? All these suppositions are consistent and conceivable” (§IV.1, AW 543b-544a).
- Given any new or unfamiliar phenomenon, what lesson should we draw from Hume’s argument?
 - ▶ A. Despair; we have no idea what’s going to happen.
 - ▶ B. We should reflect on past experiences to find similar cases from which to judge.
 - ▶ C. We should use pure thought to choose wisely among the options.
 - ▶ D. We should perform experiments with like objects so we can predict better.
 - ▶ E. We should read more Descartes and Spinoza.

Secret Powers

- The secret powers, the connections between events, are hidden from us.
- The cohesion of marble
- “Let an object be presented to a man of ever so strong natural reason and abilities; if that object is entirely new to him, he will not be able, by the most accurate examination of its sensible qualities, to discover any of its causes or effects. Adam, though his rational faculties are supposed entirely perfect at the very first, could not have inferred from the fluidity and transparency of water that it would suffocate him, or from the light and warmth of fire that it would consume him” (§IV.1, AW 543a).
- “Present two smooth pieces of marble to a man who has no tincture of natural philosophy: he will never discover that...” §IV.1, AW 543a

Connection and Conjunction

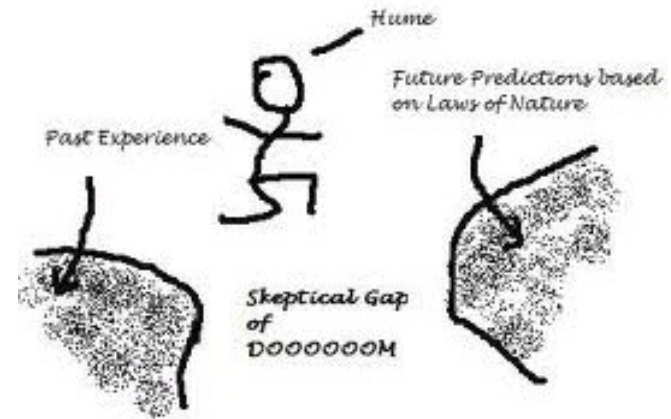
- When we perform inductions, and pronounce on the laws connecting events, we go beyond the evidence of our experience.
- We pretend that we see connections among events.
- All we ever see are conjunctions.
- “We only learn by experience the frequent conjunction of objects, without being ever able to comprehend anything like connection between them” (§VII.1, AW 560b).

No Causes, No Laws

- All our beliefs about the world are based on experience.
- Experience only tells us what was, not what has to be.
 - ▶ We have no access to the causes.
 - ▶ The hand of gravity
- We can not establish the truth of laws of nature, despite our best efforts.
 - ▶ *“The utmost effort of human reason is to reduce the principles productive of natural phenomena to a greater simplicity and to resolve the many particular effects into a few general causes by means of reasonings from analogy, experience, and observation. But as to the causes of these general causes, we should in vain attempt their discovery, nor shall we ever be able to satisfy ourselves by any particular explication of them. These ultimate springs and principles are totally shut up from human curiosity and inquiry...Thus the observation of human blindness and weakness is the result of all philosophy and meets us at every turn in spite of our endeavors to elude or avoid it”* (§IV.1, AW 544a-b, emphasis added).

Blindness and Weakness

- We know what has happened, and how to summarize those events.
- But we have no knowledge of both particular and general claims about laws of nature as they project into the future.
- We do not know that the sun will rise tomorrow.
- We do not know Newton's laws.
- The laws could suddenly shift from what they were.
- This is the problem of induction.



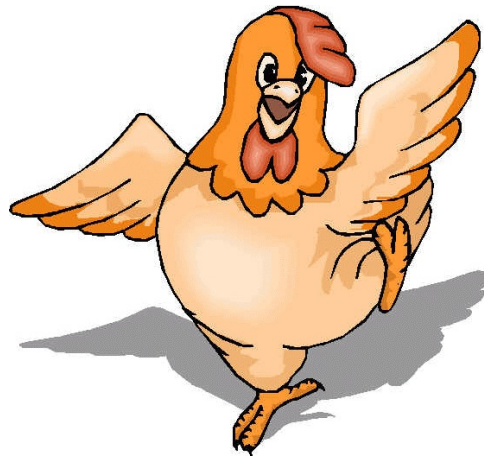
The Inductive Leap

A Dogmatic Attempt To Solve the Problem

- Descartes took the laws of nature as eternal, necessary truths.
- We *can* have knowledge of the future *if* our inductive inferences give us insight into the causal structure of the world.
- KF
 - KF1. We have experiences of the sun rising (and other law-like phenomena).
 - KF2. These experiences, combined with our reasoning, provide insight into the causal structure of the world.
 - KF3. The causal structure of the world is necessary.
 - KF4. What is necessary is eternal and so projects into the future.
 - KFC: So the sun will rise tomorrow.
- KF1 is obviously true.
- Hume provides no reason to doubt KF3 and KF4.
- His complaint is with KF2.

Bertrand Russell on the Problem of Induction

- Domestic animals expect food when they see the person who usually feeds them. We know that all these rather crude expectations of uniformity are liable to be misleading. The man who has fed the chicken every day throughout its life at last wrings its neck instead, showing that more refined views as to the uniformity of nature would have been useful to the chicken (*Problems of Philosophy*, p 63).



Skepticism About the External World

- Even the existence of a material world is a scientific hypothesis generated by experience.
- “It is a question of fact whether the perceptions of the senses are produced by external objects resembling them; how shall this question be determined? By experience, surely as all other questions of a like nature. But here experience is and must be entirely silent. The mind never has anything present to it but the perceptions and cannot possibly reach any experience of their connection with objects. The supposition of such a connection is, therefore, *without any foundation in reasoning*” (§XII.1, AW 595a, emphasis added).

Hume's Skeptical Argument About Induction

PI1. Our beliefs about future events and unobserved objects are matters of fact.

PI2. Beliefs about matters of fact are based on experience.

PI3. Experience tells us how things were, not how they will be; it tells us only about actually observed phenomena.

PIC. So, our beliefs about the future and the unobserved are unknown.

- PI1 is a definition.
- PI2 is the basic principle of empiricism.
- PI3 is the result of Hume's observations about causation.

Fixing the Hole in the Inductive Argument

- Consider a specific version of the problem of induction.
 - B1. I have seen one billiard ball strike another many times.
 - B2. Each time the ball which was struck has moved, motion was transferred.
 - BC. So, the struck ball will move this time.
- BC does not follow deductively from B1 and B2.
 - The argument is invalid.
 - The conclusion could be false, while the premises remain true.
- We can add a premise, the principle of the uniformity of nature (PUN).
 - PUN: The future will resemble the past.

The Problem Resolved

- The new version of the argument is valid!
 - B1. I have seen one billiard ball strike another many times.
 - B2. Each time the ball which was struck has moved, motion was transferred.
 - B3. The future will resemble the past (PUN).
 - BC. So, the struck ball will move this time.
- The problem with the new version is that we have no basis for believing B3.
 - ▶ “All inferences from experience suppose as their foundation that the future will resemble the past and that similar powers will be conjoined with similar sensible qualities. If there is any suspicion that the course of nature may change, and that the past may be no rule for the future, all experience becomes useless and can give rise to no inference or conclusion. It is impossible, therefore, that any arguments from experience can prove this resemblance of the past to the future, since all these arguments are founded on the supposition of that resemblance” (§IV.2, AW 547b).
- The future has resembled the past in the past.
- But we don't know that the future will resemble the past in the future!

Cause, Effect, and Uniformity

- If we had knowledge of cause and effect relations, of the connections among events, we could tie them together to yield PUN.
- We would know what the hidden springs are by experience.
- But, we only have knowledge of constant conjunction.
- So, all scientific generalizations which do not limit themselves to observed evidence are unjustified.
- Physical laws like Newtonian gravitation, or the gas laws, go beyond experimental evidence.



Team Activity

Commit it to the Flames

- Hume argues that we should rid philosophy of any claims which aren't either matters of fact or relations of ideas.
 - ▶ When we run over libraries, persuaded of these principles, what havoc must we make? If we take in 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 (Hume, *Enquiry*, §XII.3, AW 600b).
- Classify each of the given claims as:
 - ▶ A. Matters of fact;
 - ▶ B. Relations of ideas; or
 - ▶ C. Fuel for a Humean bonfire.

Laws of Nature and Miracles

- Philosophy, like politics, makes for strange alliances.
- We have noted some similarities between the Anglican bishop, Berkeley, and the Scottish skeptic and agnostic, Hume.
- Both Hume and Berkeley deny that we know laws of nature, but for different reasons.
- Berkeley thinks that there are some general regularities in nature, and exceptions to these regularities.
 - ▶ “It cannot be denied that God, or the intelligence that sustains and rules the ordinary course of things, might if He were minded to produce a miracle, cause all the motions on the dial-plate of a watch, though nobody had ever made the movements and put them in it” (Berkeley, *Principles* §62).
 - ▶ Joshua and the halting of time
- Hume not only denies that miracles do happen, he denies that they are possible.
 - ▶ There can be no irregularities in nature, because the very notion of a regularity presupposes uniformity.
 - ▶ If there were exceptions to the laws, we wouldn't call them laws.

Team Activity

Hume on Miracles

- “Nothing is esteemed a miracle if it ever happen in the common course of nature. It is no miracle that a man, seemingly in good health, should die on a sudden, because such a kind of death, though more unusual than any other, has yet been frequently observed to happen. But it is a miracle that a dead man should come to life because that has never been observed in any age or country. There must, therefore, be a uniform experience against every miraculous event, otherwise the event would not merit that appellation. And as a uniform experience amounts to a proof, there is here a direct and full proof, from the nature of the fact, against the existence of any miracle, nor can such a proof be destroyed or the miracle rendered credible but by an opposite proof which is superior” (§X, AW 579b).