Philosophy 101: Introduction to Philosophy, Queens College, Fall 2005
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Lecture Notes, December 7

I. Matters of Fact, Relations of Ideas, and §1 of the Hume Handout

Statements 1-4 all refer to matters of fact.

1) You are taking a philosophy class.
2) Your best friend likes you.
3) Enron committed accounting fraud.
4) Shakespeare wrote *The Tragedy of Macbeth.*

Our knowledge of these can be traced back to original impressions, according to Hume.
This turns out to be trickier than he thought.
The project was pursued in the 20th century by logical positivists, like Rudolph Carnap.
See A.J. Ayer, *Language, Truth, and Logic.*
We will not worry about it here.

Another complication has to do with our knowledge of ourselves.
Remember Berkeley's contortions over this problem.
Hume also thinks we have no impression of self.

Statement 5 refers to a mathematical fact.

5) 2+2 = 4.

Mathematical sentences express relations of ideas.
Their denial is a contradiction.
Descartes had hypothesized that the reason we can know such sentences is that they are innate ideas.
For Hume, the meanings of words make these sentences true or false.
The classic example, "Bachelors are unmarried," makes this clearer.

The first five examples are thus plausibly known.
What about the last three? Are they relations of ideas?

6) The sun will rise tomorrow.
7) F = ma.
8) Every effect has a cause.

Statements 6 and 7 refer to physical laws.
While the sun does not actually rise, we use the sentence as short for the rotation of the Earth on its axis.
This is not a relation of ideas, since its denial does not lead to a contradiction.

Compare denials of statements 5 and 6.
'2+2=5' is false because of the way the terms, or their referents, '2' and '5', are related.
'The sun won't rise tomorrow' is possible.
We thus can have no certainty that the sun will rise tomorrow, p 22.
We can not discover that the sentence is wrong by mere process of thought, as we can with relations of ideas.

II. Physical laws are matters of fact

Statements 6 through 8 are thus matters of fact.
Can we really know them to be true?
If they are matters of fact, they have to be traceable back to original sense impressions.
Scientific laws refer to causal connections between events.
But we have no sense impressions of the terms used.
We have experience of the events, but not their causes.
Effects are distinct from their causes.
Examples: billiard balls, knife in flesh, gravity, Adam.
We have no experience of the cause.
We only see the effects.
Consider our inability to know the properties of novel objects, like the cohesion of marble.
The secret powers, the connections between events, are hidden from us.
Thus we can not establish the truth of laws of nature, p 19.

All beliefs about the world are based on experience.
Experience only tells us what was, not what has to be.
This follows from the fact that we have no access to the causes.

So we have no knowledge of both particular and general claims about laws of nature.
We do not know that the sun will rise tomorrow.
The problem is not that there might be a big explosion.
This could be consistent with physical laws.
The problem is that the laws could suddenly shift, from what we think they are.
This is called Hume's problem of induction.

III. Hume's problem of induction

Hume argued that we have no knowledge of laws of nature.
The laws could suddenly shift, from what we think they are.
Our inability to know physical laws is generally known as the problem of induction.

How do we get knowledge of the unobserved?
Consider the example of the chicken and its feed.
Induction is how you know about unobserved phenomena, especially predictions about the future.
It is also how you know that the person next to you has a beating heart.

Hume's Skeptical argument about induction (Handout, VI):
1) Our beliefs about future events and unobserved objects are matters of fact.
2) Beliefs about matters of fact are based on experience.
3) Experience tells us how things were, not how they will be; it tells us only about actually observed phenomena.
So, our beliefs about the future and the unobserved are uncertain.

A specific version of the problem of induction (Handout, VII):
1) I have seen one billiard ball strike another many times.
2) Each time the ball which was struck has moved, motion was transferred.
So, the struck ball will move this time.

Notice that the conclusion does not follow.
You can see this if you consider what would happen if the laws of physics shift.
Then the conclusion could be false, while the premises remain true.

IV. A failed attempt to solve the problem of induction

We need a further premise to make the conclusion follow from the premises.
Consider the principle of the uniformity of nature (PUN): The future will resemble the past.
See Handout, VIII, and p 22.
If we add PUN as a third premise, then the conclusion will follow.
What could justify PUN?
We have no basis for believing in it.
All inductive inference instead presupposes it.
It can not justify itself.
(Compare this problem with the problem of Cartesian circularity.)

V. Cause and effect

If we had knowledge of cause and effect relations, we would know PUN.
We have only knowledge of constant conjunction.
If we had knowledge of the connections, we could tie events together to yield PUN.
Descartes thought he had knowledge of the laws through rational insight.
Hume rejects this, for Locke's reasons.
See Hume on Descartes, p 105.
We do not know the connections, p 46.
We can not find effects in causes.

I neglected to mention this minor point in class:
Berkeley, in contrast, pulls a rabbit out of his hat when discussing laws of nature.
He says that we have knowledge of how the world works on the basis of experience.
But he does not give us knowledge of causes.
He merely relies on the grace of God to keep order in the world.