

## Lecture 7: Meaning Empiricism and the Problem of Induction

### 1. Recap

We began by describing Hume's 'science of man': when confronted with a philosophical/scientific problem first turn our attention on how human beings work and the limits of our capacities. This involves **empiricism**, **naturalism**, and **mitigated scepticism**.

We laid out the skeleton of Hume's theory of ideas: **meaning empiricism**. Ideas are meaningful because they are less vivid copies of sense impressions that they resemble. This gives us a test for meaningful talk – try to trace what the philosopher says back to some sense impression.

Copy principle: all simple ideas are faint copies of simple impressions

We are also able to construct complex ideas out of the building blocks of simple ideas. Hume flagged up one potential problem – the **missing shade of blue**. Today we develop his theory of ideas before thinking about another potential problem **rule-following**, before applying Hume's theory to the **problem of induction**.

### 2. Principles of Association

We now know where our ideas come from and how they get their meaning (ultimately they are caused by, and resemble, impressions). Hume also notes that there is an order and regularity to the flow of our ideas. He argues that they have this order because they are governed by **principles of association** which he aims to discover (though not explain their origin – that task is beyond us):

1. Principle of resemblance.
2. Principle of contiguity of time and space.
3. Principle of cause and effect.

These are like physical laws, they govern the unfolding of our ideas and how they are related in the mind. In accord with these principles, the mind starts to associate different ideas together, and moves seamlessly from one to another.

### 3. Meaning Empiricism and Rule Following

Here I will have to be very telegraphic of a rich discussion. For additional material here see the talis reading list, particularly Kripke's book. Roughly, the meaning empiricist has meaning grounded in mental images that flow through our mind. This seems **phenomenologically** dubious – does it really seem that way to you when you are thinking?

More fundamentally it looks like mental pictures aren't fit to serve as meanings. Think of Wittgenstein's 'tove' example. Just as pointing at an object and saying 'tove' fails to do anything interesting, a mental image requires interpretation to be meaningful.

Another way of putting the point: my idea of an apple resembles a great many things (including apples). Why is it that my idea (mental image) is about apples, and not one of these other things?

**Hume's Dispositionalism:** my idea of an apple is about apples because I am disposed to think of apples when I have a sense impression of an apple.

However, this won't work – we can be disposed to make mistakes.

Take Kripke's 'Quus' example.

X quus y = x + y when x and y are <58, otherwise the answer is 5.

When we consider the equation  $58 + 67$  we want to say that the answer is 125, not 5. The reason being that we mean '+' to stand for the plus function, not the strange quus function.

What is it that determines that I mean plus by '+' and not quus? If the numbers are large enough there's nothing in my past behaviour that determines what answer I'm beholden to give (I could have been quusing numbers all along!). The **dispositionalist** rules out these absurdities by saying that I am disposed to carry on adding numbers, I won't quadd them.

But I can be disposed to make mistakes! When the numbers get very large I forget to carry the one in a regular pattern. By **dispositionalism** that would mean that by '+' I meant some very strange mathematical function, not addition. This can't be right – the dispositionalist falls down because they don't fully account for the **normativity of meaning**. In order to count as understanding a concept I must in some sense grasp the rules for its use.

According to **meaning empiricism** the meaning of thoughts can be entirely given by what's going on in an individual's mind. But what Wittgenstein and Kripke are getting at is that meaning involves **normativity**, following rules. And we cannot make sense of following a rule in your head (think of Wittgenstein's **private diary**).

#### 4. Relations of Ideas and Matters of Fact

We now have a handle on Hume's theory of ideas. But what of judgements? When and how is it reasonable to make judgements about what is the case?

**Hume's Fork:** All the objects of human reasoning can be divided into two kinds – relations of ideas and matters of fact.

In contrast to other philosophers, Hume is very sceptical about the power of *a priori* reasoning. We can't use **demonstration** to learn about the nature of the world or much of anything else.

However, we can use demonstrative (deductive) reasoning to come to knowledge about the **relations of the ideas** we have. By the conceivability principle we know that anything we can conceive of is possible. But anything that we cannot conceive of is not possible.

And when we examine our ideas we see that certain claims entail contradictions – our ideas are related in such a way to make the thought of a four-sided triangle nonsensical. In this way we can use demonstrative reasoning to learn about **arithmetic, geometry, and logic**. Propositions about this subject matter related to just the relations between our ideas.

On the other hand, demonstrative reasoning tells us nothing about substantive **matters of fact**. Denying some matter of fact is not inherently contradictory. So you can't work out whether a proposition about a matter of fact obtains through pure reasoning.

Judgements about matters of fact (probable inferences) are ultimately **causal inferences**. I judge that coffee is not poisonous as I have observed coffee causing me stress relief and not causing me death. Causal inference plays a role in our coming to judge matters of fact (this will be important next week).

In modern terminology Hume believes we can have **analytic a priori** knowledge and **synthetic a posteriori** knowledge – no categories in between. This division faces many challenges that animate the history of philosophy: philosophers of mathematics worry about whether this gives an adequate account of mathematical knowledge (see for example Frege's *Grundlagen*); the analytic/synthetic distinction is challenged by Quine (see "Two Dogmas of Empiricism").

Kant argues that Hume's account can't explain our knowledge of geometry, cause and effect or space and time (he thinks we also need to posit **synthetic a priori** knowledge).

Let us see how far we can get in understand the science of man taking Hume's fork as an assumption. It gives us a way of getting away from speculative metaphysics:

If we take in our 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. (*EHU*, Section 12).

## 5. The Problem of Induction

Hume wonders about our source of justification for believing the conclusions of inductive thinking. E.g. what justifies you in believing that the sun will rise tomorrow, on the basis of your previous experience of the sun rising in the past?

Hume wants to say that your judgement 'The sun will rise tomorrow' is not a conclusion of reasoning, either demonstrative or probable. Why? Well, any argument for the conclusion will rely upon:

**Uniformity of Nature:** that instances of which we have had no experience, must resemble those of which we have had experience, and that the course of nature continues always uniformly the same.

Could this be the conclusion of **demonstrative reasoning**? No – denying it is not contradictory. Is it the conclusion of **probable reasoning**? No – your evidence that the world will carry on being uniform is just that it was uniform in the past, but that only shows that the world will continue being uniform if the **uniformity of nature** is true. Your reasoning to the conclusion depends on the conclusion itself.

So your belief that the sun will rise tomorrow is not justified by any form of reasoning – demonstrative or probabilistic. But, isn't it a reasonable thing to believe in some sense? More reasonable than believing it's denial, surely?

## 6. Hume's Solution

We use induction all the time, and we rely on the conclusions we reach. According to Hume they are not the product of a form of reasoning, so we can't justify the conclusions we reach using arguments.

Hume instead says that the **principles of association** have a role to play here: after repeated exposure to the sun arising in the morning we form a '**habit of mind**' which moves us from thinking about mornings to thinking about sun rises.

This leads us to expect the sun to rise in the mornings. But not because we have an argument for that conclusion. Why, then, should we believe that the sun will rise. Not on the basis of argument – the best that we can say is that having such a **habit of mind** works for us.

As human animals we have a tendency to form habits of mind that lead us to believe nature will continue to be uniform.

Objection: Hume has just told us why we believe nature is uniform, not what justifies us in believing it.

Response: Hume's point is that you can't give an argument to justify the use of induction. All we can say is that we rely on it, and if nature is uniform then it's a good thing for us that we do. It helps us to navigate the world. Here we see the **naturalism** and **mitigated scepticism** of the science of man. The job of the philosopher is to study habits of mind and the sorts of inductive inferences we make and discover which are useful and which can lead us astray (**naturalism**). The philosopher can't use reason to argue for induction – reason is just not that powerful (**mitigated scepticism**).

## 7. The New Riddle of Induction

Hume's work on induction sparks great interest: induction is not just something we rely on in everyday life it is also at the heart of scientific enquiry. So Hume inspired the work in philosophy of science concerned with working out inductive logics (e.g. Carnap and others) as well as people who discovered other issues with induction (see for example Hempel's 'Paradox of the ravens').

Suppose we could support the **uniformity of nature** through arguments. Would that justify induction? According to Nelson Goodman's 'new riddle of induction' – no. This is because nature does not come ready carved into obvious categories.

Consider the generalisation 'All emeralds are green'. You believe this because all the emeralds you have seen have been green, and you think nature is uniform. Now define a new predicate:

**Grue:** An object is grue iff it is green and discovered before 2016 or blue and discovered after 2016.

All your evidence that emeralds are green also supports the claim that emeralds are grue. But the two generalisations offer different predictions – will the emerald we dig up next year look green or blue? One solution would be to say that nature does come carved up into natural joints. These joints act as 'reference magnets' and put constraints on which predicates we are allowed to use (see Lewis 'Putnam's Paradox'). This is speculative metaphysics Hume would have no truck with. Instead, he'd say that we just happen to think in terms of green and blue and not grue and bleen, and if the world is that way then that's very fortunate for us.