Hume on knowledge

HUME’S FORK

Empiricism denies that we can know anything about how the world outside our own minds is without relying on sense experience. In §IV, Hume argues that we can have knowledge of just two sorts of thing: the relations between ideas and matters of fact. He uses two related criteria to make the distinction.

First, he says that relations of ideas are known as ‘intuitively and demonstratively certain’ because ‘Propositions of this kind are discoverable by the mere operation of thought, without dependence on what is anywhere existent in the universe’ (p. 108). A mathematical example: ‘If A is longer than B, and B is longer than C, then A is longer than C’.

Second, he says that the negation of a (true) relation of ideas is a contradiction; the negation of a matter of fact is not. (A contradiction asserts both a proposition and its negation.) To say that vixens are not foxes is a contradiction in terms; it is to say that female foxes are not foxes. And so we can know for certain that vixens are foxes, because its truth depends on our thought (our concepts) not the world. By contrast, to say that foxes are pink is false, but not self-contradictory. It is through experience, not intuition or demonstration, that we discover the properties of foxes. As a first interpretation of Hume’s criteria, we might say that we gain knowledge of relations of ideas through merely understanding concepts and through deductive inference.

Relations of ideas in the Treatise

In the Treatise I.i.ii.i, Hume cites ‘resemblance, contrariety, degrees in quality, and proportions in quantity or number’ as relations between things that depend on the ideas alone. Of these, he says, the first three are ‘discoverable at first sight’, and it is only the last – mathematics– where we use demonstration. So the only form of reasoning that has complete certainty is reasoning about numbers.

In the Enquiry, Hume cites only mathematics as an example of relations of ideas. However, he retains the claim that relations of ideas can be intuitively certain, not just demonstratively. But he provides no explanation of what intuition is, nor any examples of its use. The Treatise provides examples, but they are confusing. While Hume asserts that resemblance, contrariety, and degrees in quality are relations of ideas, he illustrates the relations by examples that come from impressions:

When any objects resemble each other, the resemblance will at first strike the eye, or rather the mind... The case is the same with contrariety, and with the degrees of any quality. No one can once doubt but existence and non-existence destroy each other, and are perfectly incompatible and contrary. And tho’ it be impossible to judge exactly of the degrees of any quality, such as colour, taste, heat, cold, when the difference betwixt them is very small: yet 'tis easy to decide, that any of them is superior or inferior to another, when their difference is considerable. And this decision we always pronounce at first sight, without any enquiry or reasoning.
But understanding that existence and non-existence are contrary is not at all the same thing as judging that one thing is hotter than another. Understanding that vixens are foxes is different from spotting a resemblance. What is immediately present to the senses is certain for quite different reasons from analytic judgments.

**Development**

If we leave Hume’s distinction in terms of the two criteria he provides, then the history of philosophy is full of debate about what will count as a relation of ideas. Rationalists, such as Plato and Descartes, have argued that a great deal can be shown to be certain through (rational) intuition and demonstration, including the existence of the Forms and of God (Descartes even maintains that, although it is not obvious, to say ‘God does not exist’ is a contradiction). They have a much wider conception of the powers of reason to achieve certainty through intuition and demonstration than Hume.

Hume thinks these claims are false, and the ‘mere operation of thought’ cannot establish anything about what exists. But philosophers have also sought to make his distinction more precise. We can reinterpret it in terms of two distinctions: analytic/synthetic and a priori/a posteriori. Following the spirit of Hume’s argument, rather than the letter of his position, we can say that Hume argued that all a priori knowledge (relations of ideas) is analytic, while all knowledge of synthetic propositions (matters of fact) is a posteriori. In other words, anything we know that is not true by definition or logic alone, every ‘matter of fact’, we must learn and test through our senses.

**MATTERS OF FACT**

**Causal inference**

We can say that, according to Hume, knowledge of matters of fact is always a posteriori and synthetic. We gain it by using observation and employing induction and reasoning about probability. The foundation of this knowledge is what we experience here and now, or can remember. Matters of fact beyond this are established by ‘probable’ arguments, not deductive proofs. Hume sets out ‘to enquire what is the nature of that evidence which assures us of any real existence and matter of fact, beyond the present testimony of the senses, or the records of our memory’ (p. 108). His answer is that such knowledge rests on causal inference.

If I receive a letter from a friend with a French postmark on it, I’ll believe that my friend is in France – because I infer from the postmark to a place. I do this because I think where something is posted causes it to have the postmark of that place; and if the letter was posted by my friend, then I believe that he must be in France. In itself, this seems plausible enough. But it opens up a can of worms.

How do I know all the claims I assume when I infer that my friend is in France? I rely on past experience – in the past, I have experienced letters being posted, I have seen different postmarks, I have found that postmarks relate to where you post something, and so on. I can’t work out what causes what just by thinking about it. So causal inference rests on past experience.

But what, Hume then asks, is the basis of inferring from past experience to the present or future? We have experience that, in the past, whenever a cause of a particular type occurs, e.g. one billiard ball strikes another, it was followed by an effect, the second ball moving; but why think that this succession will occur again?
The question is an important one. Much of what we think we know we haven’t experienced. Either it lies in the past, but outside our experience (e.g. what happens in Australia when one billiard ball strikes another); or it lies in the future (what will happen when one billiard ball strikes another). Can we know about what we haven’t experienced on the basis of what we have?

**The objection to reason**

There are two ideas connected with causation which we might think provided us with good grounds for thinking that causes always cause the same effects; and so we can reason from the occurrence of the cause to the effect, whenever or wherever the cause occurs.

First, if a cause is necessarily connected to its effects, then if we perceive the cause occurring, we can logically infer the effect. But Hume points out, there is no contradiction in supposing that the second billiard ball won’t move when struck.

Second, philosophers before Hume often thought that an effect must resemble its cause. For example, Descartes argues that only God could have caused the idea of God; Locke argues that only an intelligence could have caused intelligence. On this basis, knowing the cause, we could infer the effect. And again, we could reason that because the cause in this case is similar to causes in the past, the effect will be similar to effects in the past. This would justify knowledge of matters of fact outside our experience. But Hume rejects this. Anything can cause anything, and it is only through experience that we find out what causes what.

So far, Hume has argued that we cannot deduce effects from experiencing causes, or deduce causes from experiencing effects. We can back this up with a further argument.

The relation between a cause and its effect is not a relation of ideas. The relation is not that of resemblance, nor is it a contradiction to think that, e.g. a billiard ball will not move when struck. Nor can this claim be proven (by deductive argument) to be false. So, given an experience of a cause, we cannot deduce that the effect will follow. So we cannot deduce that the world outside our experience resembles (or will resemble) what we have experienced so far.

**The problem of induction**

So how can we infer matters of fact we haven’t experienced from ones we have? If it isn’t through intuition or deduction, the inference must itself rest on matters of fact. The trouble is, establishing any matter of fact assumes just what we are trying to prove. Hume is calling the basis of induction into question.

Suppose I say that I know the billiard ball will move, because it has always moved in the past. It’s true that in the past the billiard ball always moved. But why think it will move again now? On what basis do I think that the future resembles the past? Past experience can give me ‘direct and certain information of those precise objects only, and that precise period of time, which feel under its cognizance’ (p. 114).

If I am to infer that the billiard ball will move when struck, I’m going to have to do on the basis of the principle that ‘the future will be like the past’. But this principle is in the same boat as my claim that the billiard ball will move when struck. It is not a contradiction to suppose that the future will not be like the past, so I can’t prove the
principle by deductive reasoning. But, of course, I can’t prove it by appealing to matters of fact, since I am trying to establish a matter of fact by appealing to the principle! If I say, ‘but in the past, the future was like the past’, this still gives me no basis on which to infer that ‘in the future, the future will be like the past’. [Margin: Explain Hume’s challenge to inductive reasoning.]

Hume argues that our belief that the future will resemble the past is not based on reason at all. He remarks that children are capable of learning from experience, and yet here we are, professional philosophers, struggling to produce the reasoning which we suppose the child easily employs (p. 118)! We can’t produce the reasoning, because the inference is not based on reasoning at all. Hume has argued not just that there isn’t a reason on the basis of which we make our causal inferences, he has argued that there is no type of reason which could serve.

The positive account
Hume’s account is this: on the basis of our past experience in which the cause is repeatedly followed by the effect (which Hume calls ‘constant conjunction’) when we perceive the cause again, our minds immediately infer the effect; or vice-versa. From seeing one billiard ball strike another, we immediately believe that the second will move. From receiving a letter with a French postmark, we immediately believe the letter was posted in France. We draw the inference without reasoning or argument, but on the basis of a principle of association by which the imagination has bound the two ideas – of the cause and of the effect – together in our minds: ‘When the mind…passes from the idea or impression of one object to the idea or belief of another it is not determined by reason, but by certain principles which associate together the ideas of these objects and unite them in the imagination’ (Treatise, I.iii.vi).

This movement of our minds repeats a previous sequence of thought, originally, our experiences of the repeated conjunction of cause and effect. And so Hume calls the principle that governs it ‘custom’, without pretending that such a label explains it at all. (It is unclear whether ‘custom’, as a principle of the mind, is just another name for the cause-effect principle of association. If not, then it is very closely related.) Custom is not a reason or principle of reasoning. It is not that we think ‘this object has constantly been conjoined to this second object, so the second will occur again’. We don’t even need to notice the constant conjunction; our experience of it is enough for our minds to move from the impression of the cause to a belief in the effect. Custom is a natural instinct of the mind, a disposition we simply have in the face of experience of constant conjunction. Without custom, we would be unable to draw causal inferences, and so we would have no knowledge of anything beyond what was present to our senses and memory.

IS HUME’S ACCOUNT ‘SCEPTICAL’?
Hume’s attack on reason, and his resulting account of induction and causal inference, have traditionally been understood to produce scepticism. Since there is no ‘reason’ to believe the future will be like the past, then any belief about what the future will be like is equally unsupported. So we have no rational justification for our causal inferences, and our knowledge of matters of fact is limited to what we have directly experienced.

But more recently, philosophers have argued that this was not Hume’s intention. A passage of particular importance is this:
Though we should conclude...that...in all reasonings from experience, there is a step taken by the mind which is not supported by any argument or process of the understanding, there is no danger that these reasonings, on which almost all knowledge depends, will ever be affected by such a discovery. If the mind be not engaged by argument to make this step, it must be induced by some other principle of equal weight and authority. (p. 120)

Hume asserts that our knowledge of matters of fact does not rest on reasoning, but he is not sceptical about inference from experience or its use. He calls custom a principle of equal weight and authority and is happy to continue speaking of knowledge depending on it. Again, he calls custom

the great guide of human life... Without the influence of custom, we should be entirely ignorant of every matter of fact beyond what is immediately present to the memory and senses. We should never know how to adjust means to end, or to employ our natural powers in the production of any effect. (pp. 122-3)

He clearly implies that we do know how to adjust means to end. Induction is a normal function of the mind, and our only (and best) guide to how reality is. We can conjecture that he calls §V a ‘Sceptical solution’ only because he rejects the view that the foundation of knowledge of matters of fact is reason, and not because he doubts that we have such knowledge.

Custom and reason
In support of the claim that Hume is not a sceptic about matters of fact, we should note that he is willing to talk of ‘good’ and ‘bad’ causal inferences. During his argument against reason, he indicated that we cannot say that the billiard ball will move when struck rather than stay still. Anything is possible – the ball could move, it could stay still, it could vanish… But his argument is that we cannot decide between these options on the basis of reason. Having introduced the principle of custom, we can reliably infer that the ball will move; any other belief is not equally well supported by custom.

In fact, despite having drawn such a strong contrast between reason and custom, Hume sometimes talks as though causal inference is a form of reasoning. We could say that Hume uses the term ‘reasoning’ with more than one meaning. In its narrow sense, it applies only to deductive reasoning, and should be contrasted with induction, which rests on custom. In its broader sense, it covers inductive reasoning, so custom is a form of reasoning.

But there is a deeper issue here. If custom is just a natural principle of the mind, it is hard to see how we can say that it can be better or worse, that causal inferences can be justified or unjustified. Yet we obviously can say this, e.g. ‘My grandfather smoked all his life and didn’t get cancer; so smoking doesn’t cause cancer’ is a bad inference. Yet to talk of ‘justification’ is to talk about reasoning. Perhaps we can say that while custom, not reason, is the foundation of our ability to draw causal inferences, actually drawing such inferences can count – at least in many cases – as a genuine type of reasoning.

The return of scepticism?
The conclusion that Hume is not a sceptic is too quick. At the end of the Enquiry, in §XII, Hume appears to endorse a sceptical reading of his arguments about causal inference. He displays his conclusion that all matters of fact, beyond what we have directly experienced, rests on custom – ‘which it is indeed difficult to resist, but which, like other instincts, may be fallacious and deceitful’ (p. 206). In this chain of reasoning,
the sceptic has ‘ample matter of triumph’, ‘shows his force’, and ‘seems, for the time at least, to destroy all assurance and conviction’.

But he does not endorse this reading. Hume sought to understand the nature of the mind, not to draw a sceptical conclusion from his discoveries. So he argues, in this passage, that to be sceptical about matters of fact has no point. There is no real doubt cast on our knowledge, because as soon as we have to act, or make some causal inference in life, scepticism of this kind disappears. Hume adopts what he calls a form of ‘mitigated scepticism’, which he endorsed as his aim in §1, viz. ‘the limitation of our enquiries to such subjects as are best adapted to the narrow capacity of human understanding’ (p. 208).

**PROBABILITY AND BELIEF**

Hume says that matters of fact are ‘probable’, as opposed to the certainty of relations of ideas. In §VI, he discusses the way we use probability in forming beliefs about matters of fact. Our beliefs about matters of fact are formed by repeated exposure to the facts. So Hume talks of ‘degrees of belief’ being exactly matched to how frequently something occurs in our experience. It is as though the mind keeps track of how often or how reliably something occurs (e.g. snow in January in northern Europe), and automatically adjusts how strong it infers and assent to the claim that the same thing happening again. The principle governing this automatic process of adjustment is custom.

Two points are worth noting about Hume’s account. First, in light of the discussion of custom and induction above, it is worth noting that Hume refers to forming judgments of probability as a ‘process of thought or reasoning’ (p. 131). And yet in §V, he contrasts custom and reason; and he says that forming a belief is not a rational process.

Second, Hume suggests that the idea that we form the belief that something will or will not occur through repeated exposure helps to explain the nature of belief. A belief is an idea with great vivacity; it could have accumulated this degree of vivacity from the numerous impressions of its object. If it repeatedly snows in January (impressions), then I come to believe that it will snow in January.

But in this argument, Hume has confused two senses of ‘degree of belief’. He seems to think I can only believe that it will snow in January or that it will not. The probability of the occurrence is represented by the strength of belief (itself a matter of vivacity). But, of course, I can believe with great certainty that there is an 80% chance of snow in January. The probability of the occurrence is part of what I believe, and not given by the strength of my belief. Hume’s theory doesn’t seem to allow for this possibility. This is another reason to think that his account of belief is mistaken.