33
Hume, *Enquiry* IV
Inductive Scepticism

By the end of the first quarter of the eighteenth century, the new philosophy of Galileo, Descartes, Boyle, and Locke had run into serious problems. First Bayle and then Berkeley had shown that it is not possible to assume a corpuscularian view of the world without running into sceptical doubts. Corpuscularianism requires that we assume that the world is radically different from the way it appears to us, and hence that the original objects of our knowledge are not things as they are in the world, but merely their appearances or the ideas they bring about in us. But once this new way of ideas is entered upon, we quickly find ourselves unable to explain how we can come to know the first and most basic things about the world, such as that there are other minds besides my own, that I exist for more than an instant, or that objects continue to exist when I am not perceiving them — if, indeed, there are such things as objects in an external world at all.

Bayle's official answer to these difficulties had been to reject reason in favour of faith. Berkeley's had been to reject belief in material objects in favour of a view of the world as consisting of telepathically communicating spirits. Neither approach was widely acceptable, but retaining the old beliefs in the efficacy of reason and the existence of a material world was no longer possible in the face of Bayle's and Berkeley's arguments.

Faced with this outcome, thinkers in the latter portion of the 18th century became convinced that philosophy had taken a wrong turn somewhere. The project was now to find out where and determine what needed to be done to set it back on the correct course. Over the 75 years from 1725 to 1800, four grand attempts were made to do this. The architects of these attempts were David Hume, Thomas Reid, Etienne Bonnot de Condillac, and Immanuel Kant.

Hume, Reid, Condillac, and Kant each took a different approach to dealing with the crisis in philosophy. Reid set out to defend what he referred to as "common sense" from the sceptical objections grounded in the new view that knowledge is confined to our own ideas, Condillac attempted to formulate a more rigorous empiricism, that took all our knowledge to arise from sensation, and Kant preferred to defend reason (or, as he called it, the understanding) and set out to rehabilitate Locke's project of trying to draw the bounds between reason and faith in a way that would obviate the sceptical objections. Hume took the most difficult course of all. He accepted and even amplified the force of the sceptical arguments against reason and sensory experience, but then tried to show that our main and most reliable recourse in the face of the sceptical destruction of knowledge was not grace, the force of education, or ignorance, as Bayle had suggested, but just natural instinct. Hume opposed his naturalism to Berkeley's immaterialism, Bayle's fideism, and Locke's and Descartes's claims for the sovereignty of reason. Though Hume and Condillac were contemporaries and shared a number of friends, they were never in the same city at the same time, and seem to have known nothing of one another's work. However, Reid and Kant knew of Hume's work, and were strongly influenced by it. Their writings were as much a reaction to Hume's naturalism and his scepticism as to the work of earlier philosophers.

QUESTIONS ON THE READING

1. How are propositions expressing a relation between ideas discovered?
2. In what way is the evidence for a true matter of fact, such as that the sun will rise tomorrow, different from that for a relation of ideas, such as that equals added to equals are equal?

3. What assures us of the truth of matters of fact? (Identify three things).
4. Why would someone who found a watch on a deserted island infer that it had once been inhabited?
5. What is it, according to Hume, that leads us to suppose that two different things are related to one another as cause and effect?
6. Why should we think that it is not possible, by simply examining and analyzing a cause, to deduce what its effect will be? Give two reasons, the second one specific to the case of those causal relations that "have become familiar to us from our first appearance in the world, bear a close analogy to the whole course of nature, and supposedly depend on simple qualities of bodies rather than an unseen microscopic constitution of parts."
7. What is wrong with saying that someone who understands the laws governing such things as elasticity, gravitation, cohesion, and impact might be able to tell what effects some causes will have without having to rely on experience?
8. What is wrong with saying that we learn about the connection between a cause and its effect by experience?
9. What is the "negative" thesis Hume proposed to establish in *Enquiry* IV.ii?
10. What does past experience directly and certainly inform us of? What can it not inform us of?
11. Did Hume believe that, from the proposition that an object has always been followed by a certain effect in the past, we may justly infer that similar objects will continue to be followed by similar effects in the future?
12. Did Hume believe that we do in fact always draw the inference described in the previous question?
13. Did Hume believe that the inference is justified by intuitive or demonstrative reasoning?
14. Why can there be no demonstrative argument that allows us to take the premise that a cause has led to a certain effect in the past to entail the conclusion that similar causes must lead to similar effects in the future?
15. What is wrong with arguing that since a cause has led to a certain effect in the past, and since the future generally resembles the past, then the cause will likely continue to lead to the effect in the future?
16. What conclusion did Hume draw from the fact that peasants and children and even animals are able to do causal reasoning?

NOTES ON THE READING

Foundations of knowledge. At the outset of *Enquiry* IV, Hume claimed that all our knowledge is of one or the other of two types. Some of our knowledge is based on inspection of our ideas and an act of comparison, leading us to simply "see" or better intuit that they stand in certain relations to one another. ("Intuit" is a better word than "see" because seeing is something that we do with our eyes whereas we do not inspect the content of our ideas with our eyes.) For example, I know that a cube has six faces simply by inspecting my idea of a cube and counting up the faces. And I know that orange is more like red than it is like green simply by inspecting and comparing these ideas. Occasionally, I might not be able to directly intuit a relation of ideas, but will find that I can do so by means of a chain of intermediate intuitions. For example, I may not be able to intuit that 23+31=54. But by inspecting my idea of five (say, of the five spots on a die), I can intuit that it can be exhaustively divided into a group of two and a group of three. Then, by inspecting my idea of four I can similarly intuit that it can be divided into a group of three and a group of one. Then, I

can apply my intuitions that 3+1=4 and that 2+3=5 (or two tens plus three tens is five tens) to demonstrate that the answer is 23+31=54. Hume referred to knowledge obtained by intuition and demonstration as knowledge of "relations of ideas."

No experience is required to be able to intuit or demonstrate relations of ideas, other than the experience that gives us the ideas in the first place. Once we have obtained the ideas all we need to do is inspect them in the mind's eye, as it were, and we discover that of their very nature they must stand in certain relations to one another. For this reason, knowledge of relations of ideas is permanent and unchanging. Since the knowledge is based on what we find in our ideas when we inspect them, it will not change unless the ideas change. But of course ideas cannot change. We might change the direction of our attention, and cease thinking about one idea and turn to a different one, but the idea itself is what it is and does not change. Any change would constitute the presentation of a new idea rather than an alteration in the old one, especially as we could always call the old idea back in memory.

However, not everything that I know is based on the intuition or demonstration of relations of ideas. I know that the roof of University College is brown. I also know that some years ago it was green. But neither of these things is known by inspecting my ideas of the roof of University College, of brown, or of green, and discerning any relation between them. Indeed, insofar as I know that the roof was earlier green but is now brown, my knowledge itself is telling me that there is could be no intuitive or demonstrable relation between the roof and either of these colours. Obviously, the roof is still there whether it is brown or green, and brown and green are the colours they are whether they are on the roof or not. So in this case the relation of coexistence between the roof and a particular colour is one that can change, even though the ideas involved remain exactly the same. If it is true that the roof is brown, then this truth is of a very different sort than the truth that cubes have six faces. The latter truth is permanent and could not change as long as the ideas of "cube" and "six" remain the same. The former truth not only could change, but has in fact changed, even though the ideas of "roof" and "brown" have remained the same. So the truth that the roof is brown is a truth that concerns states of affairs that can come into or go out of existence rather than states of affairs that are permanent and unchanging. As Hume put it, it is a truth that concerns a "matter of fact."

We know relations of ideas by inspecting our ideas. But matters of fact can change even while the ideas remain the same. So what gives us our knowledge of matters of fact?

One obvious answer to this question is present sensory experience. This is how I know that the roof of University College is brown. I look out the window and see it. Even though I cannot intuit any relation between the content of my idea of a roof and my idea of brown, I can have a sensory experience in which these two ideas are combined.

Another answer to the question is memory. This is how I know that the roof was green. But sensation only informs me of what I am personally now experiencing, and memory only informs me of what I have personally experienced in the past, and we make a number of assertions about matters of fact that go beyond the scope of our own, personal experience. I might say, for instance, that there are people now in the next room, even though I cannot see through the wall to verify this. Or I might say that Caesar was assassinated by Brutus, even though I could not possibly have been alive to have witnessed and remember that event. Or I might say that the perpetrator of the crime weighed more than 80 kilograms even though I did not see the crime being committed. How is it, then, that we come to believe things that we ourselves have not experienced?

This was Hume's question. It was an important question. We make many claims about the existence of objects we ourselves are not now perceiving and do not remember having perceived. The question of how it is that we come to make these claims surely deserves some attention. But, as important as this question is, it had been barely touched upon by any philosopher prior to Hume. Locke, after reflecting that we cannot know of the continued existence of objects when we are no longer sensing them, had made some scattered remarks about forming beliefs in their existence on the basis of testimony and analogy, but this hardly seems adequate.

Hume's answer to his question was that our beliefs about things that lie beyond the range of our present experience and memory are based on reasoning. This reasoning has a particular character. I starts from something that I am now experiencing or remembering. I then presume a connection between this thing that I am now experiencing and remembering and some other thing. This presumed connection leads me to believe in the unperceived existence of this other thing. For instance, a detective sees a footprint of a certain depth in the mud. He presumes that the print could only have been made by a human being over 80 kilograms in weight. As a consequence, he believes a person of that weight must have passed by. Consider another case: Someone else violently shakes an unopened can of soda pop, points it at me, and moves to crack it open. I presume that this will result in the violent expulsion of a jet of sticky fluid and duck under the table. Consider a third case: I hear the scraping of chairs and the sounding of footsteps coming from above. I presume that such sounds can only be made by people getting out of their chairs and I infer that there is a class in the room above me that has just concluded. In all of these cases an inference is made from some present experience to the past, the future, or the current existence of some unperceived thing. In each case what enables us to make the inference is the supposition of some connection between the thing we are experiencing and the thing we infer from it. The connection always involves some sort of dependency. The detective thinks that the footprint depends on someone of a certain weight having recently passed by, and I think that the noises from above depend on people getting up and walking, which in turn depends on a class having adjourned. I also think that getting squirted depends on the can being opened in my direction after having been shaken, which is something that is in process of happening. To say that one thing depends on another is to say that it is an effect of that other. And in fact, in all the cases we have considered the "reasoning" that is involved is reasoning from some present experience or memory back to its presumed cause or ahead to its impending effect.

Testimony is a particular kind of causal inference. It is only insofar as we think that witnesses would not be saying what they are saying unless the events they are reporting had actually occurred that we accept their testimony. But in doing this we are taking their testimony to be an effect of the occurrence of those events, and so reasoning from effect to cause. When I say that Caesar was assassinated by Brutus, it is because I see it written in a book. The book is a present experience that, I think, is the remote effect of that event actually having occurred. Had Caesar not been assassinated by Brutus, had witnesses not observed this event and reported it to historians, and had those historians not written books that were read by other historians, the present book I am looking at would not have the same words written in it. Thus, these words are the remote effect of that cause, and in believing that Caesar was assassinated by Brutus on the basis of this testimony I am reasoning from effect to cause.

Hume's attack on a priori causal inference. Hume noted that this answer to his question merely poses a further question. If causal reasoning is what is central to supplying us with our

beliefs about everything that falls outside of the sphere of current experience and memory then what is the basis for our presumption that particular objects are causally connected?

Hume considered two possibilities: (i) that we might be able to know causal relations in advance by simply inspecting our ideas of various objects and discerning which of them are related as causes or effects, or (ii) that we might only be able to know which objects are causally related after the fact, by first seeing objects of one type being regularly preceded or followed by objects of another type. (Hume put this question by using the terms "*a priori*" and "*a posteriori*," but "*a priori*" just means "in advance" and "*a posteriori*" just means "after the fact.") He rejected the first of these possibilities and endorsed the second. Note that these two possibilities are just the possibilities that some causal relations might be known as "relations of ideas" and that causal relations may only be knowable as "matters of fact." So Hume's conclusion is that we cannot know any causal relations by intuition or demonstration of relations of ideas.

To support his position Hume first mentioned some factors that indicate that we can only come to know causal relations after the fact or *a posteriori*. He then gave a formal argument for this conclusion.

Let us consider the indications first. When we see something entirely new, we have no idea what its cause was or what its effect will be.

Consider an example. The inventor goes into the patent office with a device and the clerk says, "what does it do?" Seeing a new invention, the clerk has no idea what its effect will be.

If the clerk should happen to form any prior idea of what the device will do, it will most likely be because the device resembles some other device that the clerk knows about. But then the device is not something entirely new to the clerk. If it really is entirely new and unlike anything the clerk has ever seen before, the clerk will have no more idea what effect it will have than a robber in a drugstore who comes across some strange vial of fluid on the pharmacist's table and wonders whether it will be nourishing, curative, or poisonous.

These examples indicate that when we are able to tell, upon first looking at a thing, what its cause was or what its effect will be, it is only because we are going by experience of what causes or effects objects like it have had in the past. If we were able to determine causes and effects in advance of experience, we should not need to refer to past experience, but ought to be able to tell what cause or effect a thing would have regardless of how unfamiliar it is.

We might not be persuaded by this. We might think that there are some causal relations that we ought to be able to predict in advance, even when seeing them for the first time. We see a billiard ball rolling down the table towards another billiard ball and we think that even when we saw that happen for the first time, we could predict that the first ball would cause the second one to move after hitting it. But Hume claimed that we only think this because we have so often seen motion follow upon impact that we have forgotten what it was like to see it happen for the first time. We no longer remember our childish uncertainty and wonder at the event. Thus, these sorts of cases, where the causal relation has been repeatedly observed since earliest childhood, cannot be cited as clear counterexamples to Hume's thesis. We would need to know how children see these things, but unfortunately they cannot tell us because by the time they are able to talk it is too late.

Even more telling is the point that in all those cases where we can remember having seen something for the first time we also remember being uncertain about what its causes or effects would be. How could we know, touching a candle flame for the first time, that it would burn? Or seeing smooth water, how could we know that we could not walk out on it as if it were a plate of glass? Stones fall, but iron rises towards the magnet. Water smothers fire, but vodka, which looks

much like water, makes it worse, and water put on a grease fire makes that worse as well. Smother a wood fire and it goes out. Smother a grease fire and it goes back into flame as soon as the air gets back at it. We can still recall our surprise in these cases. They violate our "natural" expectations and so indicate that those expectations were never based on an ability to see anything that actually connects the cause and the effect together, but only on a tacit reference to past experience of what tends to follow what.

Perhaps the most telling indication of all is to be found in Newtonian science, the science of Hume's day. We might think that science tells us makes objects have the effects that they do, and so puts us in a position to tell in advance what effects a given object will have. But all that science really does, according to Hume, is to explain more special and unusual causal relations in terms of more general and universal ones. Thus, if the scientist is better able to tell what effects some new object will have than a lay person, this is only because the scientist does not see the object as entirely new, but is able to see its operations as merely special instances of causal relations that are already familiar to us. Hume stressed that these more general and universal causal relations — the universal attraction of bodies towards one another, the communication of motion by impulse, the tendency of bodies to spring back to their original shape and size, the tendency of the parts of matter to cohere and to resist compression — are not themselves explained but simply discovered from past experience. Newton would have agreed:

> But hitherto I have not been able to discover the cause of those properties of gravity from phenomena, and I frame no hypotheses; for whatever is not deduced from the phenomena is to be called an hypothesis; and hypotheses, whether metaphysical or physical, whether of occult qualities or mechanical, have no place in experimental philosophy. In this philosophy particular propositions are inferred from the phenomena, and afterwards rendered general by induction. Thus it was that the impenetrability, the mobility, and the impulsive force of bodies, and the laws of motion and of gravitation, were discovered. And to us it is enough that gravity does really exist, and act according to the laws [that] we have explained, and abundantly serves to account for all the motions of the celestial bodies, and of our sea. [Newton, in Matthews, 152]

In this famous passage Newton declared that we first get the idea that certain causes (bodies) have certain effects (a tendency to gravitate towards one another) from experience (i.e., from observing phenomena). The whole business of science is to discover, from experience and induction, which of these causal relations are most general and universal and then to explain as much as possible of the events that happen in the world in terms of them. Even if we could explain gravity, it would only be in terms of some other, yet more universal causal relation that we had previously discovered only after the fact, by seeing it happen.

However, these are just indications of the correctness of Hume's view. He went on to offer a more decisive argument for his position. He observed that an effect is by definition an event that occurs as a consequence of its cause. This means that the effect is not the same thing as the cause but is rather something distinct from the cause and subsequent to it in time. But if causes are distinct from effects and exist at a different time from their effects, then it ought to be possible to conceive of the one without conceiving of the other. But if we can think of one object without thinking of another, then there could be no contradiction in supposing that the one exists without thinking that the preceding or following time contains the other. That is, there could be no (logical) contradiction in supposing that the objects are not causally related. Of course, such a supposition might contradict what experience teaches, but Hume's point is just that it would have to be *experience*, and not any intuited or demonstrated relation of ideas, that would have to teach us

about the existence of causal relations). Were there an intuitive or demonstrative relation between our ideas of causes and effects, there would be no way we could get the idea of the cause without getting the idea of the relation to its effect, and the denial of any such relation would contradict our idea. The fact that there is no contradiction in supposing causes to exist without their effects or effects without their causes proves that it is just experience that teaches us of the existence of causal relations.

Hume and the containment model. This perfectly simple argument — if the effect is a consequence of a cause it must be distinct from the cause and if it is distinct from the cause they can be conceived apart from one another and there can be no contradiction in supposing that the one exists apart from the other — has a devastating implication. It explodes the containment model of causality that had been accepted by almost all philosophers prior to Hume. In the process, it undermines almost all the arguments for the existence of God that have been surveyed in this course: Descartes third Meditation argument, Locke's cosmological argument, and Berkeley's causal argument. (Only Descartes' ontological argument in Meditations V is untouched by it.) It also undermines Descartes' argument for the existence of material things and Berkeley's argument for the existence of other minds.

Of course, those who had relied on the containment model had not simply done so uncritically, but had attempted to justify it with the supposition that something cannot come from nothing, or something greater from something lesser. But why should it be taken to be impossible for something to come from nothing? There is no obvious contradiction in the thought that after nothing (or something "lesser") has existed for some time that something (or something "greater") should exist at a subsequent time. (This is just a further application of Hume's point that the effect is a distinct event from the cause and not to be discovered in it.) The only way to see a contradiction is to suppose that what exists at the earlier time must be adequate to produce what exists at the later time, and to make the further supposition that what makes it adequate is that it somehow contains what is found at the later time and transmits that content down into the later time. But to make these suppositions is to argue in a circle by presupposing that the containment model of causality is correct. The containment model was supposed to be justified by the principle that something cannot come from nothing, whereas here it has turned out that the principle that something cannot come from nothing has had to be justified by the containment model.

Hume was the first modern philosopher to effectively expose the groundlessness of the containment model of causality.

Hume's attack on induction. Having established that we only come to know of causal relations after the fact or *a posteriori*, Hume proceeded to raise a further question: how is it that experience leads us to this belief?

At first sight the answer seems straightforward. We see something, call it B, follow upon something else, call it A. From this experience we infer that when A occurs again in the future it will be followed by B. For instance, I see for the first time some tropical fruit such as a kiwi or a papaya in the market place. I taste it. I infer that any fruit of that type that I eat in the future will have the same taste. Or, if I do not do this immediately, after just one experiment, I do it after a number of trails have produced the same result, and my confidence in the result increases in proportion to the number of times that result is obtained over the total number of trials. To put the point somewhat more formally, using Hume's own example, we reason inductively, as follows:

Bread nourished me yesterday.
Therefore, bread will nourish me today.

Hume saw that there is a problem with this inductive pattern of reasoning. It makes a leap. My experience only tells me that on a certain occasion or a certain number of occasions a particular type of object has been followed by another type of object. But why should I go on to suppose that this will happen in other cases as well? I might be able to do this if my experience reveals some connecting factor, like a chain that binds the earlier object to the later one and pulls the one after the other in time the way the knuckles on a train pull each boxcar after the one in front of it. But, as Hume already argued, our experience reveals no such connecting links to us. We see the cause; then we see the effect, but we do not see anything between the two that binds the two of them together. Were we to see any connecting link, we would, upon seeing a cause, be able to pronounce what its effect will be before ever having seen it happen. Or, upon seeing an effect, we would be able to say what the cause must have been despite never having seen that cause. But if there is no case where we are able to determine what effect a cause will have or what cause an effect must have had ahead of time or *a priori*, then we cannot be discerning any connecting links. Our experience tells us that one thing has in fact followed another in the past, and it is this experience that the one thing followed after the other that serves as the sole reason for our conclusion.

Might it be that we are able to make the leap from what we have observed so far to what we will observe in the future by intuition or demonstration? This hardly seems to be the case, if for no other reason than that the course of nature could change. If we think that it is possible that the course of nature could change, then we cannot intuit anything in our past experience that will allow us to demonstrate anything about what our future experience will be like. Just because bread has nourished me in the past, it does not follow that it will nourish me in the future. Barring any sophisticated chemical analysis that almost none of us have the resources and even fewer of us have the inclination to perform, all we know of bread is how it looks, smells, tastes, and feels. And between our ideas of the look, smell, taste, and feel of bread and our ideas of the feeling of nourishment there is no intuitable or demonstrable connection. I can imagine a loaf of sawdust artfully designed to look, smell, taste, and feel like real bread. Eating that loaf would not give me any nourishment. And even the chemist with the resources and the inclination to perform an analysis of the bread is only slightly better off. All that she knows is that molecules of certain sorts have in the past interacted or failed to interact with molecules of another sort. But what promises us that such interactions should continue in the future? The principles of electromagnetic attraction and repulsion between electrons and ions? But what promises us that particles with same charges will continue to repel and particles with opposite charges to attract? At whatever fundamental level our scientific research has managed to bring us, there are just facts about regularities in the succession of types of events, one after another, with no further theory accounting for what makes those successions occur.

Hume had a further argument for rejecting the possibility that we might be able to intuit or demonstrate that our future experience must be like our past experience. This argument rests on the observation that we are often reluctant to draw a causal inference from just one experiment. I open the door and a bell rings. But I might not be willing to infer, from just this one case, that the opening of the door is causally connected to the ringing of the bell. Perhaps the one event only occurred after the other on this one occasion, by accident. To assure myself, I open the door on

other occasions, and if I find that the bell rings whenever I open the door, I begin to believe that the opening of the door may have something to do with causing it to ring. But this is not something that happens in demonstration. When I give a demonstration I inspect one idea and discern something in it that enables me to relate it to another idea. If, upon inspecting the first idea, I find nothing that relates it to the second idea, I do not simply repeat that first idea over and over again a number of times. The bare repetition of the same idea adds nothing to it. And if the idea was originally inadequate to demonstrate a conclusion, and nothing is added to it to demonstrate the conclusion, then it will always be inadequate to demonstrate the conclusion and no amount of repetition of that same idea will ever change that fact. Even were we to allow that, upon reconsidering an idea, I might discover something in it that I had not noticed previously, it still does not follow that the repetition has anything to do with demonstrating the conclusion. For in this case we think that the repetition merely helped us to notice something that was there all along, from the very beginning, so the conclusion could already have been demonstrated from our first consideration of the idea.

But when we take a repeated experience of the occurrence of a sequence of events in the past to prove that that same sequence of events will continue in the future, we make just this extraordinary move. Since no demonstrative argument can make such a move, we cannot claim to be giving a demonstration.

Hume's attack on the uniformity principle. It might be objected that we could convert our repeated experience into a demonstration by appeal to a further principle. This further principle, which is called the "principle of uniformity," states that nature is generally uniform in its operations, and so tends to work in the same way in same circumstances. On this revised understanding of our reasoning from experience, we would argue as follows:

Bread nourished me on Monday.
Bread nourished me on Tuesday.
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[Principle of Uniformity]: If things have regularly occurred in a certain way in the past
they will tend to occur in that way in the future.
Therefore, bread will likely nourish me today.

But what assures us of the truth of the principle of uniformity? We cannot say we have learned it from experience, since at best experience could only tell us that nature has been uniform in her operations in the past, not that it will continue to be so in the future. Neither is it intuitively or demonstratively obvious that nature will always be uniform in its operations since there does not seem to be any contradiction in supposing that there could be a sudden change in the course of nature.

Faced with these problems it is tempting to say that the fact that nature has generally been uniform in its operations in the past at least makes it likely that this principle will continue to hold in the future. But to make such a claim is to presuppose the very principle we are seeking to justify. What we want to know is what legitimates our making the leap from an observation of the way things have been in the past to a conclusion about how they are going to be on other occasions. To think that the uniformity in the operations of nature on most of the occasions we have observed in

the past implies that nature will likely continue to be uniform in its operations in the future is to make just this same leap. So it hardly justifies making the leap. It simply begs the question.

It might be objected that Hume was too quick to say that there is no way to demonstrate the principle of uniformity. He claimed that it is possible that the course of nature might change. But how do we know for sure that it is possible? Hume claimed that we have seen it happen on occasion, but that is not obviously true. Someone might insist that no fundamental law of nature has ever been violated and that if from time to time we witness what appear to us like changes in the course of nature, it is only an appearance due to our ignorance of the true nature of the persisting fundamental laws. We are no different from Adam who, upon witnessing summer turn into winter for the first time, supposed that there had been a change in the course of nature when, in fact, everything was continuing to occur in accord with the same laws.

Perhaps, this critic might continue, if we were in possession of a way of demonstrating the principle of uniformity, that demonstration would prove to us that there can be no change in the laws of nature. So the most that we should conclude is that we are not now in possession of a demonstration of the principle of uniformity, not that one could not be offered.

However, Hume had an answer to this objection. He granted it. But at the same time that he granted it he insisted on the point that we are not now in possession of any demonstration of the principle of the uniformity. That put him in a position to insist that we are not now relying upon that demonstration in order to draw our inferences concerning causes and effects. Were there such a demonstration, it would have to be a deep and difficult one, since it had escaped his scrutiny. It is not plausible that others who engage in causal inference, particularly animals, children, and uneducated, unintelligent people, would have discerned this demonstration even though Hume could not figure it out. So if they rely on the principle of uniformity, it cannot be because they have any rational justification for doing so.

Does this mean that we should give up the principle of uniformity? Hume thought not. He insisted that we not only do make the supposition that the future will be like the past, but that we must make it if we are to survive, and that therefore we ought to make it. We just cannot justify it by any reasoning or argument. This is Hume's sceptical conclusion concerning the operations of the understanding.

ESSAY QUESTIONS AND RESEARCH PROJECTS

1. Hume's distinction between relations of ideas and matters of fact has been heralded as one of the first statements of what was later to emerge as the analytic/synthetic distinction. However, Hume's distinction, which is based on appeal to intuitively obvious relations between ideas, is importantly distinct from later versions of the distinction, which involve appeals to definitions of terms and the analysis of concepts. Arguably, Hume's "relations of ideas" include things that other philosophers would have identified as "synthetic a priori" or even purely empirical truths (e.g., "orange is more like red than like green"). Do a more detailed study of differences between Hume's account of the distinction between relations of ideas and matters of fact and more recent formulations of an analytic/synthetic distinction.
2. Hume's charge that there is no rational justification for causal inference continues to be hotly debated today. Do a study of the current debate and determine how well Hume's position has stood up to criticism.