experience them. We would not normally say, for instance, that all biological analyses would cease to be true if the human race were suddenly wiped out. But if it is rational to accept the findings and methods of empirical inquiry, then it seems rational to accept the design argument's premiss that order is discovered, not imposed.

**Hume and the Argument from Design**

Even though they might not feel that Kant has overturned the argument from design, many philosophers would say that the argument has been well and truly refuted by someone else. I refer here to Hume, whose discussion of the argument from design is one of the things for which he is best known. In his *Dialogues concerning Natural Religion* and in *An Enquiry concerning Human Understanding* Hume makes eight basic points against the argument from design. So let us now turn to these.

(a) **Hume's Arguments**

Hume's first point concerns what we can deduce from an effect. 'When we infer any particular cause for an effect', he says, 'we must proportion the one to the other, and can never be allowed to ascribe to any cause any qualities, but what are exactly sufficient to produce the effect.' Now, Hume adds, if design needs to be explained, then explain it; but only by appealing to a design-producing being. To say that this being is God is to go beyond the evidence presented by design.

Hume's second point hinges on the fact that the universe is unique. 'When two *species* of objects have always been observed to be conjoined together', he writes, 'I can infer, by custom, the existence of one wherever I see the existence of the other; And this I call an argument from experience.' But, Hume continues, this notion of inference cannot be invoked by supporters of the argument from design. Why not? Because, says Hume, the universe is unique, and we therefore have no basis for inferring that there is anything like a human designer lying behind it. 'Will any man tell me with a serious
countenance’, he asks, ‘that an orderly universe must arise from some thought and art, like the human; because we have some experience of it?’ His answer is that, if someone were to tell him this, the person’s claim could not be backed up. ‘To ascertain this reasoning’, he explains, ‘it were requisite, that we had experience of the origin of worlds; and it is not sufficient surely, that we have seen ships and cities arise from human art and contrivance.’

But suppose we agree that there is a designer whose existence may be inferred from the way things are. Would not such a designer also call for explanation? Hume’s next argument is that the answer to this question is ‘Yes’. ‘If Reason be not alike mute with regard to all questions concerning cause and effect’, he urges, ‘this sentence at least it will venture to pronounce, that a mental world, or universe of ideas requires a cause as much as does a material world or universe of objects.’ In fact, says Hume, positing a designer of the world leads to an infinite regression: ‘If the material world rests upon a similar ideal world’, he says, ‘this ideal world must rest upon some other; and so on, without end.’

Hume’s fourth point is made in the form of a question. ‘And why not become a perfect anthropomorphite?’ he asks. ‘Why not assert the Deity or Deities to be corporeal, and to have eyes, a nose, mouth, ears, &c.?’ As we saw in the case of Paley, some people argue from human artefacts to the existence of a designer whom they deem to be accountable for the universe considered as one great artefact. They do not suppose, however, that this designer is exactly like the people
The Argument from Design

responsible for human artefacts. For example, they normally deny that this designer has a body. But, so Hume argues, they should not do that if they want to be consistent. They should regard the cause of the universe’s design as something in every respect like human artificers. Following a somewhat similar line of argument, Hume goes on to suggest that the defender of the argument from design has no reason for denying that there may not be a whole gang of gods working together to produce design in the universe. ‘A great number of men’, he says, ‘join together in building a house or ship, in rearing a city, in framing a commonwealth: Why may not several Deities combine in contriving and framing a world?’

Finally, says Hume, there remain three other objections to the argument from design. The first is that the universe might easily be regarded as a living organism such as a plant, in which case the argument from design fails since it depends on comparing the universe to a machine or artefact of some kind. The next is that the order in the universe might easily be the result of chance. The last objection is that the argument from design fails because the universe shows plenty of signs of disorder.

(b) Has Hume Refuted the Argument from Design?

Hume has a strong point in saying that we should not postulate more than is necessary to account for a given effect. We may, of course, sometimes reasonably argue that some cause has characteristics other than those sufficient to produce some effect. If I know that X is made by a human being, I may reasonably suppose that its maker has two legs and a human heart. But I might be wrong. The maker may have one leg and an artificial heart. One might therefore wonder why, if the order in the universe needs explanation, it follows that this explanation will be all that God is said to be. He is often said to be eternal, but does it follow, for instance, that a source of order needs to be eternal?

Hume’s point about the uniqueness of the universe also has something to recommend it. That is because in reasoning from effect to cause we often depend on knowledge of previous
instances. If you receive a postcard from Paris saying 'Weather here, wish you were nice, Love, Me', you will probably be very puzzled. But if I receive such a card, I shall know that it comes from a certain friend who always writes that on his holiday postcards to me. What is it that enables me to conclude as I do, while you would be merely baffled? It is that I have past experience of my friend and his curious ways, while you (probably) do not. Yet, even though we have experience of human designers and what they produce, nobody supposes that anyone has experience of the origin of universes and of causes which bring them about. And since that is so, we might wonder how one can reason from the universe we inhabit to a designing cause.

What of Hume's other arguments? These, too, have merit. It is true, for example, that designers of our acquaintance are bodily creatures with bodily attributes. It is also true that products which are designed frequently derive from groups of people working together. Since the argument from design is an argument from analogy (since it holds that the universe resembles designed things within it and must therefore have a cause like theirs), we might therefore wonder how it could possibly justify us in ruling out the idea that evidence of design in the universe is evidence for what is bodily or evidence for the existence of several co-operating designers. And if designers may be thought of as themselves exhibiting order, we might also wonder why we should suppose that appealing to God as a designer of what we find in the universe counts as any kind of explanation for the order we find in the universe. If God is an instance of something orderly, how can he serve to account for the order of orderly things?

Yet this is not to say that Hume has succeeded in refuting the argument from design. Indeed, we now need to note that defenders of the argument have a number of replies which they can make in response to his various criticisms of the argument.

Take first his point about not ascribing to a cause anything other than what is exactly sufficient to produce its effect. Hume seems to think that even if we may causally account
for order in the universe by inferring the existence of something distinct from the universe, the most we can conclude is that the order is produced by a design-producing being. He does not think that we are entitled to say that we have any evidence of God's existence. Yet reason to suppose that order in the universe has a cause outside the universe is reason to suppose that the cause of the order in the universe is powerful, purposive, and incorporeal. It will need to be powerful to achieve its effect. It will necessarily be incorporeal since it lies outside the universe. Since it is not a material thing and since what it produces is order, we may suppose that it is able to act with intention. For order is naturally explained by reference to intention unless we have reason to suppose that it has been brought about by something material, i.e. something the effects of which are not the result of choice or planning on its part.

So we are entitled to infer more than an order-producing being if, as the argument from design holds, we are right to ascribe order in the universe to a cause outside it. And if it should be said that more is supposed to be true of God than that he is powerful, incorporeal, and purposive, a defender of the argument from design can reply that God is normally said to be at least this and that the argument from design therefore provides at least some support for his existence. Suppose I am wondering whether John has been in my room. I may conclude that he has because I find a note signed 'John' saying 'I was here'. If someone then tells me that the note is not evidence of John's presence because John is six foot tall and the note is not evidence for someone of that height having been in my room, I can reasonably reply that it still counts as evidence for John's presence since he is able to write and since I can recognize his writing. By the same token, a defender of the argument from design may say that even if the argument does not establish that God exists with all the attributes commonly ascribed to him, the fact that it supports the claim that something with some traditional divine attributes exists is reason for thinking of it as latching on to some evidence of God's existence.

But what of Hume's suggestion that the argument from
design fails because the universe is unique? Though, as I have said, it has something to recommend it, this suggestion, too, is open to question. For it is wrong to assume that no question about the origin of something unique can reasonably be raised and answered. Nor is this something which we would normally suppose. Scientists certainly try to account for various things which are unique. The human race and the universe itself are two good examples.

In any case, one may deny that the universe is unique. To say that the universe is unique is not to ascribe to it a property which cannot be ascribed to anything else. It is to say that there is only one universe. And even if there is only one universe, it does not follow that the universe is unique in its properties, that it shares no properties with lesser systems. ‘If you were the only girl in the world and I were the only boy’, as the once popular song envisaged, there would still be two human beings. And, so we may say, there are lots of things like the universe even if there is only one universe. For the universe shares with its parts properties which can be ascribed to both the universe and its parts. It is, for example, in process of change, as are many of its parts, and it is composed of material elements, as people and machines are. As the version of the argument from design which invokes the notion of regularity holds, the universe is also something exhibiting regularity, as, once again, is the case with people and machines.

This brings us to Hume’s third argument: that a designer requires a designer as much as anything else does, and that arguing for a designer lands one in a problem of infinite regress. Does that line of reasoning serve to rule out the argument from design?

It seems to assume that if one explains A by B, but does not offer to explain B, then one has not thereby explained A. And one may doubt whether that assumption should be accepted. As one of the characters in Hume’s Dialogues says, ‘Even in common life, if I assign a cause for any event; is it any objection...that I cannot assign the cause of that cause, and answer every new question, which may incessantly be
started?" Even scientific explanations work within a framework in which certain ultimate laws are just claimed to hold.

But there is, perhaps, a better response that can be made to Hume at this point. For why should we suppose that what is responsible for order must exhibit an order which stands in need of a cause distinct from itself? Sources of order are sometimes things with an order caused by other things. A factory machine devised to regulate a flow of bottles would be a case in point. But thoughts are also sources of order exhibiting order. And we do not need to seek independent causes which account for the fact that they exhibit order. For they would not be thoughts if they did not. Hume maintained that thoughts are a series of ideas which succeed one another in an orderly way; thus he holds that they have a temporal order which requires a cause if any order does. But thoughts are not just ordered by virtue of temporal succession. Each thought is intrinsically ordered, for thoughts have a logical structure which philosophers can analyse and try to explicate. Confronted by Hume’s third objection, therefore, defenders of the argument from design can reply that design in the universe derives from the mind of God conceiving it. They may then suggest that it therefore derives from an order which does not, qua order, stand in need of an ordering cause. Like a human designer’s thoughts which lead to something designed, so, it may be argued, the thoughts of a divine designer are essentially ordered if they exist at all.

But defenders of the argument from design will not want to say that God is exactly like human designers, which brings us to Hume’s ‘Why not become a perfect anthropomorphite?’ and ‘Why not many gods?’ arguments. Though one can see the force of these arguments, they do not succeed in showing that the argument from design is mistaken. For there are a number of replies open to someone who wishes to defend some version of the argument against them.

First, it can be said that the designer of the universe cannot himself be corporeal without himself being part of the system of things for which the design argument proposes to account. Versions of the argument from design are normally concerned
to account for material order in the universe. But they cannot do this by appealing to yet another instance of such order.

Second, it might be pointed out that the argument from design does not have to conclude that the designer of the universe shares all the attributes of the causes whose operations provide the justification for inferring him in the first place. This is because arguments from analogy do not have to assert that since A accounts for B and since C resembles B, something exactly like A must also account for C.

Suppose that my office is cleaned by Mrs Mopp. She is fat and cheerful, and she has a limp. I observe her cleaning my office week after week. She always comes in at 10.30 a.m., just before I leave for my coffee-break.

Now suppose I am told on Monday afternoon that Mrs Mopp has resigned. Nobody comes to clean my office at 10.30 on Tuesday, but when I return from my coffee-break I find that my room has been cleaned in the usual way.

What can I infer? That a cleaner has been around, of course. But I do not need to infer that the cleaner was a fat, cheerful woman with a limp. For all I know, the office could have been cleaned by a thin, miserable man with two strong legs.

The point which this example illustrates is applicable both to Hume's 'anthropomorphite' argument and to his question 'Why not many gods?' Human beings imposing order have bodies; but this does not bind us to ascribing a body to everything that can be thought of as responsible for order. It is often the case that order is imposed by groups of human beings; but this does not mean that every instance of order must be produced by a collection of individuals.

In other words, as Richard Swinburne observes, the argument from design may be held to employ a common pattern of scientific reasoning which can be stated as follows:

A's are caused by B's. A*'s are similar to A's. Therefore—given that there is no more satisfactory explanation of the existence of A*'s—they are produced by B*'s similar to B's. B*'s are postulated to be similar in all respects to B's except in so far as shown otherwise, viz.
except in so far as the dissimilarities between A's and A*'s force us to postulate a difference.\textsuperscript{16}

On the basis of this principle Swinburne proceeds to defend his version of the argument from design against Hume's fourth point. He writes:

For the activity of a god to account for the regularities, he must be free, rational, and very powerful. But it is not necessary that he, like men, should only be able to act on a limited part of the universe, a body, and by acting on that control the rest of the universe. And there is good reason to suppose that the god does not operate in this way. For, if his direct control was confined to a part of the universe, scientific laws outside his control must operate to ensure that his actions have effects in the rest of the universe. Hence the postulation of the existence of the god would not explain the operations of those laws: yet to explain the operation of all scientific laws was the point of postulating the existence of the god. The hypothesis that the god is not embodied thus explains more and explains more coherently than the hypothesis that he is embodied.\textsuperscript{17}

As a reply to Hume, this seems correct. And, with an eye on the suggestion that there might be many divine designers, it can be supplemented by appeal to the famous principle commonly called 'Occam's razor'. According to this, 'Entities are not to be multiplied beyond necessity'. That, too, is commonly invoked in scientific contexts, and a defender of the argument from design might therefore argue that though there is reason to believe in one designer god, there is no reason to believe in more than one, though there might possibly be more than one. In this connection it is perhaps worth noting that Hume himself seems to accept a version of Occam's razor. 'To multiply causes, without necessity', he says, 'is indeed contrary to true philosophy.'\textsuperscript{18}

Let us now pass quickly on to Hume's last three objections to the argument from design: that the universe can be thought of as a living organism, that chance might account for order in the universe, and that the universe contains much disorder. Are these objections decisive? It seems to me that it is certainly possible to doubt that they are.
Even if we press the analogy between the universe and a living organism, we still seem confronted by regularity in the universe. I have said little about this so far, but it does seem true that the universe behaves in regular and predictable ways, as Swinburne much stresses. It is therefore open to defenders of the design argument to draw attention to what Swinburne is talking about and to emphasize the similarity between machines and the universe. For it is characteristic of a machine that it behaves in regular and predictable ways and obeys scientific laws. Defenders of the argument from design might even add that their appeal to a designer helps to explain more than an appeal to the generative power of living organisms in accounting for the order in the universe, an appeal which Hume seems to be making in suggesting that the analogy between the universe and an organism is a problem for the argument from design. For living organisms reproduce regularity because they are already things that display it. Thus it might be said that living organisms cannot explain all the regularity in the universe since they depend on some form of regularity themselves.

Hume's point about chance is that over the course of time there will be periods of order and periods of chaos, so that the universe may once have been in chaos and the present ordered universe may derive from this state. In reply to this point, however, it can be said that Hume is only noting a logical possibility which need not affect the fact that the universe is not now in chaos, which calls for explanation. It might also be said that an explanation of the universe which does not refer to chance grows more credible as time goes by. Thus Swinburne suggests that 'If we say that it is chance that in 1960 matter is behaving in a regular way, our claim becomes less and less plausible as we find that in 1961 and 1962 and so on it continues to behave in a regular way'. In any case, why should it be thought that if something comes about by chance there is no causality or planning afoot? Suppose that the Pope sneezes in Rome at exactly the time that the US President sneezes in Washington. Must we suppose there is a cause of this coincidence of sneezes? Surely not. It is a matter of
chance. But we would not be inclined to suppose that the Pope’s sneezing and the President’s sneezing lack causal explanations.

What of Hume’s final point? In one sense it is clearly right: the universe contains disorder since there are, for example, pain-producing events of a natural kind (the sort of disorder which Hume actually has in mind). But this fact need not deter defenders of the argument from design unless they wish to hold that every particular thing works to the advantage of other particular things, which they do not want to do anymore than anyone else does. They only want to say that there is order in need of explanation; and disorder qua pain-producing natural events can plausibly be taken as just an illustration of order. One can, for instance, argue that pain-producing natural events exhibit order in that their origins can often be traced and their future occurrence predicted with a fair degree of success.

Is the Argument from Design Reasonable?

It seems, then, that if they are taken individually, Hume’s arguments against the design argument admit of reply. But a supporter of Hume might accept this conclusion and still urge that Hume has knocked a massive hole in the argument. Consider the following imaginary dialogue:

A. Brown has stabbed Jones to death.
B. Prove that.
A. Brown had a motive.
B. That does not prove that Brown stabbed Jones. Many people had a motive for killing Jones.
A. Brown was found at the scene of the crime.
B. That fact is compatible with his innocence.
A. Brown was found standing over Jones holding a blood-stained knife.
B. He may have picked it up after the murder was committed.
A. Brown says he stabbed Jones.
B. He may be trying to cover up for somebody.
Now B’s points here, taken individually, might be all quite correct. But though A may be wrong about Brown, a reasonable person would surely conclude that, when A’s points are taken together, they put a question mark over Brown’s innocence. Suppose, then, it were said that Hume’s arguments, if not all decisive individually, together make it reasonable to reject the argument from design? Evidently, a great deal turns here on the initial strength of the design argument. So let us now consider this by turning to the two forms of the argument distinguished at the outset of this chapter.

The Argument from Purpose

The argument from purpose in nature (which I shall henceforth call ‘Paley’s argument’) is an argument from analogy. It rests on the premiss that certain things in nature really are like human artefacts. So if it is to convince, there must be more than a passing resemblance between human artefacts and things in nature. The trouble is that there are notable dissimilarities between human artefacts and things in nature.

For example, human artefacts, even in cases of automated production, result quite directly from intentional actions. But this is not so in the case of things in nature. Our eyes, for instance, while we were developing in the womb, originated from genetically controlled processes that themselves had natural causes, and so on, back as far as we can determine. These processes might have been the result of design, but if so, the design seems to have been woven into the fabric of nature, so to speak.20

Defenders of Paley’s argument sometimes say that it is reasonable to think of certain things in nature as if they were machines. They sometimes say that it is reasonable to think of the universe as a machine. But nothing in nature seems to come about as machines do. And we have no reason to think that the origins of the universe resemble the conditions under which machines are produced. In addition to such facts, one might also ponder the question of what it makes sense to ask of a machine and what it makes sense to ask of things