

ARGUMENTS FROM DESIGN

Richard Swinburne

Is it reasonable to believe in God? Many suppose that belief in God is a matter of faith, not reason. Here, Richard Swinburne, Nolloth Professor of the Philosophy of the Christian Religion at Oxford University, argues that there are a number of arguments which, taken together, actually provide good grounds for supposing that God exists.

Reasons for believing that there is a God have been around as long as there have been people holding this belief; and philosophers have tried to knock these reasons into 'arguments' of more rigorous form as long as there have been philosophers. My view is that when these arguments are articulated in the right way (i.e. in a form similar to arguments in science or history) and taken together, they make a powerful cumulative case for the existence of God.

Among the strongest arguments for the existence of God, it seems to me, are two forms of the 'argument from design' - which I shall call the argument from temporal order and the argument from spatial order. The argument from temporal order begins by drawing our attention to the fact that throughout all of possibly infinite time and space material objects behave in the simple way codified by scientific laws. What exactly are the most fundamental laws of nature we may not yet know - maybe they are the field equations of the General Theory of Relativity, or maybe the laws of a Grand Unified Theory or of a still grander theory yet to be formulated. To say that such laws govern matter is just to say that every bit of matter, every neutron and proton and electron throughout endless space and time behaves in exactly the same way (i.e. in accord with exactly the same fundamental laws). How extraordinary that is!

Clearly this could not ever be explained scientifically - for scientific explanation of the operation of a natural law con-

sists in showing it to be a consequence of some more fundamental laws - we explain the operation of Galileo's law of fall on Earth by showing it to be a consequence, for the particular circumstances of Earth, of Newton's laws of motion; and we may be able to explain the operation of Einstein's laws by those of Grand Unified Theory. But my concern is with the operation of the most fundamental laws of all. Either it is a brute inexplicable fact that there are such laws at all, or it is to be explained by a pattern of explanation slightly different from the scientific.

The second form of argument - the argument from spatial order - draws our attention to the intricate construction of plants, animals, and humans. They are so organized as to be able to catch the food for which their digestive apparatus is suited, escape from the predators most keen to catch them, breed and reproduce - they are like very, very complicated machines. Now, of course, there is a well-known explanation of all this in terms of evolution by Natural Selection. Once upon a time, the story goes, there were very simple organisms, and they had offspring which varied from the parents in various ways (some of them being taller, some shorter, some simpler and some more complex than their parents). Those best fitted to survive (and often complexity of organization provides a selective advantage) did so and they in turn produced offspring with characteristics differing slightly from their own in random directions; and so it was that complex plants, animals, and humans evolved. This story is surely basically correct. But why were there simple organisms in the first place? Presumably because the matter-energy at the time of the 'Big Bang' when the Universe (or at any rate our present state of it) began 15 billion years ago had just the quantity, density, and initial velocity as to lead in the course of time to the evolution of organisms. And why are there laws of evolution? That is, laws which bring it about that animal genes mutate randomly, that animals produce many offspring, etc.? Presumably because these laws follow from the fundamental laws of nature. Only a certain

sort of critical arrangement of matter and certain kinds of laws of nature will give rise to organisms. And recent scientific work on the 'fine tuning' of the Universe has shown that the initial matter and the laws of nature had to have very, very special features indeed if organisms were to evolve. For example, the Big Bang had to be of exactly the right size - if it had been a very slightly bigger bang, the quanta of energy would have receded from each other too fast for matter to condense into galaxies, stars and planets and so allow organisms to evolve. If the Bang had been very slightly smaller, the Universe would have collapsed before it was cool enough for the chemical elements to form and so to allow organisms to evolve. Also, if the laws of nature still had the same form but the physical constants in them had slightly different values from their actual ones (or if they had had any of most other different forms), there would have been no evolution. So how extraordinary it is that the initial conditions and laws were so 'fine-tuned' as to produce plants, animals and humans! This again not merely is not, but, because of the very nature of science, *could* not, ever be something scientifically explicable. Science could not explain why the basic laws of nature are as they are, nor why the matter at the time of the Big Bang (or everlastingly, if there was no beginning) had the features it did. All this is where science starts from, what it explains other things in terms of. So again, either these are brute inexplicable facts, or they are to be explained by a pattern of explanation slightly different from the scientific.

Fortunately there is just such a pattern which we use all the time in explaining mundane phenomena. I call it personal explanation. When we explain the book being on the table, or the words of these sentences being on my writing-paper, we explain them in terms of the action of a person with capacities for making a difference to things and a purpose which he seeks to achieve thereby. The words being on the paper are to be explained as brought about by a person (me) with a capacity to move my body in certain

ways (i.e. write), and a purpose (to have an article to send to the editor). Scientific explanations often postulate unobservables (e.g. protons and electrons) in order to explain the observable data; and the grounds for supposing they do is that the explanatory hypothesis is simple and leads us with some probability to expect the data which we would not otherwise expect. Personal explanations in terms of unobservable persons are to be accepted on similar grounds. The simplicity of a hypothesis is a matter of it postulating few entities with few simple properties.

The data inexplicable by science to which I have drawn attention - the uniform behaviour of objects in accord with laws of nature, and the special character of those laws and of the initial (or boundary) conditions of the Universe - are readily explicable in terms of the action of a God, omnipotent (all-powerful), omniscient (all-knowing) and perfectly free. He is constantly active, moving the stars and atoms in a regular way (as we may move our bodies in a regular way in the patterns of a dance), and in just such ways as, together with the primeval matter which he makes, to bring forth animals and humans. Being omnipotent, he can do this. Being omniscient, he will see good reason for doing it. A regularly evolving world is beautiful, and the humans who will eventually emerge can learn how the world works - which they can do only if there are simple laws of nature for them to understand - and then they can themselves choose to some extent how to form the world for good or ill. It is good that there be humans playing a role in the creation process. God, being perfectly free, will not be prevented by irrational forces from bringing about what he perceives to be good.

It is sometimes said that the laws of nature being as they are, and the initial conditions being as they were in our Universe, would be explained if there were a trillion other universes with various different laws and initial conditions. Then it would be very probable that there would be one universe in which these factors were just right for the evolution of animals and humans. But it would be the height of irrationality

to postulate a trillion universes (as opposed to one God) in order to explain our Universe, unless there were particular features of our Universe best explained by a super-theory which had the trillion-universe consequence. But even so that super-theory would have to postulate very special boundary conditions for the super-Universe of universes and very special super-laws of nature which had the consequence that there would evolve such a variety of universes that it was very probable that at least one would be life-evolving. Most super-theories (as well as being very complicated) will not have that consequence. So we have the problem of just why the super-Universe had laws of nature and boundary conditions of just that kind. And so again, whether of one universe or of one super-universe, either its order and 'fine-tuned' character are brute inexplicable facts or they are to be explained by a pattern of explanation slightly different from the scientific.

The hypothesis of theism is a very simple hypothesis. It postulates one personal being, not many. Persons are beings with powers to make differences to the world, knowledge of how to do so, and some degree of freedom in how to do so. God is postulated as a very simple kind of person - having infinite degrees of power, knowledge, and freedom; or, put negatively, zero limits to his power, knowledge and freedom. Scientists always postulate infinite (or zero) degrees of properties if they can do so consistently with the data, as the simplest hypothesis. They postulate that photons have zero rest mass rather than some very, very small rest mass which would predict the data equally well; and they used to postulate that the gravitational force had infinite velocity until other considerations forced a different hypothesis upon them. To postulate God is to postulate one being of a very simple kind, and this hypothesis makes it not improbable that we will find the data to which I have drawn attention.

To suppose these data to be just brute inexplicable facts seems, however, highly irrational. To suppose that it is sim-

ply a vast coincidence that every bit of matter everywhere in the Universe behaves in exactly the same way is irrational to the point of absurdity - and even more so when there is a simple rival hypothesis which leads us to expect those data, as well as the further datum of the world being fine-tuned to produce animals and humans. Reason leads us inescapably from Nature up to Nature's God.

For fuller argument, see Richard Swinburne, Is There a God? (Oxford: Oxford University Press, 1966). An earlier version of this piece was previously published in the Times Higher Education Supplement.