Probabilistic Arguments for the Existence of God

Argumentos probabilísticos para a Existência de Deus

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I

St. Paul famously claimed that pagans who did not worship God were 'without excuse', because 'ever since the creation of the world [God's] eternal power and divine nature, invisible though they are, have been understood and seen through the things which he has made.'[1] Inspired by this text, many Christian thinkers from the second to the eighteenth centuries put forward arguments from premises 'evident to the senses' to the existence of God. One form of that tradition attempts to produce deductively valid arguments. It is a not unreasonable interpretation of Aquinas's *Summa Theologiae* 1.2.3., that he sought to give five such arguments there. But the enterprise of producing deductive arguments is, I think, an enterprise doomed to failure. For if it could be achieved, then a proposition which was a conjunction of the evident premises together with 'there is no God' would be incoherent, would involve self-contradiction. But again propositions such as 'there is a Universe, but there is no God', though perhaps false, seem fairly evidently coherent.

1 - *Fundamento: Revista de Pesquisa em Filosofia* agradece ao Professor Swinburne sua autorização para publicação do seu texto, no Brasil, nesta revista.

So my own preference is for the 'inductive' form of natural theology. This begins from premises evident to the senses and claims that they make probable (though not certain) the existence of God. Thinkers were not very clear about the distinction between inductive and deductive arguments during the first 1000 years of the Christian era, and not much clearer until the eighteenth century. So it would be anachronistic to say that the patristic writers were explicitly seeking to give inductive, or alternatively deductive arguments, but I consider that some patristic and later arguments do conform to an inductive pattern. What I have sought to do in my own natural theology is to give rigorous form to inductive arguments to the existence of God from premises reporting phenomena evident to the senses; and to bring out the close similarities between such arguments and arguments to a deep theory of physics such as Quantum theory, and to arguments of historians or detectives to some particular person having done some deed. The many such arguments for the existence of God can be ordered by the generality of their premises – the phenomena from which they begin. The most general phenomenon is that there is a physical Universe; the argument from the physical Universe to God is the cosmological argument. Then there are arguments of two main kinds from the order in the Universe; these are teleological arguments. One is the argument from the universal operation of simple natural laws, which I call the argument from temporal order. The other is the argument from those laws being such as (given an early state of the universe) to lead to the existence of human bodies, which I call the argument from spatial order. Then there is the argument from consciousness – that humans are not merely bodily organisms, but are conscious beings (having sensations and beliefs, thoughts, desires and purposes, and the ability to reason and to choose to bring about good or evil.) Then there are arguments from particular miraculous events within history, and above all from the Resurrection of Jesus – or rather, since it is disputed whether these events happened, from the public evidence about them. And finally there are arguments from the very widespread phenomena of religious experience. Like all inductive arguments from particular phenomena to some deep physical hypothesis, or to some claim of a historian, the arguments from phenomena to God are cumulative. Each phenomenon gives some degree of probability to the hypothesis; taken together with arguments from phenomena *against* the existence of God, they give an overall probability to the existence of God. I have argued at length elsewhere[2], that overall these arguments make the existence of God significantly more probable that not. Constraints of time however mean that all that I can hope to do in this lecture is to show the force of arguments from the first four phenomena listed above: the existence of a physical universe, its conformity to simple natural laws, those laws being such as to lead to the existence of human and animal bodies, and those bodies being the bodies of reasoning humans who choose between good and evil.

Theism, the claim that there is a God is an explanatory hypothesis, one which purports to explain why certain observed phenomena (that is, data or evidence) are as they are. There are two basic kinds of explanatory hypothesis – personal and inanimate hypotheses. A personal hypothesis explains some phenomenon in terms of it being caused by a substance, a person, acting earlier with certain powers (to bring about effects), certain beliefs (about how to do so), and a certain purpose (to bring about a particular effect, either for its own sake or as a step towards a further effect). I (a substance) cause the motion of my hand in virtue of my powers (to move my limbs), my belief (that moving my hand will attract attention) and my purpose (to attract attention). An inanimate explanation is usually represented as explaining some phenomenon in terms of it being caused by some initial state of affairs and the operation on that state of laws of nature. The present positions of the planets are explained by their earlier positions and that of the Sun, and the operation on them of Newton's laws. But I think that this is a misleading way of analysing inanimate explanation – because 'laws' are not things; to say that Newton's law of gravity is a law is simply to say that each material body in the universe has the power to attract every other material body with a force proportional to mm'/r^2 and the liability to exercise that power on every such body. So construed, like personal explanation, inanimate explanation of some phenomenon (e.g the present positions of the planets) explains it in terms of it being caused by substances (e.g the Sun and the planets) acting earlier with certain powers (to cause material bodies to move in the way codified in Newton's laws) and the liability always to exercise those powers. So both kinds of explanation explain phenomena in terms of the earlier actions of substances having certain powers to produce effects. But while personal explanation explains how substances exercise their powers because of their purposes and their beliefs , inanimate explanation explains how substances exercise their powers because of their liabilities to do so.

I suggest that we judge a postulated hypothesis (of either kind) as probably true insofar as it satisfies four criteria. First we must have observed many phenomena which it is quite probable would occur and no phenomena which it is quite probable would not occur, if the hypothesis is true. Secondly, it must be much less probable that the phenomena would occur in the normal course of things, that is if the hypothesis is false. Thirdly, the hypothesis must be simple. That is, it must postulate the existence and operation of few substances, few kinds of substance, with few easily describable properties behaving in mathematically simple kinds of way.[3] We can always postulate many new substances with complicated properties to explain anything which we find. But our hypothesis will only be supported by the evidence if it is a simple hypothesis which leads us to expect the various phenomena that form the evidence. And fourthly, the hypothesis must fit in with our knowledge of how

the world works in wider fields – what I shall call our 'background evidence'.

I now illustrate these criteria at work in assessing postulated explanations. I begin with a postulated personal explanation. Suppose that there has been a burglary; money has been stolen from a safe. A detective has discovered these pieces of evidence: John's fingerprints are on the safe, someone reports having seen John near the scene of the burglary at the time it was committed, and there is in John's house an amount of money equivalent to the amount stolen. The detective puts forward as the explanation of the burglary the hypothesis that John robbed the safe. If John did rob the safe, it would be to some modest degree probable that his fingerprints would be found on the safe, that someone would report having seen him near the scene of the crime at the time it committed, and that money of the amount stolen would be found in his house. But these phenomena are much less to be expected with any modest degree of probability if John did not rob the safe; they therefore constitute positive evidence, evidence favouring the hypothesis. On the other hand, if John robbed the safe, it would be most unexpected (it would be most improbable) that many people would report seeing him in a foreign country at the time of the burglary. Such reports would constitute negative evidence, evidence counting strongly against the hypothesis. Let us suppose that there is no such negative evidence. The more probable it is that we would find the positive evidence if the hypothesis is true, and the more improbable it is that we would find that evidence if the hypothesis is false, the more probable the evidence makes the hypothesis.

But a hypothesis is only rendered probable by evidence insofar as it is simple. Consider the following hypothesis as an explanation of the detective's positive data: David stole the money; quite unknown to David, George dressed up to look like John at the scene of the crime, Tony planted John's fingerprints on the safe just for fun; and, unknown to the others, Stephen hid money stolen from another robbery (coincidentally of exactly the same amount) in John's house. If this complicated hypothesis were true, we would expect to find all the positive evidence which I described, while it remains not nearly as probable otherwise that we would find this evidence. But this evidence does not make the complicated hypothesis probable, although it does make the hypothesis that John robbed the safe probable; and that is because the latter hypothesis is simple. The detective's original hypothesis postulates only one substance (John) doing one thing (robbing the safe) which leads us to expect the various pieces of evidence; while the rival hypothesis which I have just set out postulates many substances (many persons) doing different unconnected things.

But as well as the evidence of the kind which I have illustrated, there may be 'background evidence', that is evidence about matters which the hypothesis does not purport to explain, but comes from an area outside the scope of that hypothesis. We may have evidence about

what John has done on other occasions, for example evidence making probable a hypothesis that he has often robbed safes in the past. This latter evidence would make the hypothesis that John robbed the safe on this occasion much more probable than it would be without that evidence. Conversely, evidence that John has lived a crime-free life in the past would make it much less probable that he robbed the safe on this occasion. A hypothesis fits with such background evidence insofar as the background evidence makes probable a theory of wider scope (e.g. that John is a regular safe-robber) which in turn makes the hypothesis in question more probable than it would otherwise be.

The same four criteria are at work in assessing postulated inanimate hypotheses. Consider again the hypothesis that the present positions of the planets are to be explained by their positions and that of the sun five hundred years ago (which we learn from reports of observers) and the operation of Newton's laws – which I'll rephrase in due course in my preferred way. Newton's theory of gravitation consisted of his three laws of motion and his inverse square law of gravitational attraction. The evidence available at the end of the seventeenth century favouring this theory consisted of evidence about the paths taken (given certain initial positions) by our moon, by the planets, by the moons of planets, the velocities with which bodies fall to the earth, the motions of pendula, the occurrence of tides etc. Newton's theory made it very probable that these phenomena would occur as observed. It would be very unlikely that they would occur if Newton's theory were not true. There was no significant negative evidence. The theory was very simple, consisting of just four laws, the mathematical relations postulated by which were very simple ($F=mm'/r^2$ being the most complicated one). Yet innumerable other laws would have satisfied the first two criteria equally well. Within the limits of accuracy then detectable any law in which you substitute a slightly different value for the '2' (e.g. '2.0000974') would have satisfied the first two criteria as well as did the inverse square law. So too would a theory which postulated that the inverse square law held only until AD 2969 after which a quite different law, a cube law of attraction would operate, or a theory containing a law claiming that quite different forces operated outside the solar system. But Newton's theory, unlike such theories, was rendered probable by the evidence because it was a very simple theory. There was no relevant background evidence, because there was no evidence outside the scope of Newton's theory making probable any explanatory theory (e.g. a theory of electromagnetism) with which Newton's theory needed to fit. Hence Newton's theory was very probable on the evidence available in the seventeenth century because it satisfied our four criteria; and so therefore is the hypothesis that it together with the initial positions of Sun and planets explains the present positions of the planets. Rephrased in a more satisfactory way, that hypothesis is the hypothesis that the Sun and each of planets have simple powers and liabilities (as codified

by Newton's laws) and initial positions which explain the present positions of the planets.

I stress again the importance of the criterion of simplicity. There are always an infinite number of mutually incompatible theories which could be constructed which predict all the observed data when these would not otherwise be expected, yet make different predictions from each other about what will happen tomorrow. Without the criterion of simplicity it would be impossible to predict anything beyond what we immediately observe. If the hypothesis is concerned only with a narrow field, it has to fit with any background evidence. But for many hypotheses there may be no relevant background evidence, and the wider the scope of a hypothesis (that is, the more it purports to tell us about the world), the less background evidence there will be. For a very large-scale theory of physics (such as Quantum Theory) there will be few physical phenomena apart from those within its scope (ones which it purports to explain), and so little – if any – background evidence.

Such are the criteria for the probable truth of some postulated explanatory hypothesis. I now spell out the hypothesis of theism. Theism is clearly a personal hypothesis. God is supposed to be one person who is essentially omnipotent, omniscient, perfectly free and eternal. (If you emphasize that God is three persons of one substance, regard these arguments as arguments to the existence of God the Father, on whom all else ultimately depends.) A person is a being who has powers (to perform intentional actions, that is actions which he or she means to do), beliefs, and purposes (choosing among alternative actions which to perform). It is simpler to suppose that the cause of the universe has zero limits to his power (that is, is omnipotent), rather than that he can only make a universe of a certain size and duration. An omnipotent person can do any logically possible action, that is any action which can be described without contradiction; and so he cannot make me both exist and not exist at the same time. But since it makes no sense to suppose that I could both exist and not exist at the same time, a logically impossible action is not really an action at all – any more than an imaginary person is really a person. A truly omnipotent person would not be subject to irrational forces in forming his purposes, as so often are the choices of humans; he would be influenced by reason alone and so by what he believes good to do. In that sense of 'perfectly free', an omnipotent person is necessarily perfectly free. A truly omnipotent person would be *essentially* omnipotent, for otherwise his omnipotence would be precarious. It is simpler to suppose that God is unlimited in time as well as in power, and so essentially eternal. In my view that should be interpreted as God being everlasting (existing at every moment of past and future time), since I regard the Boethian view of God as outside time, yet simultaneously present at all moments of human time, as a view to which it is very difficult to give any sense, and a totally unnecessary burden on theism.

But so often there must be before God, as there are before us, a choice between incompatible actions which he believes to be equally good actions. And, since God is omnipotent, the range of apparently incompatible equal best actions available to him would be so much greater than the range available to us. Further, God must often be in a situation where we cannot be, of having a choice between an infinite number of possible actions, each of which is apparently less good than some other action he could do. For example, angels and bears and elephants are good things; they can be happy and loving. So, the more of them the better (given that in the case of bears and elephants they are spread out among an infinite number of planets, so that they do not crowd each other out). So however many of these creatures God creates, God would believe it better if he had created more. (And he could still have created more, even if he created an infinite number of them.) It may be however that when there is no best or equal best action available to God, there may be -it would seem to God-a best kind of action available to God, such that it would be better to do some action of that kind than to do any number of actions of any other incompatible kind. For example, God can create creatures of many different types, including angels, humans and animals. If it were the case that it would be better to create at least some humans (even if he creates no angels or animals), than to create any number of angels and animals and no humans or to do an action of any other incompatible kind, then it would be a best kind of action for God to create some humans, although there would be no best number for him to create. If God believed that this is the case then, I suggest, God being influenced by reason alone would inevitably create some humans. And if there are two or more equal best kinds of action available to him he will inevitably do some action of one of these kinds. So God will inevitably always do what seems to him the best or equal best action, or if - it seems to God, that there is no such action, at any rate what seems to him to be an action of the best or equal best kind, and otherwise some action which seems to him good.

Given the logical impossibility of backward causation, God will not be able to cause past events, but he will be able to cause any future event. The simplest supposition about God's knowledge is that there will be zero limits to it compatibly with his omnipotence. Hence his knowledge will be confined to knowledge of the past and of any necessary truths, but the future will be entirely subject to his choice. Just as omnipotence is to be understood as the power to do anything logically possible, so omniscience should be understood as knowledge of everything logically possible to know. (Of course on the Boethian account of God's eternity, then God' s omniscience would include knowledge of the whole (to us) future as well as of the whole past.) Insofar as moral principles (e.g. that one ought to keep one's just promises) are necessary truths, and so independent of the will of God, God will have true beliefs about what they are; and so not merely do what he believes to be the best

(or whatever), but what is in fact the best or equal best (or one of the best or equal best kinds of action) or otherwise any good action. In that case he will be as good as it is logically possible to be, which is to say that he will be perfectly good.

I conclude that theism is a very simple hypothesis indeed. It postulates just one substance, God, having essentially the simplest degree of power, and lasting for the simplest length of time; all the other essential divine properties follow from that. God being what he is in virtue of these essential properties makes God a 'person' in a sense somewhat analogical to the sense in which we are persons. Theism is such wide-ranging hypothesis (it purports to explain all the most general features of the universe) that there is no background evidence; all the evidence (whether positive or negative) is within its scope. So the hypothesis of theism satisfies the third criterion superbly well; and does not need to satisfy the fourth criterion. Hence whether the hypothesis of theism, that God exists, is probable on the evidence of the phenomena which I outlined earlier turns on how well that evidence satisfies the first two criteria.

So first, are the phenomena such as, if there is a God, it is probable that he would bring them about? If there is a God, he will seek to bring about good things.It is good that there should be a beautiful universe. Beauty arises from order of some kind – the orderly interactions and movements of objects in accord with natural laws is beautiful indeed; and even more beautiful are the plants and animals which evolved on Earth. Animals have sensations, beliefs and desires, and that is clearly a great good. Humans have the power to reason and understand the universe, and that is an even greater good. But all these kinds of goodness are kinds of goodness which God himself possesses. God is beautiful and has beliefs and desires (and in my view, also sensations), and the power to reason and understand. But there is one kind of great goodness which God himself does not possess – the power bring about good or evil. God can only bring about good. Yet it would be very good indeed that there should be persons who have the free will to make this all–important difference to the world, the power to benefit or harm ourselves, each other and other creatures. So, if there is a God, we have very good reason to suppose that there will be persons who have, as I believe humans have, that freedom[4]. But clearly there is a bad aspect to the existence of such persons; they may cause much evil. So it cannot be a unique best action to create such persons, but in view of the unique kind of goodness which they would possess, surely it must be an equal best action to create such persons; and, if so, it is as probable as not that if there is a God, there will be such persons, that is persons like us humans. But if God is to create us, he must provide a universe in which we can exercise our choices to benefit or harm ourselves and each other. We can only do that if we have bodies, and so places where we can get hold of each other, and escape from each other[5]. But only if there are comprehensible

regularities which we can discover will there be ways in which my doing this or that will make a predictable difference to me or you, and so we can have a choice of how to treat each other. Only if humans know that by sowing certain seeds, weeding and watering them, they will get corn, can they develop an agriculture. And only if they know that by rubbing sticks together they can make fire, will they be able to burn the food supplies of others. But comprehensible observable regularities are only possible if the fundamental laws of nature are simple ones. Further, if God is to create embodied humans, the laws must be such as to allow the existence of human bodies, either brought about by an evolutionary process or created directly by God. And finally, human bodies only have a point if they are controlled by conscious persons. So the four phenomena to which I have referred are to be expected (that is, it is quite probable that they will occur) if there is a God .

But if there is no God, it is immensely improbable that these phenomena will occur. It is enormously improbable that each of the innumerably many fundamental particles, or rather chunks of compressed energy) immediately after the Big Bang, should just happen to exist. And it is even more improbable that each such chunk should behave in exactly the same fairly simple way as each other chunk (the way codified in the laws of Relativity and Quantum theory and the four forces). So while there are fairly simple laws, their instantiation in each of innumerably many chunks of matter – energy would be an enormous coincidence unless caused by some external agent. And even if such an enormous coincidence occurred by chance, it is immensely improbable that those laws should be such as together with the boundary conditions of the Universe (which are its initial conditions if the Universe had a beginning) should have given rise to human bodies. And even if this too occurred by chance, as far as any plausible scientific laws are concerned, the laws might just as easily have given rise to robots. Consciousness is totally improbable, unless there is a creator who gave it first to the higher animals and then to us.

Some contemporary physicists will tell you that we live in a multiverse such that many different possible universes (with different laws of nature, and different initial conditions) will eventually occur, and so it is not surprising that there is one like ours. But we could only have reason to believe what they tell us, if the most probable explanation of phenomena observable in our universe was that the most general laws of nature are such as to bring about these many universes; and to postulate that is to postulate that all the particles, not merely of our universe, but of the vastly bigger multiverse behave in accord with the same very general laws, which throw up particular variants thereof in different universes – which is to postulate an even bigger coincidence. And the laws of that multiverse would have to be such as to produce at some stage a universe like ours which in turn produces us, when very almost all possible multiverses would not have this characteristic. So even if our universe

does belong to a multiverse, it is immensely improbable (if there is no more ultimate explanation thereof – e.g. God) that that would be a multiverse of the kind to bring about the existence of humans. So the possible existence of a multiverse makes little difference to the force of the arguments which I have discussed.

So these four general phenomena are such as it is moderately probable will occur if there is a God, and almost certainly will not occur if there is not a God. Theism is a very simple hypothesis indeed, and simpler – I suggest – than any inanimate hypothesis which could be constructed. I conclude that arguments from the phenomena which I have discussed are strong cogent arguments to the existence of God.

Notes

1. Letter to the Romans 1:20.

2.See my *The Existence of God*, 2nd ed., Oxford University Press, 2004 ; and the short simplified version *Is There a God*? Oxford University Press, 1996.

3. For a full account of the nature of simplicity, see my *Simplicity as Evidence of Truth*, Marquette University Press, 1997; or my *Epistemic Justification*, Oxford University Press, 2001, chapter 4.

4.For my defence of the claim that humans have libertarian free will, that is freedom to make choices, either good or evil, despite all the influences to which they are subject, see my *Mind, Brain, and Free Will*, Oxford University Press, 2013.

5. For proper argument in favour of this claim, see *The Existence of God,* pp.123-131.