Why Anything? Why This?

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Why does the Universe exist? There are two questions here. First, why is there a Universe at all? It might have been true that nothing ever existed: no living beings, no stars, no atoms, not even space or time. When we think about this possibility, it can seem astonishing that anything exists. Second, why does this Universe exist? Things might have been, in countless ways, different. So why is the Universe as it is?

These questions, some believe, may have causal answers. Suppose first that the Universe has always existed. Some believe that, if all events were caused by earlier events, everything would be explained. That, however, is not so. Even an infinite series of events cannot explain itself. We could ask why this series occurred, rather than some other series, or no series. Of the supporters of the Steady State Theory, some welcomed what they took to be this theory's atheistic implications. They assumed that, if the Universe had no beginning, there would be nothing for a Creator to explain. But there would still be an eternal Universe to explain.

Suppose next that the Universe is not eternal, since nothing preceded the Big Bang. That first event, some physicists suggest, may have obeyed the laws of quantum mechanics, by being a random fluctuation in a vacuum. This would causally explain, they say, how the Universe came into existence out of nothing. But what physicists call a vacuum isn't really nothing. We can ask why it exists, and has the potentialities it does. In Hawking's phrase, 'What breathes fire into the equations?'

Similar remarks apply to all suggestions of these kinds. There could not be a causal explanation of why the Universe exists, why there are any laws of nature, or why these laws are as they are. Nor would it make a difference if there is a God, who caused the rest of the Universe to exist. There could not be a causal explanation of why God exists.

Many people have assumed that, since these questions cannot have causal answers, they cannot have any answers. Some therefore dismiss these questions, thinking them not worth considering. Others conclude that they do not make sense. They assume that, as Wittgenstein wrote, 'doubt can exist only where there is a question; and a question only where there is an answer'.

These assumptions are all, I believe, mistaken. Even if these questions could not have answers, they would still make sense, and they would still be worth considering. I am reminded here of the aesthetic category of the sublime, as applied to the highest mountains, raging oceans, the night sky, the interiors of some cathedrals, and other things that are superhuman, awesome, limitless. No question is more sublime than why there is a Universe: why there is anything rather than nothing. Nor should we assume that answers to this question must be causal. And, even if reality cannot be fully explained, we may still make progress, since what is inexplicable may become less baffling than it now seems.

1

One apparent fact about reality has recently been much discussed. Many physicists believe that, for life to be possible, various features of the Universe must be almost precisely as they are. As one example of such a feature, we can take the initial conditions in the Big Bang. If these conditions had been more than very slightly different, these physicists claim, the Universe would not have had the complexity that allows living beings to exist. Why were these conditions so precisely right?[1]

Some say: 'If they had not been right, we couldn't even ask this question.' But that is no answer. It could be baffling how we survived some crash even though, if we hadn't, we could not be baffled.

[1] In my remarks about this question, I am merely summarizing, and oversimplifying, what others have claimed. See, for example, John Leslie, Universes, Routledge, 1989.

Others say: 'There had to be some initial conditions, and the conditions that make life possible were as likely as any others. So there is nothing to be explained.' To see what is wrong with this reply, we must distinguish two kinds of case. Suppose first that, when some radio telescope is aimed at most points in space, it records a random sequence of incoming waves. There might be nothing here that needed to be explained. Suppose next that, when the telescope is aimed in one direction, it records a sequence of waves whose pulses match the number π, in binary notation, to the first ten thousand digits. That particular number is, in one sense, just as likely as any other. But there would be something here that needed to be explained. Though each long number is unique, only a very few are, like π, mathematically special. What would need to be explained is why this sequence of waves exactly matched such a special number. Though this matching might be a coincidence, which had been randomly produced, that would be most unlikely. We could be almost certain that these waves had been produced by some kind of intelligence.

On the view that we are now considering, since any sequence of waves is as likely as any other, there would be nothing to be explained. If we accepted this view, intelligent beings elsewhere in space would not be able to communicate with us, since we would ignore their messages. Nor could God reveal himself. Suppose that, with some optical telescope, we saw a distant pattern of stars which spelled out in Hebrew script the first chapter of Genesis. This pattern of stars, according to this view, would not need to be explained. That is clearly false.

Here is another analogy. Suppose first that, of a thousand people facing death, only one can be rescued. If there is a lottery to pick this one survivor, and I win, I would be very lucky. But there might be nothing here that needed to be explained. Someone had to win, and why not me? Consider next another lottery. Unless my gaoler picks the longest of a thousand straws, I shall be shot. If my gaoler picks that longest straw, there would be something to be explained. It would not be enough to say, 'This result was as likely as any other.' In the first lottery, nothing special happened: whatever the result, someone's life would be saved. In this second lottery, the result was special, since, of the thousand possible results, only one would save a life. Why was this special result

also what happened? Though this might be a coincidence, the chance of that is only one in a thousand. I could be almost certain that, like Dostoyevsky's mock execution, this lottery was rigged.

The Big Bang, it seems, was like this second lottery. For life to be possible, the initial conditions had to be selected with great accuracy. This appearance of fine-tuning, as some call it, also needs to be explained.

It may be objected that, in regarding conditions as special if they allow for life, we unjustifiably assume our own importance. But life is special, if only because of its complexity. An earthworm's brain is more complicated than a lifeless galaxy. Nor is it only life that requires this fine-tuning. If the Big Bang's initial conditions had not been almost precisely as they were, the Universe would have either almost instantly recollapsed, or expanded so fast, and with particles so thinly spread, that not even stars or heavy elements could have formed. That is enough to make these conditions very special.

It may next be objected that these conditions cannot be claimed to be improbable, since such a claim requires a statistical basis, and there is only one Universe. If we were considering all conceivable Universes, it would indeed be implausible to make judgments of statistical probability. But our question is much narrower. We are asking what would have happened if, with the same laws of nature, the initial conditions had been different. That provides the basis for a statistical judgment. There is a range of values that these conditions might have had, and physicists can work out in what proportion of this range the resulting Universe could have contained stars, heavy elements, and life.

This proportion, it is claimed, is extremely small. Of the range of possible initial conditions, fewer than one in a billion billion would have produced a Universe with the complexity that allows for life. If this claim is true, as I shall here assume, there is something that cries out to be explained. Why was one of this tiny set also the one that actually obtained?

On one view, this was a mere coincidence. That is conceivable, since coincidences happen. But this view is hard to believe since, if it were true, the chance of this coincidence occurring would be below one in a billion billion.

Others say: 'The Big Bang was fine-tuned. In creating the Universe, God chose to make life possible.' Atheists may reject this answer, thinking it improbable that God exists. But this is not as improbable as the view that would require so great a coincidence. So even atheists should admit that, of these two answers to our question, the answer that invokes God is more likely to be true.

This reasoning revives one of the traditional arguments for belief in God. In its strongest form, this argument appealed to the many features of animals, such as eyes or wings, that look as if they have been designed. Paley's appeal to such features much impressed Darwin when he was young. Darwin later undermined this form of the argument, since evolution can explain this appearance of design. But evolution cannot explain the appearance of fine-tuning in the Big Bang.

This argument's appeal to probabilities can be challenged in a different way. In claiming it to be most improbable that this fine-tuning was a coincidence, the argument assumes that, of the possible initial conditions in the Big Bang, each was equally likely to obtain. That assumption may be mistaken. The conditions that allow for complexity and life may have been, compared with all the others, much more likely to obtain. Perhaps they were even certain to obtain.

To answer this objection, we must broaden this argument's conclusion. If these life-allowing conditions were either very likely or certain to obtain, then – as the argument claims – it would be no coincidence that the Universe allows for complexity and life. But this fine-tuning might have been the work, not of some existing being, but of some impersonal force, or fundamental law. That is what some theists believe God to be.

A stronger challenge to this argument comes from a different way to explain the appearance of fine-tuning. Consider first a similar question. For life to be possible on the Earth, many of the Earth's features have to be close to being as they are. The Earth's having such features, it might be claimed, is unlikely to be a coincidence, and should therefore be regarded as God's work. But such an argument would be weak. The Universe, we can reasonably believe, contains many planets, with varying conditions. We should expect that, on a few of these

planets, conditions would be just right for life. Nor is it surprising that we live on one of these few.

Things are different, we may assume, with the appearance of fine-tuning in the Big Bang. While there are likely to be many other planets, there is only one Universe. But this difference may be less than it seems. Some physicists suggest that the observable Universe is only one out of many different worlds, which are all equally parts of reality. According to one such view, the other worlds are related to ours in a way that solves some of the mysteries of quantum physics. On the different and simpler view that is relevant here, the other worlds have the same laws of nature as our world, and they are produced by Big Bangs that are broadly similar, except in having different initial conditions.

On this Many Worlds Hypothesis, there is no need for fine-tuning. If there were enough Big Bangs, we should expect that, in a few of these, conditions would be just right to allow for complexity and life; and it would be no surprise that our Big Bang was one of these few. To illustrate this point, we can revise my second lottery. Suppose my gaoler picks a straw, not once, but very many times. That would explain his managing, once, to pick the longest straw, without that being an extreme coincidence, or this lottery's being rigged.

On most versions of the Many Worlds Hypothesis, these many worlds are not, except through their origins, causally related. Some object that, since our world could not be causally affected by such other worlds, we can have no evidence for their existence, and can therefore have no reason to believe in them. But we do have such a reason, since their existence would explain an otherwise puzzling feature of our world: the appearance of fine-tuning.

Of these two ways to explain this appearance, which is better? Compared with belief in God, the Many Worlds Hypothesis is more cautious, since its claim is merely that there is more of the kind of reality that we can observe around us. But God's existence has been claimed to be intrinsically more probable. According to most theists, God is a being who is omnipotent, omniscient, and wholly good. The uncaused existence of such a being has been claimed to be simpler, and less arbitrary, than the uncaused existence of many highly complicated worlds.

And simpler hypotheses, many scientists assume, are more likely to be true.

If such a God exists, however, other features of our world become hard to explain. It may not be surprising that God chose to make life possible. But the laws of nature could have been different, so there are many possible worlds that would have contained life. It is hard to understand why, out of all these possibilities, God chose to create our world. What is most baffling is the problem of evil. There appears to be suffering which any good person, knowing the truth, would have prevented if he could. If there is such suffering, there cannot be a God who is omnipotent, omniscient, and wholly good.

To this problem, theists have proposed several solutions. Some suggest that God is not omnipotent, or not wholly good. Others suggest that undeserved suffering is not, as it seems, bad, or that God could not prevent such suffering without making the Universe, as a whole, less good.

We must ignore these suggestions here, since we have larger questions to consider. I began by asking why things are as they are. Before returning to that question, we should ask how things are. There is much about our world that we have not discovered. And, just as there may be other worlds that are like ours, there may be worlds that are very different.

2

It will help to distinguish two kinds of possibilities. Cosmic possibilities cover everything that ever exists, and are the different ways that the whole of reality might be. Only one such possibility can be actual, or be the one that obtains. Local possibilities are the different ways that some part of reality, or local world, might be. If some local world exists, that leaves it open whether other worlds exist.

One cosmic possibility is, roughly, that every possible local world exists. This we can call the All Worlds Hypothesis. Another possibility, which might have obtained, is that nothing ever exists. This we can call the Null Possibility. In each of the remaining possibilities, the number of local worlds that

exist is between none and all. There are countless of these possibilities, since there are countless combinations of possible local worlds.

Of these different cosmic possibilities, one must obtain, and only one can obtain. So we have two questions: Which obtains, and Why?

These questions are connected. If some possibility would be easier to explain, we may have more reason to believe that this possibility obtains. This is how, rather than believing in only one Big Bang, we have more reason to believe in many. Whether we believe in one or many, we have the question why any Big Bang has occurred. Though this question is hard, the occurrence of many Big Bangs is not more puzzling than the occurrence of only one. Most kinds of thing, or event, have many instances. We also have the question why, in the Big Bang that produced our world, the initial conditions allowed for complexity and life. If there has been only one Big Bang, this fact is also hard to explain, since it is most unlikely that these conditions merely happened to be right. If instead there have been many Big Bangs, this fact is easy to explain, since it is like the fact that, among countless planets, there are some whose conditions allow for life. Since belief in many Big Bangs leaves less that is unexplained, it is the better view.

If some cosmic possibilities would be less puzzling than others, because their obtaining would leave less to be explained, is there some possibility whose obtaining would be in no way puzzling?

Consider first the Null Possibility, in which nothing ever exists. To imagine this possibility, it may help to suppose first that all that ever existed was a single atom. We then imagine that even this atom never existed.

Some have claimed that, if there had never been anything, there wouldn't have been anything to be explained. But that is not so. When we imagine how things would have been if nothing had ever existed, what we should imagine away are such things as living beings, stars, and atoms. There would still have been various truths, such as the truth that there were no stars or atoms, or that 9 is divisible by 3. We can ask why these things would have been true. And such questions may

have answers. Thus we can explain why, even if nothing had ever existed, 9 would still have been divisible by 3. There is no conceivable alternative. And we can explain why there would have been no such things as immaterial matter, or spherical cubes. Such things are logically impossible. But why would nothing have existed? Why would there have been no stars or atoms, no philosophers or bluebell woods?

We should not claim that, if nothing had ever existed, there would have been nothing to be explained. But we can claim something less. Of all the cosmic possibilities, the Null Possibility would have needed the least explanation. As Leibniz pointed out, it is much the simplest, and the least arbitrary. And it is the easiest to understand. It can seem mysterious, for example, how things could exist without their existence having some cause, but there cannot be a causal explanation of why the whole Universe, or God, exists. The Null Possibility raises no such problem. If nothing had ever existed, that state of affairs would not have needed to be caused.

Reality, however, does not take its least puzzling form. In some way or other, a Universe has managed to exist. That is what can take one's breath away. As Wittgenstein wrote, 'not how the world is, is the mystical, but that it is.' Or, in the words of a thinker as unmystical as Jack Smart: 'That anything should exist at all does seem to me a matter for the deepest awe.'

Consider next the All Worlds Hypothesis, on which every possible local world exists. Unlike the Null Possibility, this may be how things are. And it may be the next least puzzling possibility. This hypothesis is not the same as – though it includes – the Many Worlds Hypothesis. On that more cautious view, the many other worlds have the same elements as our world, and the same fundamental laws, and differ only in such features as their constants and initial conditions. The All Worlds Hypothesis covers every conceivable kind of world, and most of these other worlds would have very different elements and laws.

If all these worlds exist, we can ask why they do. But, compared with most other cosmic possibilities, the All Worlds Hypothesis may leave less that is unexplained. For example,

whatever the number of possible worlds that exist, we have the question, 'Why that number?' That question would have been least puzzling if the number that existed were none, and the next least arbitrary possibility seems to be that all these worlds exist. With every other cosmic possibility, we have a further question. If ours is the only world, we can ask: 'Out of all the possible local worlds, why is this the one that exists?' On any version of the Many Worlds Hypothesis, we have a similar question: 'Why do just these worlds exist, with these elements and laws?' But, if all these worlds exist, there is no such further question.

It may be objected that, even if all possible local worlds exist, that does not explain why our world is as it is. But that is a mistake. If all these worlds exist, each world is as it is in the way in which each number is as it is. We cannot sensibly ask why 9 is 9. Nor should we ask why our world is the one it is: why it is this world. That would be like asking, 'Why are we who we are?', or 'Why is it now the time that it is?' Those, on reflection, are not good questions.

Though the All Worlds Hypothesis avoids certain questions, it is not as simple, or unarbitrary, as the Null Possibility. There may be no sharp distinction between worlds that are and are not possible. It is unclear what counts as a kind of world. And, if there are infinitely many kinds, there is a choice between different kinds of infinity.

Whichever cosmic possibility obtains, we can ask why it obtains. All that I have claimed so far is that, with some possibilities, this question would be less puzzling. Let us now ask: Could this question have an answer? Might there be a theory that leaves nothing unexplained?

3

It is sometimes claimed that God, or the Universe, make themselves exist. But this cannot be true, since these entities cannot do anything unless they exist.

On a more intelligible view, it is logically necessary that God, or the Universe, exist, since the claim that they might not have

existed leads to a contradiction. On such a view, though it may seem conceivable that there might never have been anything, that is not really logically possible. Some people even claim that there may be only one coherent cosmic possibility. Thus Einstein suggested that, if God created our world, he might have had no choice about which world to create. If such a view were true, everything might be explained. Reality might be the way it is because there was no conceivable alternative. But, for reasons that have been often given, we can reject such views.

Consider next a quite different view. According to Plato, Plotinus and others, the Universe exists because its existence is good. Even if we are confident that we should reject this view, it is worth asking whether it makes sense. If it does, that may suggest other possibilities.

This Axiarchic View can take a theistic form. It can claim that God exists because his existence is good, and that the rest of the Universe exists because God caused it to exist. But in that explanation God, qua Creator, is redundant. If God can exist because his existence is good, so can the whole Universe. This may be why some theists reject the Axiarchic View, and insist that God's existence is a brute fact, with no explanation.

In its simplest form, this view makes three claims:

(1) It would be best if reality were a certain way.

(2) Reality is that way.

(3) (1) explains (2).

(1) is an ordinary evaluative claim, like the claim that it would be better if there was less suffering. The Axiarchic View assumes, I believe rightly, that such claims can be in a strong sense true. (2) is an ordinary empirical or scientific claim, though of a sweeping kind. What is distinctive in this view is claim (3), according to which (1) explains (2).

Can we understand this third claim? To focus on this question, we should briefly ignore the world's evils, and suspend our other doubts about claims (1) and (2). We should suppose that, as Leibniz claimed, the best possible Universe

exists. Would it then make sense to claim that this Universe exists because it is the best?

That use of 'because', Axiarchists should admit, cannot be easily explained. But even ordinary causation is mysterious. At the most fundamental level, we have no idea why some events cause others; and it is hard to explain what causation is. There are, moreover, non-causal senses of 'because' and 'why', as in the claim that God exists because his existence is logically necessary. We can understand that claim, even if we think it false. The Axiarchic View is harder to understand. But that is not surprising. If there is some explanation of the whole of reality, we should not expect this explanation to fit neatly into some familiar category. This extra-ordinary question may have an extra-ordinary answer. We should reject suggested answers which make no sense; but we should also try to see what might make sense.

Axiarchy might be expressed as follows. We are now supposing that, of all the countless ways that the whole of reality might be, one is both the very best, and is the way that reality is. On the Axiarchic View, that is no coincidence. This claim, I believe, makes sense. And, if it were no coincidence that the best way for reality to be is also the way that reality is, that might support the further claim that this was why reality was this way.

This view has one advantage over the more familiar theistic view. An appeal to God cannot explain why the Universe exists, since God would himself be part of the Universe, or one of the things that exist. Some theists argue that, since nothing can exist without some cause, God, who is the First Cause, must exist. As Schopenhauer objected, this argument's premise is not like some cab-driver whom theists are free to dismiss once they have reached their destination. The Axiarchic View appeals, not to an existing entity, but to an explanatory law. Since such a law would not itself be part of the Universe, it might explain why the Universe exists, and is as good as it could be. If such a law governed reality, we could still ask why it did, or why the Axiarchic View was true. But, in discovering this law, we would have made some progress.

It is hard, however, to believe the Axiarchic View. If, as it

seems, there is much pointless suffering, our world cannot be part of the best possible Universe.

4

Some Axiarchists claim that, if we reject their view, we must regard our world's existence as a brute fact, since no other explanation could make sense. But that, I believe, is not so. If we abstract from the optimism of the Axiarchic View, its claims are these:

> Of the countless cosmic possibilities, one both has some very special feature, and is the possibility that obtains. That is no coincidence. This possibility obtains because it has this feature.

Other views can make such claims. This special feature need not be that of being best. Thus, on the All Worlds Hypothesis, reality is maximal, or as full as it could be. Similarly, if nothing had ever existed, reality would have been minimal, or as empty as it could be. If the possibility that obtained were either maximal, or minimal, that fact, we might claim, would be most unlikely to be a coincidence. And that might support the further claim that this possibility's having this feature would be why it obtained.

Let us now look more closely at that last step. When it is no coincidence that two things are both true, there is something that explains why, given the truth of one, the other is also true. The truth of either might make the other true. Or both might be explained by some third truth, as when two facts are the joint effects of a common cause.

Suppose next that, of the cosmic possibilities, one is both very special and is the one that obtains. If that is no coincidence, what might explain why these things are both true? On the reasoning that we are now considering, the first truth explains the second, since this possibility obtains because it has this special feature. Given the kind of truths these are, such an explanation could not go the other way. This possibility could not have this feature because it obtains. If some possibility has some feature, it could not fail to have this feature, so it would have this feature whether or not it obtains. The All

Worlds Hypothesis, for example, could not fail to describe the fullest way for reality to be.

While it is necessary that our imagined possibility has its special feature, it is not necessary that this possibility obtains. This difference, I believe, justifies the reasoning that we are now considering. Since this possibility must have this feature, but might not have obtained, it cannot have this feature because it obtains, nor could some third truth explain why it both has this feature and obtains. So, if these facts are no coincidence, this possibility must obtain <u>because</u> it has this feature.

When some possibility obtains because it has some feature, its having this feature may be why some agent, or some process of natural selection, made it obtain. These we can call the <u>intentional</u> and <u>evolutionary</u> ways in which some feature of some possibility may explain why it obtains.

Our world, theists claim, can be explained in the first of these ways. If reality were as good as it could be, it would indeed make sense to claim that this was partly God's work. But, since God's own existence could not be God's work, there could be no intentional explanation of why the whole of reality was as good as it could be. So we could reasonably conclude that this way's being the best explained <u>directly</u> why reality was this way. Even if God exists, the intentional explanation could not compete with the different and bolder explanation offered by the Axiarchic View.

Return now to other explanations of this kind. Consider first the Null Possibility. This, we know, does not obtain; but, since we are asking what makes sense, that does not matter. If there had never been anything, would that have had to be a brute fact, which had no explanation? The answer, I suggest, is No. It might have been no coincidence that, of all the countless cosmic possibilities, what obtained was the simplest, and least arbitrary, and the only possibility in which nothing ever exists. And, if these facts had been no coincidence, this possibility would have obtained because – or partly because – it had one or more of these special features. This explanation, moreover, could not have taken an intentional or evolutionary form. If nothing had ever existed, there could not have been some agent, or process of selection, who or which made this

possibility obtain. Its being the simplest or least arbitrary possibility would have been, directly, why it obtained.

Consider next the All Worlds Hypothesis, which may obtain. If reality is as full as it could be, is that a coincidence? Does it merely happen to be true that, of all the cosmic possibilities, the one that obtains is at this extreme? As before, that is conceivable, but this coincidence would be too great to be credible. We can reasonably assume that, if this possibility obtains, that is because it is maximal, or at this extreme. On this Maximalist View, it is a fundamental truth that being possible, and part of the fullest way that reality could be, is sufficient for being actual. That is the highest law governing reality. As before, if such a law governed reality, we could still ask why it did. But, in discovering this law, we would have made some progress.

Here is another special feature. Perhaps reality is the way it is because its fundamental laws are, on some criterion, as mathematically beautiful as they could be. That is what some physicists are inclined to believe.

As these remarks suggest, there is no clear boundary here between philosophy and science. If there is such a highest law governing reality, this law is of the same kind as those that physicists are trying to discover. When we appeal to natural laws to explain some features of reality, such as the relations between light, gravity, space, and time, we are not giving causal explanations, since we are not claiming that one part of reality caused another part to be some way. What such laws explain, or partly explain, are the deeper facts about reality that causal explanations take for granted.

There would be a highest law, of the kind that I have sketched, if some cosmic possibility obtained because it had some special feature. This feature we can call the Selector. If there is more than one such feature, they are all partial Selectors. Just as there are various cosmic possibilities, there are various explanatory possibilities. For each of these special features, there is the explanatory possibility that this feature is the Selector, or is one of the Selectors. Reality would then be the way it is because, or partly because, this way had this feature.

There is one other explanatory possibility: that there is no Selector. If that is true, it is random that reality is as it is.

Events may be in one sense random, even though they are causally inevitable. That is how it is random whether a meteorite strikes the land or the sea. Events are random in a stronger sense if they have no cause. That is what most physicists believe about some features of events involving sub-atomic particles. If it is random what reality is like, the Universe not only has no cause. It has no explanation of any kind. This claim we can call the Brute Fact View.

Few features can be plausibly regarded as possible Selectors. Though plausibility is a matter of degree, there is a natural threshold to which we can appeal. If we suppose that reality has some special feature, we can ask which of two beliefs would be more credible: that reality merely happens to have this feature, or that reality is the way it is because this way has this feature. If the second would be more credible, this feature can be called a credible Selector. Return for example to the question of how many possible local worlds exist. Of the different answers to this question, all and none give us, I have claimed, credible Selectors. If either all or no worlds existed, that would be unlikely to be a coincidence. But suppose that 58 worlds existed. This number has some special features, such as being the smallest number that is the sum of seven different primes. It may be just conceivable that this would be why 58 worlds existed; but it would be more reasonable to believe that the number that existed merely happened to be 58.

There are, I have claimed, some credible Selectors. Reality might be some way because that way is the best, or the simplest, or the least arbitrary, or because its obtaining makes reality as full and varied as it could be, or because its fundamental laws are, in some way, as elegant as they could be. Presumably there are other such features, which I have overlooked.

In claiming that there are credible Selectors, I am assuming that some cosmic and explanatory possibilities are more probable than others. That assumption may be questioned. Judgments of probability, it may again be claimed, must be grounded on facts about our world, so such judgments cannot be applied either to how the whole of reality might be, or to how reality might be explained.

This objection is, I believe, unsound. When we choose between scientific theories, our judgments of their probability

cannot rest only on predictions based on established facts and laws. We need such judgments in trying to decide what these facts and laws are. And we can justifiably make such judgments when considering different ways in which the whole of reality may be, or might have been. Compare two such cosmic possibilities. In the first, there is a lifeless Universe consisting only of some spherical iron stars, whose relative motion is as it would be in our world. In the second, things are the same, except that the stars move together in the patterns of a minuet, and they are shaped like either Queen Victoria or Cary Grant. We would be right to claim that, of these two possibilities, the first is more likely to obtain.

In making that claim, we would not mean that it is more likely that the first possibility obtains. Since this possibility is the existence of a lifeless Universe, we know that it does not obtain. We would be claiming that this possibility is intrinsically more likely, or that, to put it roughly, it had a greater chance of being how reality is. If some possibility is more likely to obtain, that will often make it more likely that it obtains; but though one kind of likelihood supports the other, they are quite different.

Another objection may again seem relevant here. Of the countless cosmic possibilities, a few have special features, which I have called credible Selectors. If such a possibility obtains, we have, I have claimed, a choice of two conclusions. Either reality, by an extreme coincidence, merely happens to have this feature, or---more plausibly---this feature is one of the Selectors. It may be objected that, when I talk of an extreme coincidence, I must be assuming that these cosmic possibilities are all equally likely to obtain. But I have now rejected that assumption. And, if these possibilities are not equally likely, my reasoning may seem to be undermined.

As before, that is not so. Suppose that, of the cosmic possibilities, those that have these special features are much more likely to obtain. As this objection rightly claims, it would not then be amazing if such a possibility merely happened to obtain. But that does not undermine my reasoning, since it is another way of stating my conclusion. It is another way of saying that these features are Selectors.

These remarks do show, however, that we should distinguish two ways in which some feature may be a Selector.

Probabilistic Selectors make some cosmic possibility more likely to obtain, but leave it open whether it does obtain. On any plausible view, there are some Selectors of this kind, since some ways for reality to be are intrinsically more likely than some others. Thus of our two imagined Universes, the one consisting of spherical stars is intrinsically more likely than the one with stars that are shaped like Queen Victoria or Cary Grant. Besides Probabilistic Selectors, there may also be one or more Effective Selectors. If some possibility has a certain feature, this may make this possibility, not merely intrinsically more likely, but the one that obtains. Thus, if simplicity had been the Effective Selector, that would have made it true that nothing ever existed. And, if maximality is the Effective Selector, as it may be, that is what makes reality as full as it could be. When I talk of Selectors, these are the kind I mean.

5

There are, then, various cosmic and explanatory possibilities. In trying to decide which of these obtain, we can in part appeal to facts about our world. Thus, from the mere fact that our world exists, we can deduce that the Null Possibility does not obtain. And, since our world seems to contain pointless evils, we have reason to reject the Axiarchic View.

Consider next the Brute Fact View, on which reality merely happens to be as it is. No facts about our world could refute this view. But some facts would make it less likely that this view is true. If reality is randomly selected, what we should expect to exist are many varied worlds, none of which had features that, in the range of possibilities, were at one extreme. That is what we should expect because, in much the largest set of cosmic possibilities, that would be what exists. If our world has very special features, that would count against the Brute Fact View.

Return now to the question whether God exists. Compared with the uncaused existence of one or many complicated worlds, the hypothesis that God exists has been claimed to be simpler, and less arbitrary, and thus more likely to be true. But this hypothesis is not simpler than the Brute Fact View. And, if it is random which cosmic possibility obtains, we should not expect the one that obtains to be as simple, and

unarbitrary, as God's existence is claimed to be. Rather, as I have just said, we should expect there to be many worlds, none of which had very special features. Ours may be the kind of world that, on the Brute Fact View, we should expect to observe.

Similar remarks apply to the All Worlds Hypothesis. Few facts about our world could refute this view; but, if all possible local worlds exist, the likely character of our world is much the same as on the Brute Fact View. That claim may seem surprising, given the difference between these two views. One view is about which cosmic possibility obtains, the other is about why the one that obtains obtains. And these views conflict, since, if we knew that either view was true, we would have strong reason not to believe the other. If all possible worlds exist, that is unlikely to be a brute fact. But, in their different ways, these views are both non-selective. On neither view do certain worlds exist because they have certain special features. So, if either view is true, we should not expect our world to have such features.

To that last claim, there is one exception. This is the feature with which we began: that our world allows for life. Though this feature is, in some ways, special, it is one that we cannot help observing. That restricts what we can infer from the fact that our world has this feature. Rather than claiming that being life-allowing is one of the Selectors, we can appeal to some version of the Many Worlds Hypothesis. If there are very many worlds, we would expect a few worlds to be life-allowing, and our world is bound to bee one of these few.

Consider next other kinds of special feature: ones that we are not bound to observe. Suppose we discover that our world has such a feature, and we ask whether that is no coincidence. It may again be said that, if there are many worlds, we would expect a few worlds to have this special feature. But that would not explain why that is true of our world. We could not claim – as with the feature of being life-allowing – that our world is bound to have this feature. So the appeal to many worlds could not explain away the coincidence. Suppose, for example, that our world were very good, or were wholly law-governed, or had very simple natural laws. Those facts would count against both of the unselective views: both the All Worlds Hypothesis and the Brute Fact View. It is true that, if

all worlds exist, or there are very many randomly selected worlds, we should expect a few worlds to be very good, or wholly law-governed, or to have very simple laws. But that would not explain why our world had those features. So we would have some reason to believe that our world is the way it is because this way has those features.

Does our world have such features: ones that count against the unselective views? Our world's moral character seems not to count against these views, since it seems the mixture of good and bad that, on the unselective views, we should expect. But our world may have the other two features: being wholly law-governed, and having very simple laws. Neither feature seems to be required in order for life to be possible. And, among possible life-containing worlds, a far greater range would not have these features. Thus, for each law-governed world, there are countless variants that would fail in different ways to be wholly law-governed. And, compared with simple laws, there is a far greater range of complicated laws. So, on both the unselective views, we should not expect our world to have these features. If it has them, as physicists might discover, that would give us reasons to reject both the All Worlds Hypothesis and the Brute Fact View. We would have some reason to believe that there are at least two partial Selectors: being law-governed and having simple laws.

There may be other features of our world from which we can try to infer what reality is like, and why. But observation can take us only part of the way. If we can get further, that will have to be by pure reasoning.

6

Of those who accept the Brute Fact View, many assume that it must be true. According to these people, though reality merely happens to be some way, <u>that</u> it merely happens to be some way does not merely happen to be true. There could not be an explanation of why reality is the way it is, since there could not be a causal explanation, and no other explanation would make sense.

This assumption, I have argued, is mistaken. Reality might be the way it is because this way is the fullest, or the most varied, or obeys the simplest or most elegant laws, or has some other special feature. Since the Brute Fact View is not the only explanatory possibility, we should not assume that it must be true.

When supporters of this view recognize these other possibilities, they may switch to the other extreme, claiming that their view's truth is another brute fact. If that were so, not only would there be no explanation of reality's being as it is, there would also be no explanation of there being no such explanation. As before, though this might be true, we should not assume that it must be true. If some explanatory possibility merely happens to obtain, the one that obtains may not be the Brute Fact View. If it is randomly selected whether reality is randomly selected, and there are other possibilities, random selection may not be selected.

There is, moreover, another way in which some explanatory possibility may obtain. Rather than merely happening to obtain, this possibility may have some feature, or set of features, which explains why it obtains. Such a feature would be a Selector at a higher level, since it would apply not to factual but to explanatory possibilities. It would determine, not that reality be a certain way, but that it be determined in a certain way how reality is to be.

If the Brute Fact View is true, it may have been selected in this way. Of the explanatory possibilities, this view seems to describe the simplest, since its claim is only that reality has no explanation. This possibility's being the simplest might make it the one that obtains. Simplicity may be the higher Selector, determining that there is no Selector between the ways that reality might be.

Once again however, though this may be true, we cannot assume its truth. There may be some other higher Selector. Some explanatory possibility may obtain, for example, because it is the least arbitrary, or is the one that explains most. The Brute Fact View has neither of those features. Or there may be no higher Selector, since some explanatory possibility may merely happen to obtain.

These alternatives are the different possibilities at yet another, higher explanatory level. So we have the same two questions: Which obtains, and Why?

We may now become discouraged. Every answer, it may seem, raises a further question. But that may not be so. There may be some answer that is a necessary truth. With that necessity, our search would end.

Some truth is logically necessary when its denial leads to a contradiction. It cannot be in this sense necessary either that reality is a brute fact, or that there is some Selector. Both these claims can be denied without contradiction.

There are also non-logical necessities. The most familiar, causal necessity, cannot give us the truth we need. It could not be causally necessary that reality is, or isn't, a brute fact. Causal necessities come lower down. Similar remarks apply to the necessities involved in the essential properties of particular things, or natural kinds. Consider next the metaphysical necessity that some writers claim for God's existence. That claim means, they say, that God's existence does not depend on anything else, and that nothing else could cause God to cease to exist. But these claims do not imply that God must exist, and that makes such necessity too weak to end our questions.

There are, however, some kinds of necessity that would be strong enough. Consider the truths that undeserved suffering is bad, and that, if we believe the premises of a sound argument, we ought rationally to believe this argument's conclusion. These truths are not logically necessary, since their denials would not lead to contradictions. But they could not have failed to be true. Undeserved suffering does not merely happen to be bad.

When Leslie defends the Axiarchic View, he appeals to this kind of non-logical necessity. Not only does value rule reality, Leslie suggests, it could not have failed to rule. But this suggestion is hard to believe. While it is inconceivable that undeserved suffering might have failed to be in itself bad, it is clearly conceivable that value might have failed to rule, if only because it seems so clear that value does <u>not</u> rule.

Return now to the Brute Fact View, which is more likely to be true. If this view is true, could its truth be non-logically

necessary? Is it inconceivable that there might have been some Selector, or highest law, making reality be some way? The answer, I have claimed, is No. Even if reality is a brute fact, it might not have been. Thus, if nothing had ever existed, that might have been no coincidence. Reality might have been that way because, of the cosmic possibilities, it is the simplest and least arbitrary. And, as I have also claimed, just as it is not necessary that the Brute Fact View is true, it is not necessary that this view's truth be another brute fact. This view might be true because it is the simplest of the explanatory possibilities.

We have not yet found the necessity we need. Reality may happen to be as it is, or there may be some Selector. Whichever of these is true, it may happen to be true, or there may be some higher Selector. These are the different possibilities at the next explanatory level, so we are back with our two questions: Which obtains, and Why?

Could these questions continue for ever? Might there be, at every level, another higher Selector? Consider another version of the Axiarchic View. Reality might be as good as it could be, and that might be true because its being true is best, and that in turn might be true because its being true is best, and so on for ever. In this way, it may seem, everything might be explained. But that is not so. Like an infinite series of events, such a series of explanatory truths could not explain itself. Even if each truth were made true by the next, we could still ask why the whole series was true, rather than some other series, or no series.

The point can be made more simply. Though there might be some highest Selector, this might not be goodness but some other feature, such as non-arbitrariness. What could select between these possibilities? Might goodness be the highest Selector because that is best, or non-arbitrariness be this Selector because that is the least arbitrary possibility? Neither suggestion, I believe, makes sense. Just as God could not make himself exist, no Selector could make itself the one that, at the highest level, rules. No Selector could settle <u>whether</u> it rules, since it cannot settle anything unless it does rule.

If there is some highest Selector, this cannot, I have claimed, be a necessary truth. Nor could this Selector make itself the highest. And, since this Selector would be the highest,

nothing else could make that true. So we may have found the necessity we need. If there is some highest Selector, that, I suggest, must merely happen to be true.

Supporters of the Brute Fact View may now feel vindicated. Have we not, in the end, accepted their view?

We have not. According to the Brute Fact View, reality merely happens to be as it is. That, I have argued, may not be true, since there may be some Selector which explains, or partly explains, reality's being as it is. There may also be some higher Selector which explains there being this Selector. My suggestion is only that, at the end of any such explanatory chain, some highest Selector must merely happen to be the one that rules. That is a different view.

This difference may seem small. No Selector could explain reality, we may believe, if it merely happened to rule. But this thought, though natural, is a mistake. If some explanation appeals to a brute fact, it does not explain that fact; but it may explain others.

Suppose, for example, that reality is as full as it could be. On the Brute Fact View, this fact would have no explanation. On the Maximalist View, reality would be this way because the highest law is that what is possible is actual. If reality were as full as it could be, this Maximalist View would be better than the Brute Fact View, since it would explain reality's being this way. And this view would provide that explanation even if it merely happened to be true. It makes a difference where the brute fact comes.

Part of the difference here is that, while there are countless cosmic possibilities, there are few plausible explanatory possibilities. If reality is as full as it could be, that's being a brute fact would be very puzzling. Since there are countless cosmic possibilities, it would be amazing if the one that obtained merely happened to be at the maximal extreme. On the Maximalist View, this fact would be no coincidence. And, since there are few explanatory possibilities, it would not be amazing if the Maximalist highest law merely happened to be the one that rules.

We should not claim that, if some explanation rests on a brute fact, it is not an explanation. Most scientific explanations take

this form. The most that might be true is that such an explanation is, in a way, merely a better a description.

If that were true, there would be a different defence of the kind of reasoning that we have been considering. Even to discover how things are, we need explanations. And we may need explanations on the grandest scale. Our world may seem to have some feature that would be unlikely to be a coincidence. We may reasonably suspect that this feature is the Selector, or one of the Selectors. That hypothesis might lead us to confirm that, as it seemed, our world does have this feature. And that might give us reason to conclude either that ours is the only world, or that there are other worlds, with the same or related features. We might thus reach truths about the whole Universe.

Even if all explanations must end with a brute fact, we should go on trying to explain why the Universe exists, and is as it is. The brute fact may not enter at the lowest level. If reality is the way it is because this way has some feature, to know what reality is like, we must ask why.

7

We may never be able to answer these questions, either because our world is only a small part of reality, or because, though our world is the whole of reality, we could never know that to be true, or because of our own limitations. But, as I have tried to show, we may come to see more clearly what the possible answers are. Some of the fog that shrouds these questions may then disappear.

It can seem astonishing, for example, how reality could be made to be as it is. If God made the rest of reality be as it is, what could have made God exist? And, if God does not exist, what else could have made reality be as it is? When we think about these questions, even the Brute Fact View may seem unintelligible. It may be baffling how reality could be even randomly selected. What kind of process could select whether, for example, time had no beginning, or whether anything ever exists? When, and how, could any selection be made?

This is not a real problem. Of all the possible ways that reality might be, there must be one that is the way reality actually is. Since it is logically necessary that reality be some way or other, it is necessary that one way be picked to be the way that reality is. Logic ensures that, without any kind of process, a selection is made. There is no need for hidden machinery.

Suppose next that, as many people assume, the Brute Fact View must be true. If our world has no very special features, there would then be nothing that was deeply puzzling. If it were necessary that some cosmic possibility be randomly selected, while there would be no explanation of why the selection went as it did, there would be no mystery in reality's being as it is. Reality's features would be inexplicable, but only in the way in which it is inexplicable how some particle randomly moves. If a particle can merely happen to move as it does, reality could merely happen to be as it is. Randomness may even be less puzzling at the level of the whole Universe, since we know that facts at this level could not have been caused.

The Brute Fact View, I have argued, is not necessary, and may not be true. There may be one or more Selectors between the ways that reality might be, and one or more Selectors between such Selectors. But, as I have also claimed, it may be a necessary truth that it be a brute fact whether there are such Selectors, and, if so, which the highest Selector is.

If that is a necessary truth, similar remarks apply. On these assumptions, there would again be nothing that was deeply puzzling. If it is necessary that, of these explanatory possibilities, one merely happens to obtain, there would be no explanation of why the one that obtains obtains. But, as before, that would be no more mysterious than the random movement of some particle.

The existence of the Universe can seem, in another way, astonishing. Even if it is not baffling that reality was made to be some way, since there is no conceivable alternative, it can seem baffling that the selection went as it did. Why is there a Universe at all? Why doesn't reality take its simplest and least arbitrary form: that in which nothing ever exists?

If we find this astonishing, we are assuming that these features should be the Selectors: that reality should be as simple and

unarbitrary as it could be. That assumption has, I believe, great plausibility. But, just as the simplest cosmic possibility is that nothing ever exists, the simplest explanatory possibility is that there is no Selector. So we should not expect simplicity at both the factual and explanatory levels. If there is no Selector, we should not expect that there would also be no Universe. That would be an extreme coincidence.[2]

[2] Of several discussions of these questions, I owe most to John Leslie's Value and Existence, (Blackwell, 1979) and to Robert Nozick's Philosophical Explanations (Oxford, 1981); then to Richard Swinburne's The Existence of God, (Oxford, 1979), John Mackie's The Miracle of Theism, (Oxford, 1982), Peter Unger's article in Mid-West Studies in Philosophy, Volume 9 (1989), and some unpublished work by Stephen Grover.