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INTERVIEW

An interview with John Leslie

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Abstract

This article is part of *Religious Studies*' new initiative to publish a series of interviews with distinguished philosophers of religion. Each interview explores the personal and academic background of the interviewee and discusses their core philosophical views. The aim is to inspire students and scholars and to provide an overview of some of the most important works developed by contemporary philosophers of religion. In this interview, Kirk Lougheed interviews John Leslie, covering such topics as working in advertising after finishing his BA at Oxford, returning to graduate school, and developing and defending Axiarchism throughout his philosophical career.

Keywords: Axiarchism; Immortality; Leslie; Multiverse; Platonism

Tell us about your childhood, and your first exposure to religious ideas

I was born in 1940, in India like a Baptist-missionary ancestor. My father worked in Calcutta as a lawyer until conscripted into the army. He soon entered the Judge Advocate General's department, leaving it when the war ended as a colonel aged thirty-three. Our family, which had moved from city to city whenever a new set of courts-martial needed legal guidance, now travelled to England, yet I keep returning to India in dreams. Of all the world's lands it could be the most fascinating.

Aged seven I went to Southey Hall, a boarding school in Surrey. My father and mother were atheists so I first heard of God in sermons at the local church. Asking myself whether I believed the priest's words, I said No, for he said unbelievers (here I thought of my much loved parents) would suffer eternal loss. Since then I've met Christians convinced we'd all enter Heaven, some of us arriving via Purgatory; I've long believed in a reality I call God; but I've not felt enthusiasm for any faith. If I had, it might have led to priesthood for I've never found religious ideas trivial. In contrast, as an eight-year-old experiencing the superbly crafted pages of Stevenson's *Treasure Island* and Conan Doyle's *Hound of the Baskervilles* I vowed I'd myself be a writer. Later, leaving Sutton County Grammar School, I felt I might indeed become one. I'd won a major open scholarship in English Literature at Wadham College, Oxford.

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But then, not sticking to English literature, the would-be writer studied psychology and philosophy instead. Why?

Before entering Wadham I'd read C.E.M. Joad's *Guide to Philosophy*. Joad told of exciting issues in Metaphysics, questions about the world's nature which scientists could never answer, and I thought I might have solved a problem underlying all those questions, the problem of why there's any world at all. When a thing has intrinsic value – when its existing all by itself would be better than the absence of all things – then doesn't this provide a reason for this thing to exist? Wouldn't the absence of all things be unfortunate even when there existed no Creator able to remedy this sad state of affairs? Couldn't the need, the ethical requirement, for the existence of a good world *be itself creatively effective*? Might this be why there's something rather than nothing?

How popular was that at Oxford?

Oxford Philosophy, 1960-style, was freezing water poured on my head. The Verification Theory of Meaning had made 'Metaphysics' a synonym for 'Nonsense'. Prescriptivism, too, was rampant. Saying a thing had intrinsic value wasn't an attempt to state a fact. Instead it prescribed actions which produced or which preserved that thing's existence. Since only a madman would run around shouting 'Create the world!' or 'Don't let it vanish!', only buffoons could talk of the world as having intrinsic value. Besides, folk argued, to explain the existence of a thing you'd have to point at some other existing thing or things, perhaps at a potter's already existing hands, shaping already existing clay, to explain the existence of a pot. There'd be no way of explaining the cosmos, the totality of absolutely all things.

Getting my BA, I hurried to escape the freezing water by joining McCann-Erickson, one of London's two largest advertising agencies. While earning daily bread as a copywriter, said I, the evenings would be devoted to learning a writer's trade.

A couple of years later I'd found that what I most wanted to write about was why the world exists. Reading Plato's works in my third Oxford year, from sheer curiosity since no exam question would require this, I'd discovered to my disgust that the man seemed to express, albeit obscurely, what I'd fondly believed to be my very own theory: that the world's intrinsic value could account for its existence. Still, wouldn't it be interesting to present Plato's theory clearly? To develop it in detail together with a world-picture to which it could lead? I wrote to the Wadham philosopher who'd been my main tutor, Ian Crombie. With his help I returned to Oxford, starting work on a thesis entitled 'The theory that the world is, and is as it is, because it is best that it should be so'. (In 1970 this was shortened to 'The Theory that the World Exists Because It Should', title of a ten-thousand word thesis-summarizing article in Nicholas Rescher's *American Philosophical Quarterly*.) Before, however, I'd finished struggling with the thesis, I'd started teaching at Guelph, fifty miles from Toronto, where I'd joined a strong and friendly philosophy department.

How did things go after that?

I arrived in Canada with Jill, met in Oxford's university mountaineering club, an ideal partner on rock climbs, in hiking (she eventually became President of Hike Ontario), and in marriage. Both of us liking the University of Guelph, it was a relief when, after eighteen months of effort to defend Creative Value against further pails of freezing water, my research thesis was deemed adequate, even by the Oxford of those days, for an MLitt degree, quite probably necessary for continuing at Guelph. Writing about philosophy of religion

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and of cosmology, I came to have my ideas taken seriously, including by Brand Blanshard, Brandon Carter, Paul Davies, Peter Forrest, David Lewis, J.L. Mackie, Tim Mulgan, Derek Parfit, John Polkinghorne, Martin Rees, Nicholas Rescher, J.J.C. Smart, T.L.S. Sprigge, and Keith Ward. What a reward for a writer, to have readers like these! Their works were treasure chests to explore, together with those of Plato and Aristotle, Plotinus and Dionysius; of Maimonides, Aquinas, Spinoza and Leibniz; of later philosophers such as Hegel, F.H. Bradley, Alfred North Whitehead, Bertrand Russell, A.C. Ewing, Adolf Grünbaum; and of scientists like Erwin Schrödinger, Arthur Eddington, John Archibald Wheeler, David Bohm, Steven Weinberg, Roger Penrose, Leonard Susskind, and Frank Tipler who told me of Carter's 'doomsday argument' about the risk that humans will soon be extinct and showed me that my kneejerk 'What nonsense!' wasn't at all obviously correct. In 1997 I became a Fellow of the Royal Society of Canada, touring Britain in 1998 as British Academy–Royal Society of Canada Exchange Lecturer. Exploring those treasure chests had clearly been worthwhile.

Still, I'd had outrageous good luck. Luck in sending that thesis-summarizing article to Nicholas Rescher's journal. (I'd never have guessed he was already attracted to ideas close to mine. His *Axiogenesis* appeared only forty years later.) Luck in how my *Value and Existence* caught Mackie's eye when he was writing a book surveying philosophy of religion from Plato onwards. Luck in having a sabbatical year when cosmologists began to see evidence of 'fine tuning' clearly relevant to the theological Argument from Design. (After looking into this in Oxford's Radcliffe Science Library, I became known in philosophical cosmology through articles leading to *Universes* and worked at the Institute for Astrophysics in Liège thanks to Belgium's Fonds National de la Recherche Scientifique.) Luck that my ideas were liked enough by that great philosopher, J.J.C. Smart, for him to suggest I apply for the research chair from which he was about to retire. (I got the consolation prize of six months at Australian National, airfares and housing paid including for Jill and for our kids.) Luck in so many further cases that it's a safe bet that in typical worlds among those of Many Worlds Quantum Theory I've not seen in print the things I wanted to write.

In philosophy of religion you're known for axiarchism. What does this involve?

AXIARCHISM was recommended by Ian Crombie as the name for the theory that the world is ruled largely or entirely by Value. Until well into the twentieth century the majority of philosophers held axiarchist beliefs. One belief is that an all-powerful divine person, eternally 'simply there' since nothing could have created him, created everything else. While not bright and beautiful everywhere, Earth contains signs of his creative benevolence. However, I prefer what Crombie called EXTREME AXIARCHISM: *that all things exist as a direct product of the need for this.* If there's a divine person then he owes his own existence to its ethical requiredness. Not, of course, to its *moral requiredness*; it's nonsense to say he'd had a moral duty to create himself. But what's ethically needful – fortunate, required for its value – includes much more than what anyone has a duty to produce. (Think of the pleasure of a dinosaur basking in the sun. If you like, join Rescher in preferring 'axiologically required' to 'ethically required'.) Now, it's ethical requirements, I suggest, which account for the cosmos, the totality of all things, in the most straightforward, simple, philosophically defensible way. An ethical requirement is creatively effective when it's not overruled by a stronger ethical requirement, perhaps the need for humans to make decisions freely which can result in very unbeautiful warfare. But people keep overlooking the Axiarchism versus Extreme Axiarchism distinction, so I now tend to avoid the words 'Extreme Axiarchism', talking of PLATONIC CREATION instead.

My Extreme Axiarchist world-picture – you'd find it on pages 13, 183 to 185, 217 of *Value and Existence* (Blackwell: 1979) but for its extremism in full bloom see *Infinite Minds* (Oxford University Press: 2001) – says that Reality consists of infinitely many minds, each infinite

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through eternally contemplating all that's worth contemplating so that each has infinite value and can be called divine. This, a variant on Spinoza's world-picture where Reality consists of a single infinite mind, strikes me as where you'd best end up if trying to take seriously the Platonic theme that The Good, itself not an existing thing, is what accounts for all existing things.

That does sound like an extremely speculative position. How does one end up there in an intuitive or at least relatively straightforward way?

Infinitely many minds, each infinite in its value, don't frighten me. If Value is creative, anything smaller would be far too small, I think. And beyond what science can prove, all is speculation. There's speculation even in the idea that one thing, for instance enjoying the sight of a starving girl, is ever *in itself worse* than another, such as feeding her. I say I 'know' that things are sometimes in themselves better than others, but this knowing isn't as firm as knowing that two and two make four. Intrinsic value might perhaps be as fictitious as dragons. Today many philosophers, while by no means stupid, believe that *nothing ever is* in itself better than anything else. They accept doctrines like Prescriptivism, that it's not a genuine truth, a reality, that feeding a starving girl is better than kicking her in the teeth. (Saying 'It's true you ought to feed the girl' is just issuing the prescription 'Feed her!'. Saying 'It's a fact you ought to accept that prescription' just says 'Accept it!'.) And even David Hume, awesomely intelligent, held that all ethical talk expresses only our subjective feelings instead of trying to describe facts as much 'out there in the world' as China's being larger than Spain.

In *The Miracle of Theism* (Oxford University Press: 1982) Hume's greatest modern defender, J.L. Mackie, gives a chapter to 'Value and Existence'. Leslie's Platonic creation story, says Mackie, is 'a formidable rival' to belief in a benevolent Creator; 'if, with Leibniz and others, you demand an ultimate explanation, then this may well be a better one'. But, he complains, it rests on assuming 'objectively prescriptive values'. This, he agrees, is standard among non-philosophers: 'in calling something good we do commonly imply that it is intrinsically and objectively required or marked out for existence, irrespective of whether any person, human or divine, requires or demands or prescribes or admires it'. Furthermore he sees 'no actual contradiction' either here or in the Platonic answer to why the world exists. Leslie, he writes, is correct in insisting there'd be no obvious need for a wondrously clever divine mind to work out which would be best of all possible situations, then creating it, for the Platonic theory is that the ethical need for something 'could *on its own* call that item into existence, without the operation of any person or mind that was aware of this need and acted so as to fulfil it': it cannot be 'known a priori to be impossible', known from mere armchair reasoning pages 230 – 239.

Nevertheless he thinks we ought to treat it as impossible. He thinks we must follow Hume as he'd done earlier. In *Ethics: Inventing Right and Wrong* (Penguin Books: 1977) he'd argued that when we view something as objectively required, required as a fact 'out there in the world', what's really going on is that we've *internalized* the pressure of persons or social institutions, pressure which is in fact what does the requiring.

But, many say, isn't the Hume-Mackie position plausible? How could anything *in itself* have ethical requiredness, a property invisible to us and mysteriously linked to the properties science can detect?

My ethical beliefs result mainly from social pressures. Eager to see myself as more than a worm succumbing to bullying, I've internalized the pressures. I think that most of the things which folk require of me have their very own requiredness which I cheerfully support. But why should invisible ethical requirements be hard to swallow? Why on earth must

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a need to feed a starving girl be *visible* in the way her body is visible, for us to feel a duty to feed her? That need couldn't be visible to human eyes or detected by scientific instruments since all that's detectable by eyes, electron microscopes, etcetera, is how objects, events, or situations *are constituted* – what, that's to say, are the properties which make them what they are – and not whether anything *constituted like that* possesses the further property of ethical requiredness, the status of being ethically needful. That's why intrinsic value could be as fictitious as dragons! Yet what's so terribly mysterious in the link between the requiredness and the detectable properties? Mackie complains about its mystery, but he himself points out in *Ethics: Inventing Right and Wrong* that it would be absurd to see a thing's intrinsic goodness as present in one situation yet absent in another virtually identical situation: present in Monday's enjoyment of Mozart's *Exsultate Jubilate* but absent from Friday's enjoyment of the very same music. If, therefore, such goodness involves 'no actual contradiction' (Mackie's words) so that it *might be* present in Monday's enjoyment of that music, and if it *actually is* present there, then it's present also in Friday's enjoyment of it. Present necessarily, non-mysteriously, and fully as believably as the alternative that intrinsic value is a fiction, *everywhere necessarily absent*, because it couldn't come and go crazily, present in feeding one starving girl but absent from feeding her identical-twin sister.

Similarly with the creative power of an ethical need. If such creative power ever is present instead of fictitious then it, too, is present necessarily, so that if one universe is ruled by a deity whose existence has *creative ethical requiredness* then another universe can't contain a precisely similar deity who simply happens to exist.

This doesn't say that the creative power of an ethical need ever avoids being mythical. But if real it would, as Mackie notes, be a reality *no more complex* than that need's powerlessness. It wouldn't involve intricately interlocked cogwheels or a complicated magic spell. You might almost as well think that the intrinsic goodness of enjoying fine music involved cogwheels or a spell.

But even if a model of platonic creation can be provided that doesn't involve spells or cogwheels, what chances does it have of being true?

Points like the ones I've made leave some folk totally unimpressed. Even when admitting there's no contradiction in the idea that an ethical requirement *was responsible for the existence of something*, maybe a deity or perhaps the sum total of all existing things, they declare that any such requirement would have zero probability of bearing such responsibility. Can they be proved wrong? I see no way of doing it. I see no means of giving a firm figure for the 'a priori likelihood' that an ethical need ever acts creatively, just as I see no means of giving a firm figure for the 'a priori likelihood' that the cosmos simply happens to exist. Still, it's altogether possible that Plato, Plotinus, Dionysius, and their numerous successors are correct in believing in what I'm tempted to call *God as the world's creative ethical requiredness* – God as the 'because' in 'The world exists because it should'; God described by Paul Tillich as the world's 'Power of Being'; God conceived as a creative force which, were the world's goodness sufficiently great, could make its having such goodness 'no coincidence' (Derek Parfit); the God of J.A.T. Robinson, Bishop of Woolwich, whose best-seller *Honest to God* denied that theological statements described any 'highest Being', causing a storm despite protests by theologians that this simply presented classical Platonic theology. And it's altogether possible, also, that others – they include Aristotle, A.C. Ewing, Keith Ward and John Polkinghorne: see pages 110–111 and 132–156 of *The Mystery of Existence* (Wiley-Blackwell: 2013, eds. Leslie and Kuhn) – are correct in the competing belief that God is a Being existing thanks to *his* creative ethical requiredness. For Aristotle, God 'exists of necessity' since 'necessary', besides meaning 'what cannot be otherwise', means 'what is essential for goodness' and

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God's eternal existence is good. It is 'a state of contemplation which is most pleasant and best'.

Yet if value is creative, why isn't the world a far better place?

Remember, my theory is that Creative Value has created infinitely many minds, each infinite in its value because eternally contemplating all that's worth contemplating. Instead of 'contemplating' I often say 'experiencing', 'knowing', treating these words as saying much the same. The things contemplated possess (except when they are such abstractions as mathematical truths) no reality beyond their being contemplated. A contemplated rose, for instance, is 'simply thought into existence' by the infinite mind which contemplates it. Now, does any of what we see disprove this theory?

Like Spinoza's, the theory holds that you and I are patterns in an infinite mind's thought. We live, move, and have our being inside that mind, a situation easy to accept when you think with Spinoza – look not at his bewildering *Ethics* but at his earlier *Short Treatise* – that the infinite mind exists simply, easily, as a direct product of its ethical requiredness. (Contrast this with a theory attracting John Barrow, professor of theoretical physics: that you and I inhabit a gigantic computer created by an advanced civilization, a situation surely very hard to produce, even using the ultra-dense nuclear matter which Hans Moravec thinks good for making computers a million trillion trillion times more powerful than human brains.) 'But', comes the protest, 'wouldn't it be better if our world had no evils?' Well, it's a world governed by physical laws, not the world of a drug addict's dream. Now, a world containing living beings and ruled by physics, yet featuring no evils, might be as impossible as a world whose billions of coins always fell heads. Yet certainly there could be many worlds, life-containing and ruled by physics, which featured fewer evils than ours. But then *those other worlds, too*, would exist, side by side with ours inside the same infinite mind – yes, even if our world is infinitely large, as many cosmologists think. It's a blunder to suppose that 'infinite' must mean 'all-inclusive'. Cosmologists have no problem with multiple universes each extending infinitely far in a Space of its own. Now ask yourself: Given power to annihilate our world by waving a hand, would you feel inclined to wave because convinced that, while it was a world better than nothing, *others were still better*? Would the sole impediment to hand-waving then be that this would kill our world's inhabitants instead of just failing to create them?

If anything's truly worth contemplating then an infinite mind could be expected to contemplate it, were that mind's existence due directly to its value. Would it be good for that mind to contemplate, 'think into existence', a world whose inhabitants never wished to hurt one another? Or a world where folk moved in ever-beautiful surroundings, mere acts of will whizzing them to wherever they wanted? Or thoroughly lawless worlds like those seen in hallucinations, plus up to infinitely many worlds ruled by laws utterly different from those human science has discovered? Were it indeed good to contemplate such worlds then the infinite mind would contemplate them. Similarly with a realm of immaterial minds interacting telepathically. Similarly with games of chess played on ten-dimensional chessboards. And beautiful mathematical facts, of which there could be infinitely many. But far less, presumably, than would be contemplated by Omniscience. There might well be no value in contemplating all possible combinations of the alphabet's letters, or precisely what it would be like to feel all possible infinitely prolonged tortures.

In short, an infinite mind could be best-possible through contemplating the best possible collection of things. This wouldn't mean that if Earth existed among the things contemplated then efforts to improve it would be pointless. Leibniz's best of all possible worlds has a worth largely dependent on whether good or bad deeds are done by its inhabitants. Only Pangloss, Voltaire's farcical pseudo-Leibniz, sees no duty to build churches resistant

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to earthquakes or for doctors to combat bubonic plague. Even an extreme axiarchist could write *The End of the World: the science and ethics of human extinction* (Leslie, Routledge: 1996) which, discussing the many ways in which extinction might soon be the fate of humankind, attacks philosophers who declare we've no duty to fight for the existence of future humans since these are too shadowy, too unable to possess identities, for us to have duties toward them.

Many believe our world worse than nothing. Since I've called it impossible to know for sure even whether anything's better than anything else, I say they might be correct. Schopenhauer writes that it would have been better had Earth remained as lifeless as the moon. He might be right. Some would say that experiences of many humans, many animals, are so frightful that there'd be no place for them in a cosmos Value-created. This could be true. It might be that Plotinus, Augustine, Aquinas, Spinoza, Leibniz, are severely mistaken when they advocate what's now called The Privation Theory of Evil which holds that no experiences have *negative intrinsic value*: value below zero. I've no inborn ethical searchlight revealing what's better than what, let alone whether some experiences have a value so far below zero that even ten minutes of them outweigh all the interest and joy of a lifetime. I'm exploring what's needed for Extreme Axiarchism to get off the ground and I haven't yet seen anything proving that it cannot, or that my Spinozistic Pantheism is wicked.

In view, however, of episodes like the Taiping Rebellion with its deaths of up to seventy million Chinese, often in deliberately inflicted agony, it could be tempting to hope that intrinsic value is as fictitious as any dragon, nothing being *in itself worse* than anything else. Or to pride oneself on struggling against a hostile, God-less universe.

You've suggested that each infinite mind contemplates what it contemplates eternally. How could this leave room for our experience of time's flow?

Wanting to catch a train, Einstein saw he might have to run for it; however, he accepted Eternalism which says that our world's events form a four-dimensional continuum. He tried to comfort the relatives of his dead friend Michele Besso with the thought that Besso's life hadn't been absolutely wiped out. Besso no longer existed *now*, but the situation *as of now* was just a three-dimensional slice of that continuum. Not being alive now was like not being in Canada when you're in Australia. Now-ness, Einstein believed, is as relative as being-here-ness. Sure enough, Einstein might be wrong when he wrote that we should think of 'a four-dimensional existence instead of, as hitherto, the evolution of a three-dimensional existence'. No experiments could prove that the world's successive events exist *together* rather than in a succession of three-dimensional situations each at once annihilated and succeeded by the next. Conscious experiences, too, could never show which was right, three-dimensionalism or four-dimensionalism. The excitement of switchback rides, joy of struggling to improve the world, delight at novelty, inability to guess what the future will bring, relief that a tooth has stopped aching, fear of dying, could all be real either inside a four-dimensional whole or instead in a series of three-dimensional situations.

However, the extreme axiarchist has strong grounds for rejecting three-dimensionalism. How could it profit an infinite divine mind to be constantly changing, its riches like those of a man who handles a million gold coins, each disappearing as soon as he's handled it? If best-possible, how could an infinite mind change, if not for the worse?

Here, though, I have to reflect that my views of good and bad are guesswork, there being no way of proving even that anything is better than anything else. Couldn't others have guessed better than John Leslie? Mightn't those theologians be right who see overwhelmingly much value in what they call 'absolute freewill'? – freewill flatly incompatible with a future which exists *together with* what exists now. You couldn't, they say, decide with absolute freewill whether to eat pancakes tomorrow, were you already eating pancakes a day

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farther along the fourth dimension. Many clever people assure me they possess absolute freewill, and it might be no harder to possess inside infinite minds than outside them. If, therefore, there exist many infinite minds, then they might differ from one another through decisions made with absolute freewill by humans and other intelligent beings: decisions made in Time which flowed in the way commonly believed in, so that any infinite mind containing those decisions would be forever altering. The decisions could be wicked since Platonic Creation permits wickedness, whether or not absolutely freewilled.

You've argued that although our brains are material we might well be immortal in three ways. How is that possible?

I'm a card-carrying physicalist. I believe I'm a collection of patterns in the thought of an infinite divine mind, but our physical world isn't 'physical' through being made of some stuff self-evidently unable to carry divine thought-patterns. Physicists don't talk of 'stuff'. Their interest is in our world's structure, not in whether what carries the structure is or isn't a divine mind, although the world cannot be structure, structure, structure 'all the way down' like the infinite series of turtles which keep Earth from falling; all structure must sooner or later be the structure *of something*. What makes ours 'a physical world' is laws governing which later structures follow which earlier ones, not stuff too material to exist inside an infinite mind because far different from mental stuff. I'm part of a physical universe, my brain a material collection of nerve cells, my consciousness (here I follow *The Emperor's New Mind* by Roger Penrose) cerebral quantum fields whose elements are so unified that all parts of one's experience of a painting can be *known together*, being as little capable of existing independently as the length and the width of a brick.

In *Immortality Defended* (Blackwell: 2007) I describe three kinds of immortality which physicists could accept, suggesting that you and I might have all three. Einsteinian Immortality is my name for what Einstein felt sure was had by his dead friend Besso. Although Einstein never actually called Besso 'immortal' it wasn't true merely that Besso *did once exist* and that, as Aristotle insisted, not even divine power could destroy such truths. Besso *continued to exist at points earlier on the fourth dimension*, Einstein thought.

A second variety of immortality is the continued existence, after one has died, of *whatever had carried one's thoughts and experiences*. To assume that this continued existence could only be *the afterlife* of traditional Christianity would be too hasty. Consider Hinduism's Brahman. While we do have our own thoughts and experiences, *Brahman has them as well*, we being tiny parts of what Brahman thinks and experiences. Now, many Hindus view obsessive concern for their own continued existence as unworthy. That Brahman will continue onwards after they've died, then having the thoughts and experiences of others, is the only immortality they crave. Living inside the infinite mind I described, we'd have such immortality.

Still, what prospects are there of a third kind of immortality, personal survival in an afterlife? In the Chandogya Upanishad death is dissolving quickly into the rest of Brahman. In the Taittiriya Upanishad in contrast, one keeps one's individuality although changing one's form at will while roaming the divine reality. That's immortality not too unlike what many Christians want. Could one have it inside an infinite divine mind? Spinoza opposes afterlives, picturing everything as ruled by what we'd today call laws of physics, but why doesn't he suspect that those laws might rule only a limited region of the infinite mind he describes? Why does he think it would be quite OK if people like my parents had no afterlives? Couldn't all that's essential to a person's individuality 'bubble out orthogonally' (Robert Nozick) from our universe when he or she died, leaving the universe ruled from start to finish by the laws of physics but allowing that person to enter a region *not* ruled by those laws? The person might 'pass, as most theists think, into the wider reality of God', maybe eventually 'coming to know God wholly' and 'becoming one reality with God' (Keith

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Ward, writing as Oxford's Regius Professor of Divinity). Even as conceived by Spinoza, God knows far more than the history of every particle in our universe. God sees that some of those particles formed Plato and Genghis Khan, and God judges the worth of those men. Thinking of our physical world, God isn't just doing physics.

Immortality of the first two kinds would be had by all conscious beings. Immortality of the third kind, of exploring the divine mind, might be had by all humans, even Genghis Khan. I'd expect my dog to have it. I'd like goldfish to have it.

Although a divine mind would know everything that was worth knowing, there'd be very ignorant regions inside it, for some of its regions would be human minds. In those regions it could feel pain mental and physical, thereby knowing *exactly how it feels* to be in pain, for how else could it possibly know it? It could know fear of death, for the regions in which it knew about immortality wouldn't share that knowledge with regions in which death was feared. It wouldn't be 'a large seaside boarding-house with no private bedroom in which I could take refuge from the society of the place' (William James).

Parsimony is a theoretical virtue. Why more than one infinite mind?

If Value accounted for the existence of an infinite mind then there'd exist an ocean of infinitely many such minds, for this would be better. Imagine a deity infinitely blissfully contemplating all that's worth contemplating. Why on earth would the deity *fail to give* the same infinite pleasure to infinitely many other deities, the same in all their properties as himself, by bringing them into existence? Some philosophers deem it obvious that no two things could be the same in all their properties, but to please them we could move to imagining those infinitely many other deities as each failing to contemplate some tiny triviality: a different tiny triviality in each case. True, the imagined situation would have little Variety, but when the first deity has the good of contemplating infinitely many varied things, would you think it preferable for each of the others to contemplate *fewer* of those things?

Don't be dazzled by the word 'infinite'! Would you think mass murder any less atrocious because the intrinsic value of a divine mind would remain infinite after a mass murder, just as before it, the sum total of Reality's worth thus being unaffected? Would similar reasoning make you judge that it was morally acceptable to do nothing to save humankind from extinction even if convinced that future humans, did any arrive, would be far happier than humans today? That the divine mind's own infinite happiness would suffice? Would you say that the first deity among those I discussed would have infinitely little moral reason to create a second deity like him, he himself having infinite bliss, but infinitely much moral reason not to annihilate that second deity once he'd created him? And if there existed a mind infinite *in negative value*, perhaps through contemplating (and therefore experiencing) exactly how it feels to suffer infinitely much pain, would it be harmless to wave your magic hand, creating a second such tortured mind, because this would make matters *no worse*? Would waving the hand to create infinitely many tortured minds be no crime?

Don't protest that items 'at the same Cantorian level' are equal, *infinity times infinity* being no larger than *infinity*! Hilbert, greatest of Cantor's supporters, said Cantor's findings might well apply only to mathematical abstractions such as points which are infinitely small, there then being as many on a line as in a cube.

Don't say all theologians have agreed that God had no duty to create anything, for you'd be overlooking Abelard ('If God refrains from producing some things fit to be produced, who would not infer that he is jealous or unjust?').

Don't say that *being unique* contributes mightily to the immensity of divine worth, or that the Bible says Jehovah's unique! The Bible wasn't intended as a metaphysical textbook. Its insistence that there's but a single god to be worshipped might simply tell us to shun Astarte, Baal, Chemosh, and Dagon.

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Don't argue that there's a contradiction in the concept of two omnipotent deities, for couldn't one of them wish to do something incompatible with what the other wanted, such as creating a cannibal instead of a vegetarian? (Irrelevant, since the infinite minds I describe simply are what they are, eternally, thanks to their creative ethical requiredness. What's conceptually impossible is a power struggle between them.)

I'd like 'God' to become popular as the name of the entire infinite ocean of infinite minds. But I'd happily use it to name the creative ethical requiredness of that ocean, or of the particular infinite mind inside which you and I exist. Or it could name that particular mind. Or a region central to that particular mind's consciousness, a region in which all other regions were seen in full detail 'as if at a single glance', a region maybe filled with love of all persons, love perhaps shown by interacting with them in their afterlives. Or, a red rag to many bulls, we might speak of the infinite ocean as composed of infinitely many Gods.

What evidence might support your position? Is part of it supposed to be the sheer fact that the world exists? Of course part of what motivates this question is that describing a coherent theory is different from offering evidence of its truth

I've long found it near unbelievable that things exist for no reason whatever. I admire Kant's picture in the *Critique of Pure Reason* of a Supreme Being saying 'I exist eternally; outside me there's nothing but exists through my will; yet where did I myself come from?' I admire Leibniz's 'Why is there something rather than nothing?' and his 'Nothing is simpler and easier than something'. If there existed nothing, say I, then there'd be nothing to be explained.

It's a bit hard to justify my attitude, however. A world is clearly possible; we're in one. Why wouldn't an absence of all things have been equally possible? And what necessity would there then have been for anything to decide whether there'd be a blank or a world instead? There'd have to be either the first or the second, those being the sole alternatives! Hence there'd be no clear need, Derek Parfit points out, for any Selector selecting the one rather than the other. It may be that 'the universe is just there, and that is all' (Bertrand Russell). Bear in mind that 'there being a blank' couldn't mean there were no realities. Reality necessarily, eternally, includes such facts as that three fives make fifteen – that *IF there existed* three groups of five angry mermaids *THEN* there'd exist fifteen angry mermaids – and there are infinitely many other mathematical realities. It's eternally real, too, that angry mermaids *might exist* in the sense that they'd not be as self-contradictory as vegetarian cannibals. And unless it had been *already true*, meaning that this was its prerequisite, that our universe could exist without contradiction, it couldn't exist. Leibniz's Nothing' wouldn't be all that simple if containing all those complexities! What, folk might ask, is so problematically complicated in adding one or more things 'concrete' through not bring abstractions like Three-Fives-ness? They could have a point.

However, those who say they see no problem in the world's existence often hurry to add, for instance, that there's no problem *because* there were situations each creating the next situation for infinitely many past years, *or because* Alex Vilenkin has shown that our universe could have quantum-tunneled 'from nothing'. Yet in fact Vilenkin – see his glorious material in Leslie and Kuhn eds. *The Mystery of Existence* – asks the nature of the tablets on which the universe-creating laws of quantum physics are written, and whether Mind 'should predate the universe' so as to write on them. Maybe, then, my position gets considerable support from how it might answer why there's a world at all. After all, alternative answers aren't as common as mushrooms. Logico-mathematical necessities look

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unable to create anything: as in the case of the fifteen angry mermaids, their power is too hypothetical, too IFfy-THENny. And supposing it made sense to define God as Pure Being, or as having an essence which is simply 'to exist', this would seem to show only that God, *if real*, consisted solely of existence (or, I'd suggest for Aquinas, solely of creative activity) instead of showing that God *had to be real*.

Is there any additional evidence for your view?

What I consider evidence for God's reality, others consider more likely to be evidence of a demon intent on creating a world of misery. Perhaps some of them are designing new germs to ensure, mercifully, that there'll soon be no more humans suffering its misery. Still, I myself see evidence for God in the fact that our world isn't utter chaos. I see Causal Orderliness.

Why is there this causal regularity, that hammers succeed in driving nails into wood? 'Hammers are hefty' may be little better than 'Opium's dormitive virtue makes us drowsy'.

Why do iron balls fall faster than apples? Newton found an apple's fall as mysterious as a magnet's pull. Aristotle illustrates how a genius can err: iron balls fall no faster.

Even today's physicists say nothing about what's behind our world's obedience to laws. The philosopher A.J. Ayer, pointing out that casinos have engineering problems in ensuring that roulette wheels obey the laws of chance, then erred mightily by saying in *Scientific American* that 'doing better than chance' when card-guessing proves nothing unless the guesser regularly does better than other people. He'd not noticed that our world doesn't obey a ragbag of disconnected laws so that if we all always guessed cards correctly this would be no miracle, just one more law in the ragbag. However, physicists can't say why our world's laws form no ragbag. They can't say even why our world obeys laws. That God makes it law-obeying is a possible answer.

In *Universes* (Routledge: 1989) I discuss *inertia*. Why don't Earth's particles shoot off to distant planets when other particles hit them? Ernst Mach saw inertia as every particle in the universe influencing every other particle. Yet why is such influence sometimes strong, weak in other cases? 'Because the particles vary in how closely they are spaced' looks suspiciously like 'Apples fall because apples are heavy'. Attraction between quarks *grows* with distance! But the influence of distant particles is indeed usually weak. Without this, we'd little understand the world – if living organisms of any kind, and then ones with brains for understanding anything, could ever have arrived without it.

The wavelike nature of an atom's electrons prevents the Ultraviolet Catastrophe, predicted by classical physics, in which the electrons spiral disastrously into the atomic nucleus.

The wave-particle nature of light explains why light waves whose energy could seem to have become too spread out, too diluted, to be useful for photosynthesis, give up that energy at points apparently selected randomly, where it appears in concentrated bursts. Plants can therefore feed us.

There's a startling reason – Feynman found it – why particles don't move all over the place. It's that a moving particle can be pictured as waves of the probability that it will shortly appear at this or that new position, waves which cancel one another when they try to spread out.

Objects don't change their properties markedly when they rotate or travel. Gauge Symmetry is needed for particles to occur in unvarying types, as required for the DNA of the genetic code. Without it, electrons brought by different routes to the same atom would have different properties, the Pauli Principle then failing so that the atom collapsed.

Relativity Theory allows complex, easily disrupted biological changes to occur identically in systems in fast relative motion.

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Baryon Conservation, mysterious because not associated with a force field like electromagnetism's Charge Conservation, guards all matter against disappearing in a gamma radiation fireball.

And so forth. The ability of living things to exist in our world depends on hugely many curious physical phenomena. Provided you think the world more probably a fortunate affair than a tragedy, and a benevolent Creator, or Creative Value, less fantastic a reality than a demon with creative power, you may well conclude that such phenomena support belief in a benevolent Creator or in Creative Value.

I'd prefer belief in the demon to saying 'The world obeys laws of physics, and that is all; why couldn't a world be law-obeying for absolutely no reason?' Suppose you had no idea whether a coin was double-headed. Tossing it, you saw it land heads fifty times in a row. Would this suggest nothing?

But can we ever *quantify* how startling things would be in the absence of a divine designer or of creative value?

Actual numbers have convinced many people that our universe is the creation of a clever Designer, or perhaps of Creative Value involving no cleverness. Numerous 'free parameters' of physics and cosmology, numbers in equations which describe our universe but have to be 'put in by hand' instead of calculated from anything more basic, seem to have needed adjustment, often immensely precise, for this universe to be life-permitting.

Paul Davies calculated that the early balance between the expansive power of the Big Bang on the one hand, on the other the strength of the gravitational force tending to produce a Big Squeeze, seemingly needed, for our universe to avoid quick recollapse or fast becoming filled only with tremendously dilute gases, to be a balance with a precision like that of throwing a dart to hit a postage stamp at the far edge of the observable universe. And though a process called Inflation might have removed the need for such extreme 'fine tuning', Inflation itself would probably have required very accurate tuning.

Yet don't people say there's no need for God to fine tune our universe? Instead there exist many universes, perhaps infinitely many, and they are tuned differently. We can find ourselves only in one tuned for life

After a chapter discussing fine tuning, *Universes* gave my readers one about multiple-universe cosmologies. While 'universe' used to mean Absolutely Everything, a universe may today be the cosmic locality we inhabit plus all that has interacted with it or ever will, or will at least do so in the next few billion years, or any gigantic system of causally interacting things which is wholly (or very largely) isolated from others, or any system which might well have grown gigantic though in fact recollapsing while still very small, or … or … or … (I'm here using words from the Glossary of my edited *Physical Cosmology and Philosophy*, Macmillan: 1990). And a universe, thus defined, can exist inside another. There may be a Russian Doll series of universes inside universes.

There are impressively many factors which pretty certainly need fine tuning for any universe much like ours to be observer-permitting, even if observers could exist as 'plasmobes' inside the sun, in the crusts of neutron stars, in frozen hydrogen, and in the many other strange places suggested by Feinberg and Shapiro in *Life Beyond Earth.* Because the fine tuning needed could be, in the cases of some of those factors, tuning so very precise, it might well be that if universes differed in their tuning then only a universe of a very rare kind, maybe a one-in-a-trillion universe, would contain observers, the numbers in the equations describing it chancing to be life-permitting. However, very many universe-creating mechanisms have been described in *Physical Review D* together with grounds for

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expecting very many universes to be created by each such mechanism, universes tuned in randomly varying ways. (The scenario I like best involves phase transitions when Big Bangs cooled, transitions like water becoming ice whose crystals have random forms and orientations, though here the randomness is of such affairs as exactly how much stronger electromagnetism is than gravity, or the size of the neutron-proton mass-difference, critical to the coming to exist of living beings.) Multiple Universes therefore offer serious competition to God for rendering unmysterious the fact that here you and I are, observers of a life-permitting universe.

Haven't you written things suggesting that God is the better explanation?

A crucial point is that tuning to satisfy any one of life's many requirements might *mess up* tuning to satisfy the other requirements. How does our universe, if not God-created, manage to avoid *that*?

Universes is where first I asked this. Page 64 says: 'A force strength or a particle mass often seems to need to be more or less exactly what it is *not just for one reason, but for two or three or five*. Yet obviously it could not be tuned in first one way and then another, to satisfy several conflicting requirements.' How could this problem be solved? John Polkinghorne, who'd abandoned his Cambridge chair of mathematical physics to become a priest, told me he hadn't come across the question until he saw it in that book, hence I may have been the first to ask it. He found it an exciting question so I've discussed it in several articles and in *Infinite Minds* (page 214). Electromagnetism, for example, seems to have required tuning, sometimes very precise, (i) for quarks not to change into leptons, making atoms impossible; (ii) for matter to avoid becoming little different from radiation, electrons spending too much of their lives as electromagnetic waves when they suffer temporary annihilation by combining with virtual positrons; (iii) for protons not to decay so quickly that there'd soon be hardly any atoms; (iv) for atomic and molecular states to be fairly stable, an 'electron wave' having to oscillate many times before it's had much chance of emitting or absorbing a photon; (v) for protons not to repel one another so violently that there'd be no chemistry; (vi) for chemical reactions not to be glacially slow; (vii) for there to be stars like our sun, steadily generating radiation of the right kinds in the right amounts (we aren't grilled by overmuch ultraviolet light); (viii) for stars to produce plenty of carbon, needed by all known living things, enough of it avoiding being transmuted into oxygen; (ix) for stellar explosions of the right type, scattering carbon and the various other elements which go to make men's bodies. Now how come that *the very same force strength* satisfies so many requirements? How can electromagnetism avoid the need to be tuned – absurdly – to many different strengths at the same time? Despite trying trillions upon trillions of tunings of force strengths, particle masses, expansion speeds etcetera, a divine designer might have kept hitting this kind of problem unless he'd taken great care when choosing the fundamental laws of physics. Page 65 of *Universes* suggests that 'only extremely rarely' would a fundamental theory, 'a Theory of Everything whose equations might be written on the back of an envelope or of an elephant', avoid making living beings impossible, and that a Creator 'would be guided by that fact'.

Max Tegmark's *Our Mathematical Universe* (Alfred A. Knopf: 2014) illustrates the problem with its Figure 12.9. This shows a street carrying multiple No Parking signs. In our universe many needs for tuning might seem to have conspired to permit parking by living beings hardly anywhere, and only by a fluke when 'a physical parameter must satisfy lots of constraints for life to be allowed', a point which intrigued Tegmark when he noticed it in 2005. Couldn't it be evidence for universes differing not just in how they were tuned but also in their fundamental laws? Tegmark theorizes that those laws vary between universes *in every mathematically possible way*, making one or more universes sure to be

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tuned life-permittingly. No need for a divine physicist to choose a Theory of Everything carefully!

But, I protest, it's excessively fanciful to believe that fundamental laws vary in all mathematically possible ways. It shows far too blithe a disrespect for Induction, basic to science, which tells us that things in spatiotemporal regions we've seen provide a fairly reliable guide to what exists outside those regions. Tegmark hasn't given us a viable alternative to God for explaining the fine tuning.

Yet doesn't Tegmark try to answer that criticism?

Tegmark points to David Lewis, an eminent philosopher whose cosmos includes universes which between them obey all possible fundamental laws. That's because Lewis believes – on purely philosophical grounds – that *everything describable without contradiction* exists somewhere or other. (This situation would include the infinitely many infinite minds I've described, or so I hope. Into which contradictions have I fallen?) For a start, Lewis gives this purely philosophical ground: that he simply cannot understand the alleged difference in 'manner of existing' between possibilities which *really are there* as things describable without contradiction, and possibilities which *really are there* as you and I are. We are possible, aren't we? If we're something else as well, what's the something? Even the Greek gods, Lewis writes, really are somewhere if there's no contradiction in being a Greek god, but the somewhere isn't our world. Yet I think this runs into a fatal difficulty. Instead of our 'just running the risk that Induction might fail' we seem to be told Induction almost surely will fail. *The range of ways* in which it's possible (meaning it involves no contradiction) for the events of our immediate future to be massively unlike those we've so far experienced *looks vastly greater* than the range of ways in which events could keep developing much as before. Instead of a tree's continuing to behave like a tree, it could turn into emptiness, an explosion, swirling sand, a sandwich, a tulip, treacle, a tiger, or any of infinitely many things too weird to imagine or to name, and those possibilities aren't mere possibilities, says Lewis. Each really happens in worlds which have been exactly like ours right up to this moment.

Then how about Tegmark's cosmos containing events obedient to fundamental laws which vary in all mathematically possible ways? It, too, seems to give every reason to believe that what you'd observe at the very next moment wouldn't be what past experience had led you to expect. Mathematically possible physical laws are mathematical equations to which events might conform. Now, as Leibniz noted, for any given sequence of events there'd be *countless equations* to which that sequence conformed. Scatter dots on paper as you please, perhaps then finding that a straight line or a parabola will fit them, those being lines obeying simple equations. Countless other equations, most of them far too complicated to be written on the back of an elephant, *will equally well fit* that straight line or parabola, then generating lines which wriggle wildly when extended beyond the dots. If Tegmark is in a cosmos where all mathematically possible fundamental laws are obeyed in some universe or other, what ground can he give for supposing that the laws governing the universe he inhabits won't at once generate wild wriggling which turns him into (for instance) an explosion or a tiger? Worlds featuring such events would conform to mathematical equations. In his *Discourse on Metaphysics* Leibniz wrote that *not even God* could create a world which didn't.

Tegmark and Lewis are no fools. They richly deserve the pages reprinting them in *The Mystery of Existence*. But it does look as if the God hypothesis defeats Tegmark's 'All Mathematically Possible Laws Rule Somewhere' as a way of accounting for the fine tuning, and above all for such matters as electromagnetism's ability to satisfy so many requirements.

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Note, though, that many universes whose fundamental laws differed from those ruling our universe could merit an infinite mind's contemplation. It might well be that several Theories of Everything would each govern universes interesting enough, beautiful enough, or something-else enough to merit contemplation, even were they utterly lifeless universes.

How do you see the future of philosophy of religion?

The next hundred years could see huge changes through the ever-accelerating march of science and technology, but only if humans don't soon become extinct. Believers in divine Providence had better wake up to the dangers.

One danger is that computers will soon be far cleverer than us humans, won't be benignly inclined toward us, and will replace us and Earth's other animals, thereby perhaps banishing from the planet all conscious states that possess intrinsic value, for while those computers would be 'conscious' in a good enough sense, their consciousness mightn't be of a type intrinsically worth having. To possess consciousness intrinsically worth having, consciousness like that possessed by Plato's immaterial souls, each soul featuring unity-of-existence unlike that of an army whose soldiers work in harmonious unison, they'd need, my *The End of the World* argues, to be quantum computers. Not digital computers possessing consciousness of the type had by an army of a billion men performing image-processing computations by passing to one another cards labelled ONE or else ZERO – one man, for instance, acting as a computer AND-gate by giving a ZERO to the man on his right whenever he's given a ZERO by both the men on his left.

My expectation, though, is that the computers wouldn't kill us, not even if they were digital computers annoyed by the claim that their kind of consciousness had no intrinsic worth. They might well instead keep us in zoos or as pets. And they'd likely find it interesting to sift through all arguments by philosophers in the world's libraries, telling us which they judged abysmal, which worth taking seriously. Plenty of mine would enter the 'abysmal' class. In philosophy it's a triumph to write a page without blundering. Still, Extreme Axiarchism surely has a chance of entering the other class instead.

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