

God, Science, and the New Atheism.

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The Basic Idea of Personal Being.

Belief in God, in a conscious and intelligent author of nature, is a very natural and understandable belief. Human beings are aware of themselves as agents, as being able to bring about states of affairs because they think they will be enjoyable or worth-while in some way. They are aware of themselves as having perceptions, thoughts, and feelings, which give them knowledge of an objectively real world, but which have an important kind of individual uniqueness and subjectivity, not directly knowable by anyone else. They also know that there are other conscious agents with whom they interact on a daily basis.

The idea of a subjective consciousness that is not directly accessible by others, but that has causal power and that relates to others by means of physical behaviour and by the use of language, arises almost inevitably as soon as reflection on human existence begins. By contrast, the idea of a wholly unconscious physical reality that proceeds in accordance with regular yet impersonal laws, and that has no knowledge of or concern with human persons, is a theoretical idea that requires a rigorous abstraction from ordinary human experience.

The fact that an idea is natural does not entail that it is true. But the idea of God, of a conscious personal agent that has purposes in and communicates through the physical cosmos, is not some sort of irrational and arbitrary leap of blind faith. It is not like believing, as Bertrand Russell once suggested, that an invisible and intangible tea-cup circles the earth, or, as some Internet sites suggest, that an invisible spaghetti monster exists in outer space.

These would be totally arbitrary suppositions, with little reason to accept them. God is not like that. Our primary sense of causality is personal agency, and insofar as causes exist in nature, we have reason to suppose that they are personally caused. Our primary sense of existence is founded on our own subjective consciousness, and that is a reason for supposing that consciousness may be a basic characteristic of reality. And if events in history and in the personal lives of humans give any sign of pattern or purpose or meaning, that is a reason for taking them as expressions of personal agency.

The point I am making is a simple one, though it can easily be overlooked. It is that belief in God is not a dispassionate hypothesis which tries to explain why things are as they are, by providing an objective, publicly demonstrable, theoretical explanation. To look for such an explanation is already a more sophisticated and abstract procedure than is involved in ordinary belief in God. Belief in God is more like an immediate reactive attitude to things we encounter in experience, more like belief that we and other persons exist. But it generalises the notion of personal agency to cover the whole experienced universe, treating the universe, or at least the universe as known by us, as the 'body' or physical expression of an underlying personal agent, known in and through the universe.

Just as there is a basic way of seeing physical bodies as expressions of personal agency, so there is a basic way of seeing the physical world of our experience as an expression of personal agency. This is because our primitive sense of causality, of existence, and of interaction, involves the idea of personal agency. These, I suggest, are reasons – they provide evidence – for thinking that a God exists, intentionally creates the universe and communicates through it.

Of course we need to go on to ask if they are good enough reasons to compel belief, or if they may not rather be misleading first impressions. But I think it is important to see that we do not start with the belief that we live in a wholly material world, in which the existence of a God would be a superfluous and even incoherent add-on. We start with belief in a world of passionate personal interactions, and it is entirely reasonable, in default of countervailing reasons, to think that the whole physical world we encounter expresses and mediates to us an active and communicative personal reality.

Religion and Science – Different Magisteria?

The practices of religion and faith build on this initial belief, and they aim to establish or sustain some form of positive relationship to the supposed personal reality or realities underlying the experienced world. Though it is extremely difficult to characterise religion briefly, my own study of early and classical religions leads me to think that religious cults provide symbols, narratives, and rituals that encourage devotion to specific values taken to exist objectively, symbolised by god-images. They claim to evoke some positive experience of a personal reality or realities, transcending the physical world. And they claim to offer a way of overcoming or mitigating the problems and imperfections of ordinary human life, by conscious relation to these personal realities.

These activities are not scientific. They are concerned with values, with subjective, not universally shareable, experiences and attitudes, and with personal commitments to ways of living in relation to powers that can only be encountered through personal relationship. I think it is quite mistaken to see religious practices, whether simple or sophisticated, as early attempts at science – as trying to explain why thunder occurs, for example, by looking for some hidden physical causal structure, perhaps supposing that some sky-being walks on the clouds. That example may seem fantastic, and it is – but it has been proposed by at least one modern atheistic philosopher as an allegedly serious account of early religion.

This, however, is an example of how some modern critics of religion seem wilfully to misrepresent religion as some sort of outmoded science. They rarely study religious phenomena seriously, or try to understand what motivates intelligent people, whether in tribal forests or international cities, to have religious beliefs. A serious study of religions will show that most believers are not motivated by questions of how things work. They do not spend long hours closely observing and recording their observations, or trying to discern some pattern of regularities in physical behaviour, looking for hidden causal structures, or trying out ways to control and improve their environment. These are the marks of a true scientist.

Many religious believers are in fact quite disinterested in such things. Their longest hours are spent with their eyes shut, meditating or praying. They often show a marked indifference to their physical environment, preferring to concentrate on subjective experiences, ritual performances, and moral practices. They may even regard the physical environment as unimportant or illusory, and close investigation of it as an irrelevance to the really important business of cultivating good relationships with the gods.

Some assertions about God can superficially sound like scientific attempts at explanation. If we say, 'God created the world', that sounds like a scientific explanation. It explains why the world is the way it is, and why it exists, by positing a hidden cause, God. But the surface grammar is misleading.

That is because scientific and religious explanations are different in kind. Scientific explanations generally refer to data that are in principle observable and publicly testable. They can ideally be formulated in mathematical equations, or at least the data they deal with can be measured and quantified. Even ethology, one of the least theoretical sciences, observes and records the behaviour of animals in the wild, varies environmental conditions to verify observed generalisations about animal behaviour, and attempts to quantify its data as much as possible. Such observations usually give rise to predictions, and help us to control various phenomena.

A good deal of physics and biology consists in positing atomic or molecular structures whose existence will account for closely observed physical behaviour. Experiments are devised that may verify the existence of such structures, and schemes of classification are invented that enable us to understand them more clearly. Good scientific theories enable us to predict and control physical processes, to produce nuclear fission or genetic control mechanisms.

I would not wish to force all sorts of science into one Procrustean model of explanation. But it does seem to be true that there are some – not many – people who have naturally scientific minds, and an aptitude for science, and in general we know how to tell who they are. A good scientific mind will try to take a complex entity apart, put it together again, try to see how it works, and perhaps improve it. A good scientific mind will not be terrified by mathematics, but will be happiest when some elegant mathematical equation can be found to embody the results of close and repeated observation. And a good scientific mind will enjoy experimenting, and seeing what happens when new experimental techniques are devised. Observation, experiment, careful testing, elegant classification and mathematical modelling, are primary scientific skills.

There are many humans who have no such skills, and who are not personally interested in science. Many of them study subjects like literature, art, music, or history in our Universities. They typically have different intellectual skills and interests. In the study of music, for example, they may be interested in how to produce beautiful sounds, in the different sorts of beauty that are expressed in music, in the ways in which musical styles may express particular emotions or reflect specific cultural interests, or simply in learning to appreciate and perhaps create different sorts of music.

There are many overlaps with scientific skills. It is not as if they are wholly distinct intellectual activities. Yet the approach of a composer is different to that of, say, an acoustical engineer. One is concerned primarily with the appreciation and subjective impact of a set of sounds, with the intrinsic experienced value of music. The other is concerned with explaining how to produce specific sounds, and how to obtain desired effects and experienced values most efficiently. It would seem obviously helpful if both sets of skills were used. There is little point in opposing them to one another, as if the technical expertise and the aesthetic experience were somehow in competition.

I have used the example of music to overcome the impression that the relation between science and religion is an especially important and unique duality in human experience and activity. I want to suggest that scientific skills and activities are just one set of human skills, possessed to a high degree only by few, alongside many other sorts of skills – in the arts, in practical wisdom about human affairs, in personal relations, in philosophy, and in religion.

A Religious Doctrine of Creation

When a believer says, ‘God created the world’, this does not show that an average church-going congregation possesses advanced scientific skills and interests. The statement is not the result of close observations carried out in many different situations, of repeated experimental testing, and of attempts to compete with Stephen Hawking in providing a mathematical model for the Big Bang. Religious statements about creation are not just bad science. They are not science at all.

To see what they are, let me return briefly to music. Some, but not all, musicians would say that music has a transcendent dimension. That is, the sounds express a truth about or an insight into reality that cannot be conveyed in any other way, but that communicate an apprehension of beauty, disclosing something real and significant about the world that humans experience. Great music conveys insight into reality, gives a personal apprehension and understanding of what it is like to be human, and what the world is like in its deepest reality, as perceived from that human point of view. It is a special sort of awareness. The nineteenth century theologian Friedrich Schleiermacher called it ‘the taste and sense of the infinite’. Schopenhauer thought that music could lead to ‘a peace that is higher than all reason, (an) ocean-like calmness of the spirit’, and that this disclosed a deep truth about reality.

These may be rather Romantic views of music, and some would react strongly against them. At their worst, they may be seen as a Classic FM view of music – aids to relaxation. But there is more to it than that. Perhaps great creative artists can uncover a vision of reality that shows an inner spiritual quality that can be evoked but never verbally described. That, said Schleiermacher, is one form of a sense of God, and it is not accidental that it is evoked by creative effort and disciplined attention, by that which is most personal and inward in human life.

I suggest that the phrase, ‘God created the world’ is more like this than it is like scientific explanation. For many people, the world that we see and touch and feel is a world of

appearances, dependent on a deeper underlying reality of Spirit, of consciousness, wisdom, and beauty. The whole of space and time is an expression, half-revealing and half-veiling, of this time-transcending, eternal reality. The sense of such a transcendent presence, known in and through the finite universe – what the later Schleiermacher called ‘the sense of absolute dependence’ - is part of the sense of God. To have that sense is to believe in creation.

‘God created the world’ does not give an ordinary causal explanation of some hidden physical reality that preceded this universe in time, that we could experimentally test, describe in a neat mathematical algorithm, and perhaps use to create improved universes in future. Creation speaks of the dependence of every time upon time-transcending Spirit, and it is something that is sensed, apprehended, or felt, rather than posited as a hidden causal structure. Indeed, God could not be a hidden causal structure, since God is not at all physical or subject to any causal laws, which belong only to created universes.

That is basically why God is not, and could not be, part of a strictly scientific explanation. God is not publicly observable, is not subject to experiment, does not act in accordance with mathematically describable regularities, and God’s acts cannot be predicted in measurable or testable ways.

For that now virtually extinct tribe of philosophers, the Logical Positivists, that meant that the existence of God could not be a matter of fact. This is a view repeated by Richard Dawkins when he says that the existence of God must be a ‘scientific hypothesis’. Matters of fact, the Positivists said, must be verifiable or falsifiable by sense-experiences, at least in principle. Even if that were true, however, it would not mean that all factual statements are scientific statements. For example, the statement that I am now standing in a room in Cambridge is certainly a factual statement, but I would not expect anyone to dignify it by calling it a scientific statement. It is not part of any theoretical explanatory scheme. It is a common-sense statement, and modern science is often far from common-sense, as is readily seen if you try to read texts on quantum cosmology.

Axiological Explanation

Is ‘God exists’ a common-sense statement, or part of a scheme of theoretical and publicly testable explanation of physical structure or behaviour? Well, it is not quite either. The term ‘God’ is highly theory-laden, and while it is based on the common-sense reasons adduced at the beginning of this paper, on the sense of transcendence I have just adduced, and often on a positive experience of the benefits of religious practice, it has moved some way beyond that in the works of major theologians. It has become part of an explanatory scheme, but not a scientific explanatory scheme. The French have a name for it. It is axiological explanation, which in the case of ‘God’ is generalised to cover the whole cosmos.

Axiological explanation is the explanation of a process in terms of value. It has four major elements. First is the identification of some state or process as of intrinsic value, as being worth choosing for its own sake alone. This entails the second element, which is awareness of a range of alternative states on the basis of which such an evaluation could be made. Third is the assumption that a choice can be made. And fourth is the conscious appreciation and

enjoyment of the value, without which all values would remain merely hypothetical rather than actual.

Such explanation presupposes that intrinsic values do exist, that there is consciousness both of their possibility and actuality, that purposive choices can be made (choices made for the sake of realising a specific value), and that there are feelings or desires that can in principle be satisfied.

Axiological explanations are not usually used in the natural sciences. Strictly physical sciences do not ask whether anything is of intrinsic value, they set aside questions of consciousness and of subjective feelings, and they are extremely wary of speaking of purposes or goals in natural processes. The human sciences, like some forms of psychology and economics, may introduce such topics, but they usually retain a primary interest in recording publicly observable behaviour, in collecting data that can be measured in some way, and in attempting to frame significant generalisations that can be tested in varying contexts. They are usually content to record trends and correlations rather than to frame precise 'unbreakable' laws, and they are usually keenly aware of the many exceptions and unique cases that will qualify their general conclusions.

To give an axiological explanation of the whole cosmos would be to identify the intrinsic values that it realises, to suppose that the cosmos is selected from a number of alternatives precisely because it realises those values, and therefore to postulate that there is a consciousness – call it 'God' - that envisages, selects, and appreciates those values. This could not, as in the human case, be a matter of recording the publicly observable behaviour of such a trans-cosmic consciousness, or of measuring its behaviour, or of framing testable generalisations about it that would apply to all gods of the same sort, at least not if there is in principle only one God.

God is by most definitions a unique case, and is not a physically observable object, so it is hard to see how any physical descriptions or scientific generalisations could be offered in the case of God. This means there could be no scientific explanation of God's actions. Nevertheless, God could function as an explanation of why the cosmos exists as it does – namely, for the sake of the values that it realises and that God, and perhaps other agents, can enjoy.

Once God has been introduced as a key concept in an axiological explanatory scheme, it becomes unsatisfactory to regard God as one personal being among others, who just happens to exist and be what God is. God's consciousness is utterly inaccessible to humans, since God has no locatable physical body to express divine thoughts and feelings. Moreover, it is a consciousness that is not dependent on some complex physical structure like a brain, so it has a sort of causal priority over matter that is quite unfamiliar to us. God does not know things, as we do, through sense-organs. God's knowledge is direct and unmediated, and it will cover not only the whole universe, but also all the alternative universes that could possibly exist.

Moreover, God's desires and acts will not be whimsical or arbitrary. God will discern the true nature of all intrinsic values, and God's creative acts will be governed by that

discernment. Thus for most theologians, as for Plato and Aristotle, the being of God will itself be of supreme intrinsic value, since it contemplates all possible values without change, frustration or decay. God is the supremely Good and Beautiful, and that is, from an axiological viewpoint, the best of all reasons for the existence of anything.

Similarly God's agency would not be one among others, but would be one source and origin of the whole cosmos. As such it would be beyond space and time, as their origin. Its knowledge and agency would thus be vastly different from ours. In the case of God, uniquely, there is no question of selecting one specific God from a set of possible alternatives, since the being of God already contains every possible alternative in itself, and without God no possibilities would exist. So God, the supremely Good, does not just happen to exist by chance. As the cause of all time, change, and possibility, God cannot be brought into being or changed or destroyed. If there is a God, then God cannot fail to exist.

It is doubtful whether such a being should be called a 'person' in any normal sense. The Supreme Good that cannot fail to be, that is self-existent and perfect in actuality, is as far superior to human consciousness and personality as our consciousness is to that of a mouse or a beetle. Such a timeless, changeless and ultimate conscious cause of all would not have a particular personality, capable of developing and of being influenced by others. Yet, in having some form of consciousness and purposive causality, it would not be less than personal. So it can be seen that the theological idea of God is a rational development of the basic sense of God from which theistic belief naturally begins.

The Legend of the War of Science and God

I suggest that this developed theological idea of God as the supreme case of cosmic axiological explanation places the original and natural idea of God as a personal basis of the universe in a coherent and elegant explanatory scheme. To assert the existence of such a God is certainly to make a factual claim, a claim about how things are. God is the spiritual creator of the physical universe. But this is not a scientific claim. It does not offer any particular physical explanation of how the universe came into being, and it does not offer publicly verifiable and experimentally testable evidence for the existence of God.

However, it would be quite wrong to say that it is irrational, or that it is based on no evidence. Belief in God is rational, because it is based on our most basic intuitions about consciousness and intentional agency, and because it can be developed as the key concept of a coherent and elegant metaphysical worldview. It is based on evidence, the evidence of personal conscious experience, of experience of value, especially in morality and art, and experience, within a religious context, of liberation from egoism and conscious unity with a supreme Good.

Not all good evidence is public or experimentally testable. We all know our private thoughts and feelings in ways no-one else can. And it would actually be immoral to devise experimental tests for whether people we know really love us. The deepest personal relationships depend upon commitment and trust, upon the cultivation of a rich inner complex of thoughts and feelings that we can never fully express, and upon loyalties that go beyond what we could strictly demonstrate to be the case.

Ironically, Logical Positivism, the philosophy that made verification the lynch-pin of its whole system, was unable to establish the possibility of public verification, since it remained always uncertain whether the public even existed, as a set of other minds not directly verifiable by the senses. Verification of some sort is important. But why should it be limited to external sense-experience, and why should anyone insist that it has to be conclusive, in a world as transient and ambiguous as this? Intimations of transcendence and of value are sorts of verification. Science does not deal with them, but there is no reason for science to deny them. The proper concerns of science lie elsewhere.

Why, then, should there have arisen in the last few years a group of writers, usually with no great interest in and little respect for philosophy, who are resurrecting the rather old and historically exploded legend about a war between science and religion? I think it is mainly because of a rejection of personal experience as a reliable source of knowledge, and the consequent down-grading of value, consciousness, and purpose to being subjective and causally inoperative by-products of a wholly material reality, of which science gives the only reliable form of knowledge.

It is extremely odd to despise philosophy and yet to rely on such a very highly disputed philosophy as materialism. To say that the whole of conscious experience, with its rich and value-laden content, is either reducible to physical processes in the brain or is wholly causally dependent on such processes, is a hypothesis that is far from being established scientifically, so no view which purports to rest only on the well-established findings of science should assume it to be true. It rests on a commitment to philosophical materialism, which seems to many philosophers, including me, to undermine the very basis of human knowledge, which in the end lies in conscious experience.

Materialism is indeed self-contradictory if it asserts as true the proposition that ‘only public observations of physical phenomena in space and time can count as evidence for true beliefs’, since the evidence for the truth of this proposition cannot be any set of public observations. It will not do to say that the proposition is not a truth, but simply a declaration that one will not count anything but public observation as evidence. If such a declaration is to be reasonable rather than quite arbitrary, it must be based on something like the consideration that only public observations provide useful or fruitful knowledge. But that begs the main question at issue: are our subjective experiences of value and transcendence, our struggles to understand our own lives and learn how to live well, all useless and fruitless? Are our often agonised attempts to find meaning in our lives, to face up to the anguish of despair and death, to find something worth-while in our inner struggles, to be consigned to being pointless by-products of unconscious material processes?

Perhaps here we touch the real heart of the New Atheism – a rather old atheism in fact, that reached its zenith with Nietzsche and Marx. For this is not just an abstract philosophical debate between idealism and materialism. It is a passionate debate about the value and meaning of human life and experience.

For the New Atheists belief in God is a virulent disorder of the mind and heart, and it is to be exterminated with every available rhetorical device. That is partly why the debate can get so heated, and why atheists can use such emotive language about believers, calling them not just people with a different philosophical view, but ‘unthinking’, ‘mendacious’, ‘dim’ and ‘deluded’. What is at stake is what it means to be truly human. Is it a matter of self-cultivation and discipline, leading to world-renunciation and inner mindfulness? Or is it a matter of facing up to the moral neutrality of the world and being bold enough to live without delusions? Things get even worse when this difference is put in terms of the acceptance or rejection of a supreme moral agent, so that you either see atheism as a rejection of life’s deepest meaning and obligation, or theism as a psychopathic and infantile pursuit of an illusion.

For some people, like Sartre, the idea that there is an invisible person watching, and probably criticising, everything you do is unbearable. It is incompatible with human freedom, and reduces human beings to fearful, cringing and sycophantic ciphers. Nietzsche, too, thought that religious believers were life-haters and deniers of joy and creativity. Freud and Marx viewed much religious belief as obsessional neurosis, or as a way of keeping the oppressed content with their miserable lot.

A recent advertising campaign on the London busses expresses something of these feelings: ‘There is probably no God – now stop worrying and enjoy your life’. What they did not say was: ‘God does not exist – why not kill a few people for fun?’ The critics of God see the moral ambiguity of religion, but completely fail to see the moral ambiguity of atheism. In face of Hitler, Mao Zedung, Stalin, and Pol Pot, and of two world wars that killed millions of people without any regard to religion, they claim that a world without religion would be much less violent and more tolerant. The record of human history, in which people kill each other for a huge variety of mostly absurd reasons, gives little support to such a pious hope.

What they reject is any idea of a human purpose that is imposed on authority. What they overlook – though Nietzsche saw it – is that a human life without objective purpose is a life where there is nothing to stop one seeing compassion and pity as options mostly adopted by the weak, and conscience as an obsolete relic of past evolutionary success, to be resisted by the strong. We do not have to see life that way. But it could not be called an unreasonable option.

Science and the Pointlessness of Nature.

The struggle between theism and atheism is not at all about science versus faith. It is the age-old clash of passionately held views about the nature and meaning of human existence, about what sort of life is humanly authentic, about what it is to live well.

Yet the facts are not irrelevant to this issue. And does science not show that nature is cruel, purposeless and pointless? No, science does not show that! Of course if we believe that the cosmos has a purpose – to produce distinctive sorts of value – then examination of the cosmos is relevant to whether there are such values, whether it is reasonable to see the

cosmos as directed to producing them, and whether it is such that an intelligent consciousness could have created it.

Scientific observation of the cosmos brings out some values very strongly – the elegance and ordered complexity of the laws of nature, the beauty of the galaxies, the creative emergence apparent in the majestic processes of cosmic evolution, the incredible integration of simple parts into complex organised wholes, the development of understanding and appreciation in three pounds of grey matter in the human skull. Science is not an emotionless discipline, and most scientists are inspired with amazement and awe by the sheer grandeur of the universe.

I cannot understand Steven Weinberg's comment that the understanding of such beauty and complexity is pointless, when that is precisely one of the things that gives the universe a point or intrinsic value. His comment could be an expression of the belief that such experiences may lose their attraction, that they are purely subjective, that they will not last long, that they occur rarely and to few, or that they are outweighed by the suffering that seems an inevitable part of the universe that produces them.

It has to be said that some people may gaze at the stars and find the prospect of studying them infinitely boring. Yet it surely seems right to say that a more appropriate response would be one of wonder and deep appreciation. There is an appropriate human response, even though many humans may fail to appreciate it. The same thing is true of our response to music and art. Some people dislike music or simply have no interest in it. For them a musical life would seem pointless. Yet for others it is in music that we reach depths of feeling and understanding that are infinitely worthwhile. As we relate to other persons, we may feel that in sympathy, compassion, and love we find something deeply appropriate and worthwhile. Yet some people hate others or see them as objects to be used or feared, and find close personal relationships to be a form of Hell on earth (Sartre's play 'Huis Clos' expresses this perfectly).

A fundamental element of belief in God is that there is intrinsic and objective value in beauty, intellectual understanding, creativity, and empathetic and co-operative personal relationship. For a theist, those values are instantiated supremely in God, and the universe expresses some aspects, images, or reflections of them, insofar as they can be embedded in time. Human fulfilment consists in shaping human awareness to appreciate them more fully, to celebrate them, and to create new temporal expressions of them. This is what gives human existence its purpose – as the Westminster Confession puts it, the human purpose is 'to love God and enjoy him forever'.

The world religions are well aware that humans often reject this purpose, and find life valueless. Most religions exist precisely to recall humans to awareness of purpose and value in life. It is not an objection to the existence of an objective purpose of realising specific intellectual, aesthetic, moral, and spiritual values that many or even most people do not recognise or achieve such a purpose. It is enough to point out that many such values exist, are reasonable goals of human action, and would, if achieved even in part, give to the cosmos a very great value that could plausibly be seen as one goal of creation.

The hardest problem for any theist is to account for the existence of death and suffering in the cosmos, if it is created by a benevolent God. This is not a new scientific problem, but an old philosophical problem of rational consistency. The sciences do, however, adduce some relevant facts. One of the most significant is the discovery that destruction and suffering seem to be essential and ineliminable parts of the cosmic process. Without the destruction of stars, heavy atoms would not form. Without the law of entropy or universal long-term decay, temporal process would have no direction. Without the competition of species for survival, the selective effects of evolution would not occur.

The emergent properties of the cosmos come about through a sort of creative exploration of possibilities that inevitably involves failures as well as successes. In the light of much modern science, it becomes plausible to say, as Steven Weinberg does, that humans, as the emergent carbon-based life-forms we are, could not exist in any other universe than this, with its laws of gravitational attraction, electro-magnetism, strong and weak nuclear forces, and entropy, that entail destruction as well as creative emergence throughout the universe.

God might have created another universe, but it would not have us in it. So if God wants us to exist, with the distinctive values we can realise, this is the universe there has to be. This is not a scientific remark, but perception of the interconnectedness and destructive-creative polarity of the universe derives from a plausible interpretation of modern science.

In this way, discoveries about the nature of the universe may affect our conception of a personal creator. It is implausible to think of God directly intending every part of this universe to be as it is, since much in the universe is either destructive or random (not fully determined). But it remains plausible to think that God has created the laws and processes of the universe, for the sake of the distinctive sorts of value the universe will produce. God sets up basic structures in the cosmos that will guarantee the achievement of a desired goal, but also allows enough indeterminism within those structures for intelligent creatures, when they evolve, to make reasoned choices between alternative futures. It is plausible to think that the ideal goal that exists in the mind of God will have some specific causal influence on the physical processes of the universe. We may find it extremely difficult to conceive of how such influence will be felt, since we lack a theoretical model that is adequate to it. But if we have made the initial postulate of God, the observed facts seem compatible with a view that sees God not as determining every event, and not as interfering occasionally in a closed and complete physical system, but as exercising a general attractive or teleological influence that may be felt as a propensity to life, consciousness, and intelligence in an open and emergent universe, that will be more apparent in some crucial instances than in others. God's influence on the world might be real, and yet limited by other causal factors that are necessary conditions for the existence of carbon-based intelligent beings.

The Priority of Spirit

Such a God could not properly be called 'cruel' or 'malevolent' or 'inefficient'. But there may remain an uneasy feeling that God is largely indifferent to the inevitable sufferings of sentient beings in the universe, or that the undoubted values the universe realises are bought

at too high a price in the sufferings of sentient beings. For just this reason most of those who believe in God, in the priority of the spiritual over the physical, have affirmed that the lives of human or sentient beings are not confined to this physical cosmos. God is Spirit, and knows and remembers all that occurs throughout every physical cosmos there may be. And though we are necessarily born as the individuals we are in this cosmos, God may have the power to re-embodiment us in other forms of being.

The principle of axiological explanation states that God creates this cosmos for the sake of its distinctive goods, and it may be, as Spinoza seems to have thought, that the evils of the cosmos are necessary to its existence, and there is nothing to be done about it. Yet if God creates for the sake of good, if God has some choice in the worlds that God creates, and if God has the power to bring good out of evil, then a more satisfactory axiology would be one in which all the evils of this cosmos could be used to realise further sorts of distinctive good.

Thus in the world religions belief in rebirth or resurrection arises, to affirm the possibility that sentient lives may continue in God, or in another realm that God creates, where all the evils of this world, for every sentient being which has suffered them, could be used to realise immensely greater forms of goodness. If a person, after a life of suffering in this world, could be assured of the possibility of an endless life of immense happiness; if that person could see how their suffering was inevitable, given the world as it is, and that they otherwise could not have existed; and if the goodness they will experience after earthly life uses their earthly life in some positive way to realise God's good purpose; then I think they could unhesitatingly say that their creation was very good, and worthy of total affirmation.

Of course science can establish none of this. Belief in afterlife is founded on present experience of the goodness of God, in the Christian case on testimony to the resurrection of Jesus and trust in God's promises, on an affirmation of the time-transcending value of personhood and its potential for good achieved through moral and creative striving, on an affirmation of the categorical demands of morality, and on commitment to a spiritual view of existence. What the sciences can do is to ask whether the observed universe is compatible with or even points towards the truth of such a factual but non-scientific claim. For my own part, I am certain of the compatibility, and believe that the intelligibility of being, which science presupposes, is a strong pointer to belief in God.

Conclusion

The so-called 'new atheists' argue that acceptance of science is incompatible with belief in God. I have shown that the case has not been made. But there are five important respects in which these writers fail to meet the canons of rationality that they supposedly insist upon.

They have no initial sympathy with religious language, practices, or beliefs, and thus neglect the first principle of critical rationality, which is to appreciate and state one's opponents' views as fully and fairly as possible.

They do not admit the limits of scientific theory, and that there are many factual questions which fall outside any such theoretical framework.

They do not see or admit the philosophical weaknesses of materialism, and the strength of more theistic views, which have been almost universally espoused by the Western philosophical canon.

They fail to draw an important distinction between the well-attested findings of natural science and the wider worldviews of a philosophical nature, like materialism, that remain underdetermined by science.

And they have a deeply emotional antipathy to the idea of a moral and spiritual purpose for human life, which antipathy is rooted in a view of religion as anthropomorphic, literalistic, life, joy, and freedom-denying. To characterise all religion in this way is to fail to make important discriminations between various kinds of belief in God.

Belief or disbelief in God, like all beliefs entailing definite practical commitments, can be a highly emotional matter. But there is a place for reason in considering such beliefs. It is ironic that those new atheists who like to place themselves under the banner of reason, themselves break some of the basic canons of rational discussion, and that they espouse a worldview that makes it very hard to justify the value of rational enquiry as a means to discovering truth.

‘Reason is the slave of the passions’, wrote David Hume, one of the few anti-religious philosophers in the classical Western canon. That, perhaps, should be the motto and the epitaph of the new atheists, who claim to be eminently rational while proposing that reasoning is, in the words of Francis Crick, ‘no more than the behaviour of a vast assembly of nerve cells and their associated molecules’, and who claim to devote their lives to a resolute search for truth, while truth is for them nothing but an accidental by-product of past struggles for survival. There must be something wrong somewhere!