

AN AGNOSTIC'S BRIEF GUIDE TO THE UNIVERSE

Revised edition

D. H. Wilson

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Foreword to the revised edition

This brief guide began as a response to the irrational assumptions made by Richard Dawkins in *The God Delusion*. However, it swiftly led to the realization that my opposition to his brand of atheism had to be balanced by my opposition to the equal irrationality of his critics. There didn't seem to be anyone capable of approaching the subject from a neutral standpoint. Agnostics either didn't want a say, or were not granted one. A glance at the Internet suggested that this was a genuine gap in the world's approach to religion, and so I decided to expand and use the essay as the basis for a website with an open forum for discussion.

This was set up in 2008, and the guide was immediately attacked by some of Dawkins' supporters as a defence of religion and the theory of Intelligent Design. Of course it is the fate of agnostics to be attacked by both sides, since by definition we find ourselves unable to embrace the faith required to believe their theories. This became a general pattern as atheists and theists of all denominations (and just a few fellow agnostics) entered the discussion. At its peak, the forum attracted some 25,000 viewings. Inevitably, as the years went by, contributors came and went, arguments became repetitive, and interest waned.

Some contributors have made an indelible mark on the history of the forum, and I would like to single out George Jelliss, Bbella, xeno6696, and balance_maintained as long-term participants from different fields whose breadth of knowledge and experience made a lasting impact on my own thinking. But above all, my thanks are due to David Turell, a retired physician and panentheist, who entered the fray at the very beginning and for 15 years has not only fiercely defended his faith but has continuously contributed hundreds of articles on a wide variety of relevant subjects, updating us on all the latest research and discoveries (sometimes even those that support opinions contrary to his own). Thanks to him, the website has become a vehicle not only for discussion but also for education, and I dedicate this revised edition to him.

The revisions I have made are in the form of modifications and additions to earlier arguments. I have not, however, attempted to update references to what were current affairs in 2008, since the examples remain valid, and individual names and details will soon be replaced by others anyway.

D.H.Wilson, November 2023

Introduction

In recent years, the controversy over God, religion, Creationism, Intelligent Design and evolution has reached fever pitch. Where once the teaching of evolution caused an outcry, now voices are raised in protest at the teaching of Creationism; and while new cults spring up in Africa and America, vast swathes of the western world have either turned their backs on religion or, at best, regard it as irrelevant. The atrocities committed by atheist dictatorships are echoed by those of the crusading past and the fundamentalist present, and there is no difference in the colour of the blood shed by a Communist Stalin, a voodoo-loving Papa Doc, a Christian George W. Bush, and a Muslim Saddam Hussein. (Add whatever current names you know of - the choice is always pretty wide.) It has become impossible to tell where authority lies, because all political, social and religious systems have been thrown into disrepute by their followers, and no faith has a monopoly on truth. The world, to quote the immortal words of Captain Boyle in Sean O' Casey's masterpiece *Juno and the Paycock*, is in "a terrible state o' chassis".

What caused the mess? St Augustine traced it all back to Adam and Eve. Siddhartha Gotama (the Buddha) attributed it to human cravings. And according to a particular TV programme, *The Root of All Evil* is religion.

In fairness to the author of that programme, Richard Dawkins, the title was followed by a question mark. However, in his book *The God Delusion*, Professor Dawkins launches the fiercest attack on religion since Nero unleashed his lions on the Christians. With a mixture of scientific fact, breadth of learning, in-depth analysis, demolition of soft targets, lop-sided reasoning and sheer enthusiasm for his self-imposed task of destroying other people's beliefs, he proves to his own satisfaction that God "almost certainly" does not exist.

Inevitably with such a fundamentalist creed, Dawkins is forced to take a great leap of faith, although he seems strangely unaware that his own quite frequent expressions of hope and belief are indeed a matter of faith and not of science. Agnosticism, in contrast to atheist assumptions and religious dogma admits to ignorance. By doing so, and thereby acknowledging the *possibility* of a conscious designer, it opens up the fascinating areas of speculation which Professor Dawkins is so anxious to close down. These include the motives and nature of such a designer, and the existence of a world and of beings beyond the scope of our perception. These are no more and no less

theoretical and fantastic than the array of theories to explain how the universe, along with the mind-boggling complexities of life, consciousness and the mechanisms for evolution, can have emerged from nothing.

The following essay begins with a direct response to atheism as it is represented in *The God Delusion*. I should like to stress, however, that although I am unable to embrace atheism - for reasons I will explain in due course - the fact that someone cannot believe one thing does not mean that he believes the opposite. I simply do not know what to believe, and that is why I am an agnostic.

The essay goes on to examine gaps in both the atheist and the theist arguments, together with the implications of those gaps, but of course it cannot offer answers to the deep questions. That is the essence of agnosticism, whether you condemn it as weakness or praise it as open-mindedness. Our neutrality (indecision?) does not, however, mean that we have given up the search for answers, but it most certainly does mean that we should give due respect to other people's beliefs. The world's "state o' chassis" will never be resolved so long as humans seek to impose their suspect truths on the no more and no less suspect truths of their fellows.

1. The Atheist Delusion

In the beginning, according to the atheist scenario, was the Big Bang. After aeons, everything calmed down, cooled down, settled down, until conditions were just right for life. Next, various inanimate globules of matter became animate and, at the same time, managed to reproduce themselves. They were very simple and very primitive, you understand, so you needn't think too hard about them. A flash of lightning, perhaps, or maybe a long, slow awakening, and eventually the little bits of what's-it came alive and straight away were able to produce new generations of living what's-its. These simple, primitive life forms somehow managed by chance (over aeons) to combine themselves into new forms, and out of the blue developed sensitivity to light (= sight), sound, touch, smell, taste, organs that enabled them to eat, drink, move, and even reproduce in new ways. "Out of the blue" because these things had never existed before. The very concepts were totally new. Pick up a pebble, and ask yourself how you would make it see. Where would you, conscious though you are, even begin the process? And "out of the blue" also because if they hadn't worked straight away, in their most primitive form, they wouldn't have survived. What is the use of something that doesn't work?

But we are told that these unprecedented organs and concepts in their original form were the products of total blindness, deafness, unconsciousness etc. Eventually, out of all this spontaneous creativity, we humans arrived, and we've been investigating ever since. And although we don't actually understand how the simple, primitive forms of life came alive or managed to reproduce themselves, and we can't even replicate the process whereby the inanimate becomes animate and the non-conscious becomes conscious, we are so clever that one day we'll do it, and our cleverness will prove that you don't have to be clever to do it. It can happen all by itself.

The bottom line, then, for the militant atheist is that anyone who doesn't believe in the ability of chance to create all these hitherto non-existent, hugely complex (even in their most primitive form) organisms – which require all the dazzling talents of human consciousness merely to unravel and comprehend – is deluded. And is also unscientific. Because belief in a conscious creator is irrational and unprovable and untestable. Whereas belief in the creative genius of unconscious chance is...ah! Well, maybe not rational. Maybe not provable. Maybe not testable. But you don't *need* a conscious creator to explain life. All you have to do is believe in chance. Besides – trump card coming up – if you believe in a conscious creator, who created him? You see, you only replace one mystery with another.

But the trump card doesn't work if it's in the wrong game, and the game here is Seeking the Truth. If you find it difficult to believe in the ingenious and hugely complex inventiveness of unconscious chance, you have to consider other explanations, regardless of where they lead. The question concerning the creator of the creator is akin to a computer announcing that it put itself together, because if it didn't, who created Man? The answer to both questions is: we don't know. It is highly unlikely that we shall ever know – at least in this life. But in any case, since we do not know now, it is arrogance for *anyone* – believer or non-believer in a god or in chance – to claim that they have a monopoly on truth.

This, however, is the pivotal point of Richard Dawkins' argument. Again and again in *The God Delusion*, he comes back to the fact that: “A designer God cannot be used to explain organized complexity because any God capable of designing anything would have to be complex enough to demand the same kind of explanation in his own right” (p. 109). In other words, something cannot have been designed if we cannot explain the existence of the designer. Can he explain how random combinations of materials can create life, reproduction, evolution and conscious? No, but as we shall

see, he has faith that one day science will tell us. To the suggestion that “there must be a cosmic intelligence who deliberately did the tuning” [of the universe], he responds: “I have already dismissed all such suggestions as raising bigger problems than they solve” (p. 147). But who says that different, unsolved (possibly insoluble) problems invalidate a proposition? For a renowned scientist to argue that an explanation can’t be true because it leads to further problems which he can’t explain is – to take Dawkins back into his own specialized field – like saying that the theory of natural selection can’t be true because we don’t know how life originated. It is a complete non sequitur. It is simply an argument against the rejection of one possible explanation in favour of another that leads to exactly the same dead end.

The fact is that sooner or later, despite the atheist's faith that science will one day reveal all, we come up against the complete blockage of not knowing how it all began. The Big Bang is the current favourite, and in answer to the question what went bang, some say nothing and some say something, but nobody knows and nobody can know. That does not, of course, invalidate the Big Bang theory, so why should the same "don't know" invalidate the design theory? It is an abnegation of scientific objectivity for anyone to “dismiss” the suggestion that there may be/have been a designer on the grounds that such a suggestion raises bigger problems.

By now atheists will no doubt have thrown their arms in the air and this essay on the fire, but my starting point is Dawkins' diatribe against the God theory, and my plea is not that one should embrace the God theory, but that one should recognize that the alternative to it (reliance on chance to design all the complexities of life) is no more scientific and no less reliant on faith. Nobody should assume that they know the truth, and we should be honest enough to admit it and exercise tolerance. That is the agnostic approach.

2. Agnosticism

In a chapter disparagingly entitled 'The poverty of agnosticism', Dawkins identifies two categories (p. 47): 1) Temporary Agnosticism in Practice, or TAP, which denotes that there “is a truth out there and one day we hope to know it, though for the moment we don’t.” 2) Permanent Agnosticism in Principle, or PAP, for questions that can never be answered. Some people assign the question of God’s existence to PAP, which means that they “cannot say anything, one way or the other, about whether or not God exists” (p. 51). He, however, believes that “the God question is not in

principle and forever outside the remit of science” (p. 71), but on the basis of a 7-point scale of probabilities, places himself in Category 6: "Very low probability, but short of zero. *De facto* atheist" (p, 50).

It is true that the inventor of the term "agnosticism", T.H. Huxley, intended it to mean the impossibility of knowing whether God exists or not (= PAP), but epistemology teaches us that there are very few things we can truly "know", and so any self-respecting theist or atheist would be bound to call himself an agnostic (hence, presumably, Dawkins' Category 6). In any case, the distinction between "can't know" and "don't know" does not change the neutrality of the person concerned. An agnostic in the more recent sense of the term - as someone who has not decided whether God exists or not - will remain open-minded, and the fact that one cannot answer a question most certainly does not mean that one cannot say anything either way about the subject of that question. Even a PAP can explain his reasons for regarding the question as unanswerable, while a TAP is able to consider *all* the arguments. Wherein, then, lies the "poverty" at least of TAP agnosticism, i.e. of open-mindedness? Besides, all human states are temporary, and even a committed Christian like Darwin can change into an agnostic, while a committed opponent of the church like St Paul can suddenly have a revelation and become its leading apostle. Dawkins, astonishingly, maintains that "atheists do not have faith" (p. 51), and yet it is his belief that science will one day come up with the answer, and the answer will be "no God". Since this entails the complexities of life (we shall discuss these later) having come into existence by sheer chance, he believes in the miraculous powers of chance as well as the ability of science to answer all the questions. If that is not "faith", what is?

Again typical of this blinkered approach is his selective quotation of results from a study in America, in which he pinpoints the fact that only 7% of members of the National Academy of Sciences believed in a personal God. This he describes as an "overwhelming preponderance of atheists" (p. 102). An agnostic, by definition, does not believe in a personal God, but by verbal sleight of hand, Dawkins has removed agnostics from the scene. Either you are a believer, or you are an atheist.

In any case, the argument is specious. Science examines the physical world. Religious people believe in a non-physical world. In an earlier chapter, Dawkins quotes the response of an Oxford astronomer who, when asked the "deep questions", said: "Ah, now we move beyond the realm of science. This is where I have to hand over to our good friend the chaplain" (p. 56). Dawkins' comment is worth quoting in

full: “But why the chaplain? Why not the gardener or the chef? Why are scientists so cravenly respectful towards the ambitions of theologians, over questions that theologians are certainly no more qualified to answer than scientists themselves?” In relation to the poll taken among scientists, one can only ask: “Why scientists? Why are atheists so cravenly respectful towards the ambitions of scientists, over questions that scientists are certainly no more qualified to answer than theologians?” But atheists such as Dawkins are convinced that the world is exclusively physical, scientists examine the physical world, and therefore scientists will one day discover the truth, and the truth is that there is nothing but the physical world. The perfect circle. Theologians, who believe in a spiritual world, are wrong, and agnostics, who are unable to step into either camp, are left out of the equation because they “cannot say anything” either way. His faith, prejudice and self-contradiction are encapsulated in an extraordinary paragraph quite early on in his thesis:

“Human thoughts and emotions *emerge* from exceedingly complex interconnections of physical entities within the brain. An atheist in this sense of philosophical naturalist is someone who believes there is nothing beyond the natural physical world, no *supernatural* creative intelligence lurking behind the observable universe, no soul that outlasts the body, and no miracles – except in the sense of natural phenomena that we don’t yet understand. If there is something that appears to lie beyond the natural world as it is now imperfectly understood, we hope eventually to understand it and embrace it within the natural” (p. 14).

He acknowledges that thoughts and emotions emerge (it is good that he avoids the word “originate”), summarizes the atheist’s beliefs, acknowledges that there are things we do not understand, and expresses the *hope* that one day we will be able to prove that their source is physical. Christians too *hope* that one day their beliefs will be vindicated, but where is the scientific objectivity of either approach? His own amounts to saying: I believe the universe is entirely physical, there are things I don’t understand, but one day I hope I’ll be proved right. And yet according to Dawkins, atheists have no faith. Agnostics do not impose theories on what they do not understand, and they do not hope that their prejudgments will be proved right.

3. The limitations of science

Before we consider the implications of the above, we need to consider the nature of science itself. Darwin wrote that "science *as yet* throws no light on...the essence and

origin of life." This holds out the possibility that one day it will. Atheists think that it will, and religious believers think that it won't. Agnostics hedge their bets.

Science can only concern itself with the material world as we know it. Science cannot speculate on matters beyond the scope of what can be tried and tested, and so by definition any belief in a non-physical world must be unscientific. But unscientific does not mean unreal or non-existent. There are many things in our lives that transcend the material world as we know it – love, art, music, beauty, premonitions and so on – but more importantly, the tools with which we examine the material world are inadequate. Birds and insects are able to perceive things that we cannot. We are clever enough to devise instruments that hugely enhance our capabilities of perception, but even then, they will only be able to show us that which the human brain *is able to* perceive. How, then, can we know that there are no other forms of life and being that exist on a totally different plane? A deaf man might argue that because he can hear nothing, sound doesn't exist. This is not to denigrate science. It is simply a denial of the right of science to exclude the possibility of phenomena outside its range. By extension, it is a denial of the right of an atheist to claim that religious faith is unscientific and therefore wrong.

4. Evolution

We should perhaps begin by saying that the theory of evolution does not and is not meant to explain the origin of life. It's chapter two in the history, and it is in itself a mystery, because we have no idea why it happened. You might say it did so because living creatures had to adapt to their changing environments or else die. However, early, so-called simple, unicellular life forms have survived and adapted without evolving into birds and bees and hawks and humans. Scientists would be delighted if they found the simplest microbes on other planets, without any that have evolved into the vast multicellular variety that has been on and mostly disappeared from Earth. If life just happened, it could have survived perfectly well without evolution. Of course that does not support or negate the argument for design, but it certainly increases the complexity that we need to explain.

A common claim made by the Dawkins school of atheism is that the Theory of Evolution is incompatible with theories of Intelligent Design. It isn't. Who says so? Charles Darwin, for one.

In *The Origin of Species by Means of Natural Selection* (all quotations from the Collins' Clear-Type Press, London & Glasgow, no date), one example is the eye. Darwin explains how the organ we know today must have developed from far more primitive forms, one step at a time. With certain vital reservations, which we will consider in a moment, there is nothing irrational or unscientific or illogical in the assumption that complex things may evolve out of simpler ones. The principle applies to most areas of life, as one generation builds on the progress of another, and the idea that advantageous changes will survive should not cause too many furrowed brows even among the religious. But that is the limit of Darwin's theory. "How a nerve comes to be sensitive to light, hardly concerns us more than how life itself first originated" (Chapter 6, Difficulties on Theory). Indeed, he might have added "how a nerve comes to be a nerve." Darwin's theory deals with the origin of species, not with the origin of life or of the actual ability to produce new organs, and at no stage does he ever pretend that it does more. He is quite specific on this subject:

"It is no valid objection [to the theory] that science as yet throws no light on the far higher problem of the essence or origin of life" (Chapter XIV, Recapitulation and Conclusion).

It may come as a shock to many so-called Darwinians to read the final sentence of this masterpiece:

"There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one..."

Dawkins also quotes this magnificent conclusion (p. 12), but takes his quote from the 1859 edition, which did not contain the words "by the Creator". Darwin would have had his reasons for inserting them, and Dawkins certainly has his reasons for ignoring them.

It is well known that in later years, Darwin lost his faith, but he himself maintained that he had never been an atheist. He was an agnostic. And his open-mindedness manifests itself again and again. Two more examples from Chapter XIV: "I see no good reason why the views given in this volume should shock the religious feelings of any one." And "A celebrated author and divine has written to me that 'he has gradually learnt to see that it is just as noble a conception of the Deity to believe that He created a few original forms capable of self-development into other and needful forms, as to believe that He required a fresh act of creation to supply the voids caused by the action of His laws.'"

Again Dawkins omits to mention such clear indications that Darwin himself kept an open mind on the subject of origins. Anyone reading *The God Delusion* would imagine that *The Origin of Species* was Darwin's proof that there was no designer.

This is not to defend the various concepts attached by different religions to the term 'Creator', as we shall see later in the discussion of a possible God's nature. And it is fair enough for atheists to complain if, for instance, Creationists want to teach schoolchildren that the Earth is 6000 years old, and to parade this as a scientific fact. I must confess that I also have major problems with the concept of a Creator who either provided the first cells with instructions to be passed on through billions of years and different organisms on how to produce every single innovation in the whole history of life on Earth or, alternatively, who personally kept popping in to design every single organism that has ever lived (not to mention every lifestyle, strategy and "natural wonder" that helped in the cause of survival).

There are, of course, flaws in the theory, and at this juncture I would like to don my agnostic's cap. One difficulty is the "imperfection of the geological record", which Darwin covers in great detail. The Cambrian Explosion ("Darwin's dilemma") is the best-known example, and some theists seize on the apparent leap in the number of new species with no known predecessors as evidence of separate design as opposed to common descent. Possible explanations: we cannot expect to find fossils of every transitional form in the history of life; new discoveries are being made all the time; it is possible that given the right conditions, organisms may themselves come up with new inventions (this relates to a theory which I will explain later).

Another is Darwin's belief in the even flow of the process, the gradualism which he deemed absolutely essential (Nature "can never take a leap, but must advance by short and slow steps"). Stephen Jay Gould's concept of "punctuated equilibrium" (new species emerge suddenly after long periods of stasis) seems to fit in well with the history of life, and I see no reason why both theories shouldn't apply. Major environmental upheavals would accelerate the process, while minor local changes might influence the much slower development of such organs as the eye. I must also confess that the tendency to describe periods of one or two million years as "short" has always struck me as tendentious. Yes, it is short in relation to geological time, but evolution takes place from generation to generation, and if we imagine a major environmental change as a trigger for innovation (the key to evolution), a million

years could well amount to 100,000 generations to accomplish the changes! ID mathematicians may still regard the odds as insurmountable, but there is a theory which I will come to later and which makes their calculations irrelevant.

A third flaw is reliance on sheer chance in the form of useful but random mutations (the basis of our ID mathematicians' scepticism). I will come back to this too.

Theists love to pinpoint these flaws and use them as an excuse for rejecting the whole theory. Its basis, however - common descent and natural selection of advantageous changes - remains as firm as ever, but since it provides no evidence to confirm or refute the idea of intelligent design, and since the man who formulated it remained open-minded on the subject, it should remain precisely where he left it: as Chapter 2 and not Chapter 1 in the History of Life.

Dawkins is not prepared to leave it there, however. He seizes on the Boeing 747 example attributed to Fred Hoyle (i.e. a hurricane sweeping through a scrapyard would never be able to create the plane, even if all the parts were available), and dismisses it as “an argument that could be made only by somebody who doesn't understand the first thing about natural selection: somebody who thinks natural selection is a theory of chance whereas – in the relevant sense of chance – it is the opposite” (p. 113). Leaving aside the puzzle of what he means by the “relevant sense”, it is not the process of natural selection that is attributed to chance here! Natural selection never created anything - it is the process which decides what existing organs/organisms will survive. The chance element lies in the creation and combination of the materials on which natural selection works. Dawkins (perhaps Hoyle too) is comparing the Boeing to the animal at the end (so far) of the evolutionary process, but it is the separate coming into being of the living, self-reproducing primeval organisms, the hitherto unthought-of even if primitive eye, ear, nose, lung, heart, penis, vagina, etc., that presents the problem. Darwin himself understood this, and so refrained from discussing such origins.

Dawkins, however, blithely announces that natural selection explains “the whole of life” (p. 116). Even when dealing with the example of the eye, he tries to make out that something so “apparently *designed*...was really the end product of a long sequence of non-random but purely natural causes” (p. 116), as if his theory did not depend on an entirely random but immediately effective mutation that gave birth to

the primitive light-sensitive nerve on which natural selection got to work. If you think a primitive light-sensitive nerve is simple, try to explain exactly how it works.

In this context, however, it also needs to be borne in mind that the very concept of sight did not exist before that random mutation, and yet the various cells in some mysterious way “knew” that this primitive light-sensitivity could develop further, and so they were able to develop new nerves and cells which eventually resulted in sight, and then in better sight. And hearing, and smell, and taste, and touch, and so on. Each one the result of an initial random mutation and an unexplained ability to improve on the original "invention"? This leads us to a theory that not only dispenses with all the problems raised by Darwin's dependence on randomness but also with Dawkins' dependence on natural selection as a creative force.

I had never heard the name Nels Quevli before I opened the AgnosticWebsite, and I doubt if David Turell, my science mentor, had ever heard it either. The name Gunter Albrecht-Buehler was also unknown to me, but I came upon it and his book CELL INTELLIGENCE when I began to research the subject. Here is Buehler's brief account of the history and of his own approach:

To the best of my knowledge, the term CELL INTELLIGENCE was coined by Nels Quevli in the year 1916 in his book entitled "Cell intelligence: The cause of growth, heredity and instinctive actions, illustrating that the cell is a conscious, intelligent being, and, by reason thereof, plans and builds all plants and animals in the same manner that man constructs houses, railroads and other structures." (The Colwell Press, Minneapolis, MN). The basic tenet of the book is that the actions and properties of cells are too amazing to be explained by anything but their intelligence. (Similar sentiments are repeated today, 90 years later, by the followers of the so-called "Intelligent Design" movement, to which I do not subscribe.) With my apologies to the father of the concept of CELL INTELLIGENCE, I disagree with his approach. What scientists find "amazing" or "inexplicable" has always been and will always remain a matter of the date. My work over the past 30+ years is not based on any philosophical positions but is entirely experimental.

He goes on to set out the scientific basis of his theory, and it is worth noting that the Nobel-prizewinning geneticist Barbara McClintock and the pioneering evolutionary biologist Lynn Margulis were also firm believers in cellular intelligence, but what set me delving into this subject was the theory proposed by James A.

Shapiro in his groundbreaking book *Evolution: A View from the 21st Century*. Once again, my thanks to David Turell, who in his book *The Atheist Delusion*, reproduced Shapiro's all-important conclusions of which the following are for me the crucial elements:

- Living cells and organisms are cognitive (sentient) entities that act and interact purposefully to ensure survival, growth and proliferation. They possess sensory, communication, information-processing and decision-making capabilities.
- Cells are built to evolve; they have the ability to alter their hereditary characteristics rapidly through well-described natural genetic engineering and epigenetic processes as well as by cell-mergers.
- Evolutionary novelty arises from the production of new cell and multicellular structures as a result of cellular self-modification functions and cell fusions.
- Natural genetic engineering and other evolutionary innovative processes respond to stimuli that place the core organism objectives of survival, growth and proliferation in peril...primarily at times of ecologic disruption.

It is essential to note that the theory of cellular intelligence was developed by scientists who observed and tested the behaviour of cells, but even outsiders like myself are fully aware of the fact that microbial life plays a huge role in our existence, and (to take a well-known example) there is a never-ending war between humans and the harmful bacteria that do so much damage to our health. The war doesn't end, because whenever we super-intelligent creatures come up with an antibiotic to counter their dirty deeds, they find ways to resist it. And these bacteria are single cells invisible to the naked eye. Our instruments, however, have enabled us to find out that a single cell is as complex as a factory. If a single cell can outwit us, what would be the potential of a community of cells, and in due course what would be the potential of a community of cell communities? There in a nutshell, you have the history of evolution. And you have the solution to the various problems that arise from earlier theories of evolution: Darwin's random mutations depend on countless lucky breaks for their seemingly miraculous innovations, but Shapiro's intelligent cells know what they're doing. The mathematical odds against chance become irrelevant if the creators of innovations are aware of problems/opportunities and have the ability to

solve/exploit them. The apparent gaps in the fossil record (e.g. the Cambrian explosion) might not be gaps at all, if particular conditions allow for major innovations by intelligent inventors.

This is why some ID-ers think Shapiro is on their side, but just like Buehler, he objects to this, and quite rightly so. They are both concerned with Chapter 2 in life: evolution, not with Chapter 1, which is origins. And as an agnostic, I can welcome a theory which so clearly explains the astonishing variety of life forms in all their complexity, as well as the constant comings and goings (as conditions change). As for origins, the theory changes nothing at all – it leaves wide open the question of how cellular intelligence came into being: the theist can say God invented it, and the atheist can say chance invented it, and I can sit on my fence and focus purely on the logical explanation of how evolution works, regardless of origins.

Another question is how do similar innovations evolve in places thousands of miles apart? Here again, there is a simple answer provided by the theory of convergence. Intelligent plants or animals subjected to similar conditions will face the same problems and come up with similar solutions.

This will probably be the end of the story for atheists, who will see the history of life as a process with no aims beyond those listed by Shapiro. In passing, one should note that this does not mean they are any less appreciative of the designs and wonders and opportunities life offers. Some of my atheist and agnostic acquaintances are just as joyful and just as altruistic as some of my theist friends, while others can be equally miserable and self-centred! However, for the theist, the mechanisms of evolution are not the end of the story. If you believe in a God or the possibility of a God, you will also want to know what is the nature of your God, and what might be his purpose in creating life. This will apply, whether you accept Shapiro's theory, Darwin's theory, or the Creationist theory that God designed every species individually. An agnostic, who simply can't decide whether there is or isn't a God, can also join the debate. However, any atheist readers (if they haven't departed already) are welcome to skip the next couple of pages!

We will discuss the subjects of origins and a possible God's nature later, but we can scarcely leave the subject of evolution without considering a possible God's motives and methods in inventing the process. And we can scarcely do this without bearing in mind the common view that God is all-powerful and all-knowing. One school of thought is anthropocentric: God wanted above all to create humans. And whether you

are an evolutionist or a Creationist, the Bible seems to confirm our supremacy: humans were to “have dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth.” We can all accept that this is what has actually happened - not always to the benefit of the rest of the planet! - but the history of past life on earth turned out to be a bit more complicated than Moses (generally regarded as the author of those words) could have imagined. It is generally recognized that vast numbers, up to 99% of all species, have come and gone since life began, and had nothing to do with the life forms that led to us and our food. So why would an all-powerful, all-knowing God have bothered with them all? And why bother with all the hominids that slowly developed into the one species of human that has survived? An all-powerful, all-knowing God would surely have created his one and only wish (us and our food) directly, as he does in the Bible. (And some religious folk even like to point to the Cambrian as evidence that their God does indeed create species directly, without precursors.) Whether you believe in evolution or separate creation, the same principle arises. The known history of life, with its vast variety of extinct species, makes nonsense of the claim that we sapiens were an all-powerful, all-knowing God’s goal from the very start.

Or perhaps it simply makes nonsense of the claim that God separately created every species, or that he deliberately controlled evolution for our sake, or that he is all-powerful and all-knowing. Each of these can lead us to a different interpretation of his motives and/or methods. For instance, if he really wanted to design a being in his own image, he might have spent billions of years experimenting in order to find the right combination (including different foods for each related ecosystem). Every life form and ecosystem would have been part of the long quest. Alternatively, having invented the process, he could have been progressively experimenting in order to find out the full potential of his invention: a God constantly learning and coming up with new ideas as he went along. Or thirdly, perhaps most fascinatingly, he could have given his invention of the intelligent cell full freedom to do all its own inventing – though with the option of dabbling if he felt like it. This third option of course links up with Shapiro’s theory, which has the merit of solving not only problems thrown up by Darwin’s theory, but also those that arise from the idea of an all-powerful, all-knowing God who for unknown reasons ends up designing 99 out of 100 species that have nothing to do with his one and only purpose.

There is another problem arising from the conventional religious view of evolution

and of God, which is that if every stage was controlled by an all-knowing, all-powerful, all-good God, how are we to explain the existence of evil? This of course is the problem of theodicy, and we shall come back to it later in our discussion on the possible nature of a Creator.

To sum up: for those of us who believe evolution happened, there is a very limited choice concerning its origin: either chance or design. Concerning the process by which it proceeds, the choice lies between chance (Darwin's random mutations), an unknown intelligent mind or minds (God or gods), and the intelligence of the cells of which all living organisms are composed.

5. Origins

Despite his inability to grasp the nature of his own faith in chance, Dawkins does not entirely ignore the problem of origins. His solution lies in something so nebulous that it can be made to fit any theory. It is the so-called "anthropic principle", whereby we can be certain that we are on one of the few planets that are suitable for sustaining life, because we know that we are on one of the few planets that are suitable for sustaining life. Dawkins is surprised that religious apologists love the principle, because they think it supports the case for design, whereas he loves it because he thinks it does the opposite. So much for the decisive influence of the anthropic principle.

He now – all credit to him – forgets his equation of natural selection with the whole of life, and declares (p. 137) that "Darwinian evolution proceeds merrily once life has originated", though he glosses over the fact that his merry procedure still requires countless random mutations for the production of new organs. "But how does life get started?" Again he admits that this "may have been a highly improbable occurrence". "The origin of life was the chemical event, or series of events, whereby the vital condition for natural selection first came about. The major ingredient was heredity, either DNA or (more probably) something that copies like DNA but less accurately, perhaps the related molecule RNA." This is an extraordinary simplification. The origin of life must at the very least have had two major ingredients, and they must have sparked into life at precisely the same moment: heredity was one, but what Darwin called the "breath" was the other. DNA is not much use in a lifeless body. By only calling on DNA/RNA, at a stroke Dawkins has halved the degree of the already

high improbability. But be reassured: “I shall not be surprised if, within the next few years, chemists report that they have successfully midwived a new origin of life in the laboratory” (p. 137). That’s OK then. Dawkins thinks that the combined knowledge of the finest brains, working on the findings of generations of earlier fine brains, will soon be able consciously to put together the ingredients and breathe the spark of life into them ... which will prove that life came about through unconscious chance. Abiogenesis is the name of the theory that inanimate matter spontaneously assembled itself to create life. And it requires just as much credulity as the genesis theory it seeks to replace.

But Dawkins has one more theoretical trick up his sleeve. Statistics. There are billions and billions of galaxies in the universe, and so life is statistically bound to have arisen by chance not only on this planet but probably on millions more. “The beauty of the anthropic principle is that it tells us, against all intuition, that a chemical model need only predict that life will arise on *one* planet in a billion billion to give us a good and entirely satisfying explanation for the presence of life here” (p. 138). The beauty of the Dawkins principle is that it tells us, against all reason, that if you want to believe in miracles, you need only cloak them in chemical or statistical terms to make your belief entirely satisfying. “The spontaneous arising by chance of the first hereditary molecule strikes many as improbable. Maybe it is – very very improbable” (p. 137). But the fact that we are here, and that there are billions and billions of planets, proves that this very very improbable event took place *by accident* through the laws of probability. And so “this statistical argument completely demolishes any suggestion that we should postulate design to fill the gap” (p. 139). Given enough time and space, then, chance might produce absolutely anything. Presumably even Hoyle's Boeing 747.

After this complete demolition comes another small concession before the final hammer blow, with its heavy reliance on the totally non-committal “anthropic principle”: “[Natural selection] needs some luck to get started, and the ‘billions of planets’ anthropic principle gives it that luck. Maybe a few later gaps in the evolutionary story also need major infusions of luck, with anthropic justification. But whatever else we may say, *design* certainly does not work as an explanation for life, because design is ultimately not cumulative and it therefore raises bigger questions than it answers” [i.e. who designed the designer] (p. 141). A few later strokes of luck would have to include the ability of organisms to adapt themselves to new conditions

and to produce the primitive but immediately functioning organs we have listed earlier, without which there would be no evolution. There is also a different form of gap in the evolutionary story: the fact that the fossil record has still failed to come up with the millions of missing links Darwin was hoping for, which presumably is just a matter of *bad* luck. (The Cambrian Explosion surely puts paid once and for all to Darwin's gradualism and to Dawkins' smooth ride.) Design “certainly” does not work - by this stage in Dawkins’ thesis we are indeed dealing in certainties - because it is “ultimately not cumulative”. Isn’t it? Did Hoyle’s Boeing suddenly spring into perfection from nowhere in no time? Are there any precedents in any field of design that are not cumulative but automatically come up with spontaneous perfection? Earlier, Dawkins points out that there are flaws in evolved organs – “exactly as you would expect if they have an evolutionary history, and exactly as you would not expect if they were designed” (p. 134). He may get away with this if we stick rigidly to the concept of the omnipotent, omniscient, all-perfect God, but for an agnostic who finds it difficult to believe in the miraculous creativity of chance and yet at the same time keeps an open mind about the existence and nature of a possible designer, the statement is quite baseless. Design requires experimentation and, just like natural selection, functions by eliminating the unnecessary and perfecting the necessary. Consider the history of cars, planes, ships, and you will see that human design follows precisely the same process as evolution - a gradual elimination of flaws and enhancement of qualities. Besides, it seems reasonable to assume that the history is not yet finished: the work is still in progress, and still "perfecting" itself, whether by chance or by design.

But if it's hard to believe that life came about by chance, it's just as hard to swallow the explanations offered to us by religion and myth. According to *Genesis*, in a version accepted by Jews, Christians and Muslims alike, God created the heaven and the earth, then said, "Let there be light: and there was light", and went on saying, "Let there be this and that" for six days, and the job was done. What could be simpler? Many Creationists stick to the literal truth of this account (or dispute the meaning of the word "day"), argue that humans and all other species were created separately and individually, and by diligent biblical calculations have worked out that we have all been on the Earth for only about 6000 years. Even allowing for the possible inaccuracies of scientific research, current knowledge suggests that *homo sapiens* has been around for over 200,000 years, and probably diverged from the chimpanzee

family about 5 million years ago. It is true that many believers reject the fundamentalist interpretation of the Bible, but once they begin to question the *literal* truth of what they believe to be the word of God (and we should not forget that *Genesis* is billed as the First Book of Moses, who is supposed to have had direct access to the Lord), it becomes increasingly difficult to accept anything as authentic. The separate, individual creation of all species runs counter to the theory of evolution, as does the simultaneous arrival of the beasts of the earth and man (all created on the sixth day). Here the fossil record clearly shows that the beasts of the earth preceded man as we know him by millions of years. Again allowing for the problem of origins as well as for gaps in the fossil record, it is difficult for someone non-committed to subscribe to the *Genesis* version with its truncated cosmology and history of life on Earth.

According to Hesiod's *Theogony* (8th century BC), creation started with Gaia (Earth), who gave birth to Uranus (Heaven), and he was thoroughly nasty to his children until one of them, Cronos, castrated him; Cronos in turn ate his own children, but his wife Rhea gave him a stone to eat instead of Zeus; when Zeus grew up (on the island of Crete), he forced his father to vomit up the rest of the family, and all of them ganged up on Cronos and gave him a hammering. Is this version more or less credible than *Genesis*? It has plenty of detail and action, and so why should Moses' version be any more reliable than Hesiod's? Who actually established in the first place that the Bible was the Word of God? Muhammad and Joseph Smith also claimed to have experienced divine revelation. What grounds do Jews and Christians have for rejecting their claims (even if they do not dispute the *Genesis* version of origins)? Hesiod may only have been recounting a version passed down to him by earlier generations that went all the way back to the beginning.

Immanuel Velikovsky, a figure much reviled by the scientific establishment, ingeniously collated myths and legends from ancient cultures and literatures - including the Bible - and related them to the geological and cosmological evidence of past catastrophes such as the Flood and the parting of the Red Sea. He did this, incidentally, at a time (the 1950s) when uniformitarianism (the theory that geological processes have remained stable throughout history) was the order of the day, but many of his findings have now been confirmed. The point I wish to make here is that some stories in the Bible and some ancient myths may be based on history, and as such they may well contain truths that we have come to regard as fairy tales. We

cannot dismiss them. Nor can we trust in them. Even authenticated history is open to the subjective interpretations of the historians.

The North American Indians have a large variety of creation myths, one of them centring on conflict between "hero twins" whose father is the sun-god. One twin is helpful to mankind, and the other brings old age, disease and death. The concept of twin gods provides a far less mystifying explanation of good and evil than that of a single, all-good Creator who designs the Devil. In classical Indian mythology, Brahma is the creator who forms a trinity with Vishnu and Shiva, respectively the forces of light and dark, life and death etc. Brahma, as the balance between them, represents existence originating from the union of opposites. Interestingly, Brahma no longer figures as a major deity in Hinduism, perhaps reflecting increased concern with human life rather than with creation - a little like the atheist focusing on natural selection rather than on the origin of life.

But I do not belong to Hesiod's culture, or to Amerindian culture, or to Indian culture, or to Dogon culture (Amma threw pellets of earth into space to make the stars, and then made the Sun and Moon by using pottery), or to Chinese culture (Pan Gu woke up inside a big black egg, smashed it, and the contents became the heavens and the earth). Erich von Daniken tells us that visitors from outer space built many of our monuments, and the Raelians assure us that life on Earth was created in the laboratories of the Elohim - who also live in outer space, and are busily cloning Jesus and Muhammad, among others. If you subscribe to these interpretations of origins, so be it, but in my own quest for a believable truth, I find all these concepts as incredible as that of chance-created life, heredity and adaptability, and that of a benign deity who, in six days 6000 years ago, conjured up heaven and earth and every single form of life, with not a single stage of progression from one to another. This is a subject we shall return to under "Religion".

Despite my inability to take the necessary leap of faith, however, one of the above explanations may be true, or some of them may contain some of the truth. The fact remains that we are here, and so there must be a true explanation of how we got here. Whatever it may be, it will seem fantastic. Science may be moving us towards new discoveries about our universe, but time and our way of life are moving us further and further away from our origins. Perhaps the ancients knew things that we do not. We should therefore remain open-minded, which is the hallmark of agnosticism, for the admission of ignorance is rarely as harmful as the assumption of knowledge.

6. The nature of a “Creator”

This is where atheism and agnosticism join forces against religion, but first we must consider the alternatives again. Either you believe that life, reproduction, adaptation and innovation and all their associated processes came about by chance – a belief that requires an act of blind, irrational faith – or you believe that they were designed by an unknown, immaterial, sourceless mind that has been around forever, which represents an equally blind and irrational faith. There is no middle way here. Natural selection came later, after life began and after every adaptation and mutation. Dawkins states categorically that attributing life to a designer is a “total abdication of the responsibility to find an explanation” (p. 155), and believes that through natural selection “we can now safely say that the illusion of design in living creatures is just that – an illusion” (p. 158). His attribution of the multiple complexities of life to luck and statistics is clearly a far more satisfying and "responsible" explanation for him. But if, on the other hand, you opt for a designer, you open yourself up to all kinds of additional problems, quite apart from Dawkins’ unanswerable (though in relation to our understanding of life on Earth, also irrelevant) one of who designed him/her/it/them. What is its nature? Why did it create our world? Where is it now? (I shall use “it” from now on in order to avoid unwanted associations.)

Some religions past (Greek and Roman) and present (especially Hinduism) have opted for a multiplicity of deities, and some for just one, but the same questions apply. The answers can, of course, only be speculative, but the advantage of agnosticism is that the speculation can remain free from all the intellectual paraphernalia that encumbers the established religions. An agnostic can look at the work of art and draw conclusions about the artist. An adherent of any religion will tend to start with the artist. This is why theologians have tied themselves in knots trying to solve the theodicy problem, i.e. to explain the origin of evil and to reconcile it with their belief that their god is all-powerful, all-knowing, and all-good. Leibniz, who first coined the term, thought the answer was that this was the best of all possible worlds, which is surely one of the biggest theological cop-outs in cop-out history: an all-good God created evil because you can't possibly have a better world than one which is full of evil!

It is always dangerous to assume that a work of art (let us continue the analogy for a

moment or two) reflects the artist directly. Who would have thought that the *Ode to Joy* with which Beethoven's 9th Symphony reaches its triumphant climax was written by a sad and lonely, relatively old man? Or that the writer of *King Lear* could also pen *A Midsummer Night's Dream*? But what we can assume is that no artist can create something totally unknown to him/her. Even the most fantastic creatures of science fiction and fairy tales have some features that make them into recognizable living beings. What, then, do we learn from the world about the possible world-maker?

At this stage, I should like to change the image, or at least extend it. The artist is, or was, also a scientist. We're not talking here about big bangs or primordial soups, but we're not talking about supernatural powers either. For a designer to have created life, it would have needed the right conditions, so it found the Earth, or maybe it created the Earth. Once the conditions were right, it set about devising the mechanisms that eventually led to us. The astonishing variety that has arisen out of those mechanisms is ample evidence of the designer's ingenuity; the beauty is evidence of its aesthetic sense; the love and self-sacrifice (not just human – we shall talk about animals later) is evidence of its goodness; the chaos, violence, cruelty are evidence of its darker side. Evil could not have come into being without its knowledge of evil. Man's sense of humour, though, is a great comforter, and that too can only have sprung from a corresponding trait in the designer. Even the most ardent believer in the literal truth of the Bible can hardly ignore the all-important line in *Genesis I*: "So God created man in his own image, in the image of God created he him." If we are in God's image, then he is also in ours, and at a stroke we can do away with all the twists and turns of casuistry.

That doesn't mean, however, that the designer is or was an old man with a white beard. It may be such, of course, because the mechanism it created, once set in motion, could have populated the world over time without its presence. On the other hand, it may be something as vast as a planetary system, and capable of holding the Earth in the palm of its hand (or the unearthly equivalent of its hand). The latter would be helpful if we wanted to explain some of the cataclysms that have struck the Earth in its history. Once the designer had decided to take drastic steps to change the physical Earth, it would have had to use physical means. But instead of using the hand, maybe it could have created tornadoes, earthquakes, floods – all through science, of course, not mere magic. When scholars find natural explanations for historical or mythical phenomena, like the parting of the Red Sea, they are not

disproving the interference of a designer. If it wanted to part the Red Sea, it would have devised a physical method to do so.

The atheist will complain that we are entering the realms of fantasy, but is this any more fantastic than the idea that inanimate, unconscious matter can become animate, reproduce itself, and develop new organs by chance? Remember, we are now considering the alternative to the atheist's fantasy, and we are speculating. If there is/was a designer, it will be beyond our comprehension and perception, but it will in some ways mirror what it designed. So let us talk of microcosms and macrocosms.

Within our own world there are many parallels between cells and the universe, between individual and society, between the body of man and the body of the Earth – so perhaps it is the same between us and our hypothetical designer. Perhaps the cells that microreflect the body that microreflects society that microreflects the Earth that microreflects the universe are also a microreflection of the designer. It may even *be* the universe, which may even *be* a body, within which the galaxies are limbs, and our solar system a mere cell.

What we have, then, is the artist/scientist creating the mechanism of life. Now we must ask why. Why does an artist paint a picture, write a book, compose a symphony? Why does a scientist invent a machine, devise a technique, conduct experiments? Why do we sing, play games, gossip? Because that's what we humans like doing. And so our designer did what designers do. That may not seem very helpful, but it sets us off on an interesting track. Why did it take so long for the design to evolve into human beings capable of questioning, investigating, even denying the existence of the designer? Why all the mindless organisms, the monsters, the creatures incapable of acknowledging it?

We cannot answer these questions, of course, but we can go on speculating. Here are some ideas: 1) the designer's motive was to create life for its own enjoyment and interest. (Eternity is a long time for metaphorical thumb-twiddling.) 2) The designer carried on experimenting to see what variations it could produce (occasionally destroying whole swathes of its creations, having got fed up with those particular species). 3) The designer wanted to create a being "in its own image", and kept on fiddling till it got us (anthropocentric interpretation, with other species serving us for food - not too far from the "Genesis" version). 4) The designer's enjoyment and interest were enhanced by giving the very first cells the intelligence to design their own means of survival (see Shapiro), thereby creating an ever changing and

unpredictable variety of life forms, perhaps culminating in human free will, which together with our heightened intelligence has produced the most varied spectacle of all. 5) The same, with chance replacing God as the "designer" of the first cells (atheist version of Shapiro). 6) The designer has lost interest, given up and left the process to look after itself. 7) The designer is still there watching with interest. These are not meant to be alternatives; they may be phases.

Let us not, however, ignore the churches, the mosques, the synagogues. Worship is central to most religions, and who is to say that the designer doesn't/didn't want to be worshipped? That too would be an understandable analogy: the artist hopes to be praised for his masterpiece, the scientist for his invention. Since this is natural to man, why not to his image? But if so, it does seem like an afterthought, bearing in mind the lateness of our appearance on the planet. It certainly cannot have been the prime motive, unless the designer simply couldn't come up with the goods first, second, or umpteenth time around. Enjoyment through new experiences seems a more likely candidate, with the different creatures evolving, surviving, killing, dying, being born, all taking part in a gigantic free-for all, basically motivated by their desire to survive and to proliferate.

Microcosm, macrocosm: we watch the world fall to pieces, and our designer watches us watching the world fall to pieces. Step by step. Natural disasters: just that. Part of the unpredictable scenario. We watch gruesome disaster movies, murders, happy romances, comedies, tragedies for our enjoyment and also our enrichment: we learn about other lives than our own. So why should the artist-scientist creator not do the same, since he and we have a shared "image"? But of course our stories are not fiction. We may thank this conscious being for creating comedy, beauty and love, but he has also created tragedy, disease, hate. Just as some theologians tie themselves in knots to explain evil, they fall over backwards to excuse their creator for allowing the guiltless to suffer. When all else fails, they offer hope of consolation in the next life (of which more anon), but what consolation can there be for a mother who has watched her child screaming in agony before the pain finally ends, cutting short a life that has barely begun? What sort of inventor invents the slaughter of the innocents?

While on the subject, we may as well deal with an extraordinary piece of pain-infliction. Christians believe that Christ died his agonizing death on the cross in order to redeem them, whatever that means. What sort of father allows his son to suffer

such pain in the first place? And what precisely is the point and process of this “redemption”? If we are good, we will be rewarded; if we are bad, we will be punished. So where does Christ’s agony fit in? Couldn’t the designer have “redeemed” us without Christ’s blood? Of all the verses in the story of Jesus, there is none so resonant and chilling as Matthew 27, 46: “And about the ninth hour Jesus cried with a loud voice, saying, Eli, Eli, lama sabachthani? That is to say, My God, my God, why hast thou forsaken me?”

Christians may argue that Christ's suffering is an example to all of us: so long as we have faith and behave ourselves, we will be rewarded for our pain. It is the same message as that given in the story of Job (see "Religion"), but why inflict such suffering? Christ and Job were presumably both "perfect and upright", so they should have been saved anyway. And I, who am not "perfect and upright", will not be made so by Christ's crucifixion or by Job's losses, since it is clear that I too must have faith in God (or Christ, which - mysteriously - amounts to the same thing thanks to the doctrine of the Holy Trinity) and obey its commandments, or I shall be condemned. We are told by John, in his first epistle general, that if we walk in God's light, "the blood of Jesus Christ his [God's] son cleanseth us from all sin." But if I already walk in God's light, what need is there for Christ's blood? Will I obey the commandments simply because Christ died an agonizing death? And could I not have had faith in him anyway without such a death?

The fact is, I am no closer to "redemption" after Christ's death than I was before it. This is not to deny that he may have been a great teacher, and many of his principles set out a good moral and social basis for living (most religions do). It is simply a comment on the senselessness of the sacrifice. The nature of the "Creator" as it emerges from this story is very much in tune with a haunting line from a Madonna song: “Only the one that hurts you can make you feel better.” God hurt Job and Christ, then made them feel better, but that won't help the rest of us, unless we can live up to their noble standards - and even that is no guarantee of favour.

What about love, then? If we are to follow our parallels, might not the artist love his own work? Might not the playwright take pity on his characters? Of course he might. If the great spectator takes a liking to you, why shouldn't he offer you special terms? Once you are free from the scientific faith of atheism and the dogma of religion, you can pick any scenario you like, because they are all equally possible/impossible. If I

cannot discount the possibility of life etc. through random miracles, I most certainly cannot discount the possibility of a conscious designer taking note of little me and putting its metaphorical thumb up or down. We may shift the parallel here from the playwright to the great dictator: if The Father of the Nation likes me, he'll be nice to me; if he hates me, he'll make me suffer. It is not a comforting thought, but it is just as likely/unlikely as any other of our scenarios.

At the beginning of this chapter, I asked three questions about the possible designer: What is its nature? Why did it create the world? Where is it now? On the assumption that the design reflects the designer, I have suggested that it is fair enough to ascribe all the good and all the bad qualities of life on Earth to the being that created it; this leads to the possibility that the act of creation was a sort of pastime, maybe for God's enjoyment; and this in turn brings us to the third question. Is it still watching? But in order to speculate on that, we need to return to a different aspect of the first question.

7. What and where is it?

We have discussed the possible character of a god, if it exists, but not the form. We have mentioned the possibility of a giant physical being (or maybe several beings) that could take the Earth in the palm of its hand. The universe itself may be a body or bodies. But there is also the possibility of a totally different form of life that we are unable to perceive – what people call the spirit world. Fantasy? Maybe, but remember that any explanation we come up with will seem fantastic – none more so than the faith that total unconsciousness could randomly create consciousness.

Is there any evidence of a different form of life? It depends what you mean by "evidence". Millions of people down through the ages have reported seeing ghosts. There are people who say they have made contact with the dead, or have lived before. Others claim to have special powers: healers, clairvoyants, telepaths, prophets, mediums. Is every single one of these a fake, or a self-deluder? You only need one genuine case to show that there are forms and forces of life beyond those that we know. In my late wife's family (she came from Nigeria) a child died and another was born soon after. The second child, while still an infant, recalled scenes from the dead child's life that he could not possibly have known from his own childhood. I myself, when living in Ghana, where I spent four years, saw a boy cut himself with broken glass and not bleed, and thrust his hand into the fire and not burn. At the time he was

under the influence of a juju. What we regard as supernatural belongs to everyday life in parts of Africa. The atheistic scientist may scoff but, as we have seen, science is not equipped to explain such phenomena. (In *The God Delusion*, Dawkins does not even scoff. He does not mention psychic phenomena at all.) Near death experiences sometimes include the acquisition of information which the patient could not possibly have known (e.g. the sudden death of a relative). There are countless forms and examples of psychic experiences that defy rational explanation. All fake? The agnostic remains open-minded.

What, then, would this imply about our hypothetical maker? If it is/was not a physical being, it is/was a so-called spiritual being. This may seem to contradict the image of the scientist manipulating his materials, but once we take the step of acknowledging spiritual powers, we must acknowledge telekinesis. A 'spirit' can move an object. I hesitate to call it a mind, since that is so closely associated with the brain, but 'spirit' too has unwanted associations. Some would use the word 'soul', but it sounds too religious. I will stick to 'spirit'.

If the designer is/was a physical being, either it has departed, or it is still there but we have failed to recognize it as such with our scientific instruments. Perhaps it is simply too big for us to discern its shape. Or perhaps it exists in another dimension. String theory and superstring theory suggest that there may be as many as 10 or 11 dimensions, compared to the meagre four that we are aware of. If, however, the designer is/was a spiritual being, we can only recognize it through our own spirit – the mental powers encased within our brains. Some scientists will inevitably argue that when the brain dies, the mental powers die (“inevitably” because science is only equipped to deal with the physical world), but your ghosts and your mediums suggest otherwise. Once again, the design may reflect the designer, and may take the form of a spirit.

Does the spirit die? The question sounds theological, but that is because of the word itself. Try to strip it of its associations, and instead concentrate on the idea that it is a form of life different from the physical one we know. Perhaps this will be easier if we take a physical analogy. When we look at each other, what we see is the person who existed one five-hundred-millionth of a second ago. When we look at a star that is 186,281 miles away, we see it as it was one second ago. If I had a telescope that could focus on an object 660 million miles away, I would see it as it was an hour ago. The greater the distance, the further back into the past we can see. Modern technology is

working on this even as I write and as you read. We can already see things millions of light years away. Theoretically, it means that nothing is lost so long as light is able to travel. A telescope on a planet X billion miles away would enable the observer to watch the crucifixion. There are, then, waves that go on for ever.

I am not saying that the spirit goes on for ever. I am an agnostic, and I do not know. I am saying that it is a possibility. That is all we can ever say if we are not able to take the leap of irrational faith which endows atheists and religious believers with their certainty. And so, if it is a possibility, we should examine its implications for ourselves (which we shall do in the next chapter) and for our designer. The designer may or may not live for ever, but what seems more likely than not is that it lived or will live a great deal longer than us. The formation of the Earth took aeons, and one can't help feeling that it would have wanted to see the outcome of its work. Whether conscious existence was planned from the start, or came about after much experimentation, or evolved gradually from increasing levels of consciousness sparked off by a mutation (deliberate or accidental), the scientific fact remains that it followed on from millions of years of pretty basic stuff: birth, survival by various means, reproduction, death. There is no fossil record of amoebas or dinosaurs having built churches, or having come up with any new technology to master the natural world, or having mounted a challenge to the very existence of the designer. If the latter's purpose was to enjoy the fruits of its labours, it is unlikely to have walked away before the most exciting twists in the tale (assuming it knew what exciting possibilities it had created), or to have done its work in such a way that it would die before seeing them. What seems most probable is that the observer will stay on till the end of the story.

We are therefore left with the following choices: 1) the unbelievable creative genius of pure chance (= atheism); 2) a physical designer which we cannot see, either because it is dead, has gone away to another part of the universe, or is unrecognizable to our perception; 3) a spirit designer with the same qualifications – dead, gone away, or unperceivable (the 'spirit', remember, being a word for some other, non-corporeal form of life). In the second and third scenarios, we must assume that the designer had some sort of motivation for its work, and this seems likely to have involved interest in the outcome. We can't measure the time scale by our own standards – the designer's scale runs into millions of years. As the hymn puts it: "A thousand ages in thy sight / are but an evening gone." In that case, it seems unlikely (that is as far as one can go in

one's speculations) that in the short time humans have been on the Earth, the designer would have got fed up with the whole thing and packed its bags. So if it exists - in no matter what form - it might still be "with" us,

There is no comfort in any of this. Nobody likes being under surveillance, and the idea that some mighty power is watching every move is thoroughly off-putting. So too is the idea that this power couldn't care less what happens to us. So too is the idea that we are entirely on our own, at the mercy of the random and the human-made catastrophes we are exposed to. So too, if we take the two possibilities open to ourselves, are the prospects of eternal death and eternal life, but we shall look at these later. For the moment, it is the designer and not the design on which we are focusing, and so far all this is both frightening and depressing. Religion seems to be no help. "Thou shalt love the Lord thy God with all thy heart," commands Jesus (Matthew 22, 37). "Fear God," says Peter, his disciple (1st Epistle General, 2, 17). Can we love what we fear? Imagine being told by your father: "Love me, or I'll beat you to a pulp."

On the other hand (agnostics always have another hand), there is no question that religion *can* be a help. Belief in a loving, caring God offers comfort in suffering as does the promise of a new, different and happy life, even here on Earth. There is a world heavyweight champion who thanks his saviour Jesus Christ for every victory and for saving him from the depths of despair. And no one can dispute the good deeds done by the many charities that are the offspring of religion.

If a designer exists, it must be infinitely cleverer than we are, and since it has been able to create such a vast variety of patterns, who knows what other tricks it has up its metaphorical sleeve?

8. Endings

Astronomers have predicted that our solar system will end cataclysmically five billion years from now. What a great way to earn a living! I can't help wondering if it might not happen four billion years from now. Or maybe six. If you're interested, the disaster will strike when the sun runs out of hydrogen, swells into a red giant (approximately 200 times the size it is now), destroys the nearest planets, and either boils us up, or sucks us in. Global warming is peanuts compared to this. But in the light of our discussion on the nature of the designer, it does raise interesting questions. Things end. What happens after the ending, and if it comes to that, what happened

before the beginning? We don't know. We can't know. And so we should not pretend to know.

But if we consider our various alternative explanations of life, we can't escape the fact that each one has the ending built in: every living thing that we know dies. We can take that one step further back: every living thing that we know changes. The changes may be imperceptible from one second to the next, but look at the photo of yourself twenty years ago, look at the photo of your dog five years ago, hunt for the flower that was in bloom five weeks ago. Things are always on the move. If you want eternal life, you may feel it's a crying shame that evolution has not perfected the undying gene. After all, it has perfected reproduction, and even self-healing and self-immunisation. No problem for the atheist, who will simply argue that the chance combinations which brought about life never got round to creating the deathless gene, and it's "natural" anyway that things should die – as if unconscious nature somehow ordained death. There is a problem, though, for the designer concept. Death has clearly always been an integral part of the design, and we need to know why.

Before human beings came along to bring variety to the spectacle, we assume that other species lived their lives, as mentioned above, and died, leaving the next generation to do precisely the same. When you've seen say twenty generations of brachiosauruses munching a thousand or so generations of bananas, even if all these generations are but an evening in thy sight, there must be a degree of boredom. Imagine, then, the tedium of endless generations, or of one endless generation. Variety is essential to any form of enjoyment. A symphony with one repeated note, a play with one repeated word, or a football match in which everyone stands stock still for ninety minutes – these will not set the pulses racing.

In general, change and ending are integral to any spectacle. Much though we may regret the fact that our moments of glory or bliss do not last for ever, we would certainly regret it even more if they did. And rather sickeningly, it has to be said that if the daily news consisted of nothing but happy reports of how well everything was going, we would very soon long to hear some bad news. We in England love our sunny summer days, but hot sun 365 days a year? It is the mixture of good and bad that makes even our own lives richer, and since change involves endings and beginnings, we can scarcely complain even on our own behalf that the designer's work is faulty in this respect. That is not to condone the seemingly needless pain and suffering mentioned earlier, but we are trying to see the whole picture, and to

understand it – not to pass judgement. Our hypothetical designer would probably have introduced the concept of endings because it was the only way that the programme could be made interesting, both for it and for us.

Whether the designer will also come to an end in five billion years is a little difficult for a mere agnostic to say, but the line of speculation that I should now like to follow is that of our own ending. If the atheists are right, and we are miraculous descendants of a million astonishing coincidences, then of course there can be nothing after death. If there *is/was* a designer of a purely physical nature – the colossus whom we cannot see – then the same applies. But if there *is/was* a designer on a different plane from ourselves, which for want of a better term I have labelled “spirit”, then an afterlife as a spirit cannot be discounted.

Before wandering off into this “undiscover’d country”, I should like for a moment to consider what *is* life and, for that matter, what *is* death. Even the vast collection of complex, interconnected organs that make up our bodies are just lumps of matter without the spark, the breath, the lightning that sets them in motion. Darwin talked of life having been “breathed” by the Creator into a “few forms or one”. There is no doubt that when we die, something stops, the engine cuts out, the light goes off, the bubble bursts – but what is it that leaves us? And when it all began, a thousand ages ago, what was it that entered us? We do not know. There is no scientist on earth who can tell us. There is no atheist or theologian on earth who can tell us. Since we do not know, we must keep an open mind about the possibilities.

The third category of originator (chance and a physical designer being the first two) presents the option of another form of life. If it created us in its image, then the body may be the container, and the other form may be the content. What we said earlier about ghosts and mediums comes into operation in this context: if just one story or one “contact” is genuine, then the whole scenario is real. Life on Earth would then be only a chapter in our history.

Some people have been brought back from the dead (so-called Near Death Experiences) and have reported extraordinary things – an amazing light, peace, contact with their loved ones, out-of-body observation of the activities going on around the body they have vacated, a sensation of oneness with the universe. In some cases, clinically dead patients have witnessed scenes or acquired information subsequently confirmed by independent witnesses. You would need to have rock-solid faith in your limited tools of perception and comprehension in order to ignore

the claims of every single testimony.

Near Death Experiences are perhaps the most powerful evidence we have of Cartesian dualism. If the brain is dead but the mind survives, the inference can only be that instead of producing consciousness, memory, will, identity etc., the brain is a vehicle - a receiver, not a transmitter. Consciousness in all its manifestations remains one of the great mysteries. Despite all the progress made by neuroscience in pinpointing and tracking the electrical processes that go on in the brain, we are still no nearer understanding how chemicals can create self-awareness. Maybe they don't.

Do we want an afterlife? The question is totally irrelevant to our quest for truth, but it is worth asking all the same, since it might influence our beliefs. The answer in most cases would probably be: "It depends..." We certainly don't want an eternal hell. An eternal heaven sounds attractive, though impossible to visualize without the dreaded element of boredom taking over. What about perfect peace? Well, perfect peace would surely be eternal, dreamless sleep. And that is what we think of as death. Since in this life we are unlikely to know the answers to our most fundamental questions, the agnostic can look forward to death with a degree of enthusiasm (though I'm talking of death itself, and not the act of dying, which may be a dreadful ordeal). Either there will be perfect peace, which can't do us any harm, or there will be a new life in which we may learn some of the longed-for answers. We should not discount those philosophies and religions such as Buddhism and Hinduism that promise (or threaten) a new life on Earth in another form, or maybe as another person, but even that prospect need not worry us unduly. Only one of the options is really frightening, and that is the much disputed concept of hell. But in order to understand such concepts, and in order to gauge the possible nature of an afterlife, we need to consider exactly who or what it is that will enter it. This is a question of identity.

9. Identity

If the spirit is the essence that gives us life, and if it does survive after the body's death (i.e. if there is an afterlife), who is it? No problem when the medium says, "Your Uncle Charlie is here", or when we find out that the headless lady in the corridor was Mrs Smith whose husband accidentally missed the log. But what if Uncle Charlie died of Alzheimer's? Will the spirit then have no clue as to who it is, or who it meets? What if it's a baby? Will it spend eternity, or at least a few billion

years, communicating sweet nothings? What if it's an alcoholic, a drug addict, a schizophrenic? Are there cures out there in the spirit world? What if the person was a murderer, a rapist, a megalomaniac, a shyster? Any chance of reform? Is the spirit capable of change at all? What would change it? The very fact that the medium can tell you Uncle Charlie is here suggests that the spirit not only knows who it is, but also knows who you are, and so by inference will know who other familiar spirits are. What, then, goes on in that bodiless world? An endless round of social intercourse via telepathy?

And if the spirit is the essence that gives us life, let us not forget that every insect, reptile, mammal, bird is possessed of the same spirit. We shall talk about animals later, but they too are alive one second and dead the next, and they too have an identity. How will our brachiosaurus spirit cope when it meets the spirit of the tyrannosaurus that ripped it to pieces?

The fact is, we cannot conceive a spirit world. It raises so many questions that the whole concept becomes laughable – sheer pleasure for the atheist, who can ignore his own blinkered vision by dismissing the blinkered vision of others. And yet... we are still faced with the need (a) to discredit every single spirit tale, report, communication, sighting, and (b) to identify what it is that gives us life. We always come back to the problem of origins, and if we are unable to share the blind, unreasoning and unreasonable faith of the theist or the atheist, we must consider the alternatives.

Is there a scenario that can encompass all the ghost stories and yet at the same time remove all the problems associated with the spirit world – what will be our identity, how do spirits pass the time, where does the animal world fit in, etc.? A lot of ghost stories concern spirits that cannot “rest”. This at least gives us one way out of our dilemma. If rest is the problem, then death is the solution. The dreamless sleep of death is the perfect rest and provides the perfect peace beyond all understanding. (One form of Buddhism which blames most of our ills on our human cravings sets us the goal of losing our "self" in order to achieve this perfect peace. Taken to its logical extremes, the ideal course of action would seem to be suicide!) And so maybe the vast majority of spirits (remember, I use the word only to describe the unknown spark that gives us life) die with their bodies. The current is switched off. But maybe in some cases, it lingers for a while, independently of the dead body. Just as the amputated limb continues to hurt, maybe the spirit hurts too. Maybe the death of the spirit is a loss of the will to live (= the desire to rest), but the will to live survives in those who

for whatever reason feel they need to go on: to right a wrong, to contact the living, to find out what happens next.

Another possibility with regard to ghosts lies with the observer: as we have seen, light waves theoretically go on for ever, and so perhaps the observer is able to shift his or her position in time/space, and latch onto the ongoing waves, “seeing” the past. This doesn’t explain the medium’s contact with the dead, who send messages to the living, but the ability – conscious or otherwise – to move onto another wavelength would be a common feature between the two sets of claims. This may even be on a par with the ability of animals to perceive things that humans can’t perceive. We know for a fact that there are, for instance, sounds beyond our hearing, and there are innumerable verified tales of animals sensing danger long before we do. Perhaps in some people there is the same heightened sensitivity to the “waves”, the “vibes”, or whatever you want to call them.

“Perhaps” is not the sort of word to find favour with your scientist or your self-confident theist or your equally self-confident atheist. They all want firm truth, and “perhaps” is worthless to them. But your scientist can only investigate the material universe, and your believer and your atheist rely ultimately on faith, and since neither the material universe nor faith can provide us with a provable explanation of the origins of life, reproduction, etc., “perhaps” is the best we can do. And within its parameters lie not only infinite possibilities, but also guidelines for future research into the nature of consciousness and communication, and into the forces that make us what we are.

10. Animals

Darwin believed that all living creatures were descended from just a few or one original species. Humans and the apes had a common ancestor, and for all the imperfections of the geological record, there can be no doubt that in terms of skeletal structure, organs, senses, reproduction, digestive processes etc., all mammals have a vast array of common features. The inference that they are variations on a theme seems inescapable, and from this we can extrapolate all kinds of fascinating insights into the nature both of animals and of humans.

One of the most important has to be the fact that the distinction I have just drawn is false. A human *is* an animal. It is therefore a mark of intellectual arrogance to denigrate the instincts, feelings, sensitivities and capabilities of animals as being

somehow inferior to those of a human. Mammals (I shall confine myself to these, as they are our closest relatives) can only survive by reproducing, caring for their young, feeling and responding to pain, finding food and drink, protecting themselves against their enemies, etc. If they are “programmed” to do this, then so are we. (We shall not delve here into the question of who or what devised the “programme”.) Our quest for survival is the same as that of other animals, and the idea that animals feel what we feel is not an anthropomorphic projection, because it is the other way round: in the evolutionary order of things, they came before us, i.e. we inherited the programme from them, and so we feel what they feel. An elephant mother loves its baby, nurtures, suckles, protects it just as we do, and if the baby dies, the elephant grieves. There are countless examples of animals expressing emotion, and you don’t even have to be a zoologist or a wildlife observer to experience this. Anyone who has lived with a cat or dog will know that it has feelings.

Another vital element in survival is communication. We pride ourselves on the complexities and range of our languages, but again these are only extensions of animal language. Scientists have observed that different animal sounds have different meanings, and it is known that there are sounds we cannot hear, and some may travel over vast distances. Our senses in many areas are inferior to those of other animals, and it may even be that our superior brain power has adversely affected those senses, as we do not rely on them so much. Natural selection may emphasize that which is advantageous, but perhaps it also creates a balance whereby one feature is enhanced and another shrinks. A heightened sense of smell may accompany a diminution of vision or vice versa.

The point I am making here is that we have lost sight of our animal origins, and because we have done so, we have misunderstood a huge area of our own behaviour. Before we discuss the animal nature of humans, however, we should consider human influence on other animals.

Knowing as we do that they are our fellow creatures, and share so many of our traits, we should not assume that their suffering is any different. They cannot describe their feelings in our language, but a cry of agony is the same in any language, human or animal. To inflict pain on an animal is in principle no different from inflicting pain on a human, and anyone who uses the excuse that they are different from us is merely one step away from the most appalling crimes in human history: Europeans enslaved Africans; Hitler murdered Jews; Sunnis and Shias, Tutsis and Hutus, Israelis and

Palestinians slaughter one another with the same excuse. Difference is no justification for cruelty or destruction.

This is clearly an argument in support of the animal rights movement, but it needs to be tempered. Even though there can be no excuse for deliberately inflicting suffering on animals, this is not a reason to reverse processes that appear to be natural, and it most certainly is not a defence of violence to prevent violence. For an animal rights supporter to go round killing medical scientists is equivalent to a member of the Zebra Protection Society shooting lions. If we use animals for meat or for vital research, for instance in combating disease, then that is part of the whole evolutionary pattern by means of which survival depends on advantage. But on the other hand (agnostics cannot help waving the other hand), we must impose limits on our advantage if we are to maintain it. By over-exploiting or killing off other species, we will ultimately deprive ourselves not only of our own food sources, but also of the biodiversity and the ecological benefits that those species bring to our planet.

As far as our own animal nature is concerned, so caught up are we in our self-awareness that we forget what we are. It is a similar process to that by which we build streets and houses to form a city, and then forget that underneath is a layer of earth, and if we once more removed the streets and houses, there would once more be earth. We cover up nature, and we cover up ourselves. This is not to say that we do *not* differ from other animals - above all, we certainly have a unique degree of awareness and intelligence - but until we recognize the common features, we shall never attain a proportionate view of ourselves or of them.

11. Humans

It is surely the designer's absolute masterstroke (or the masterstroke of mindless, emotionless, sexless chance) that our survival depends on love. Once single-cell reproduction had given way to sexual reproduction, there had to be a union of bodies, followed by a period of motherly devotion. Without these two phases, survival of the species would have been and still is impossible. Although sex is obviously not synonymous with love, there are many creatures that mate for life, and even if humans are not necessarily among them, nevertheless, the initial union of man and woman is generally a mixture of the physical and the emotional.

The second phase, in which the mother (and one hopes, in the case of humans, the father too) nurtures, feeds, protects, teaches, etc., is one of absolute devotion. The

baby is helpless. Without parental love, it must die. As far as we know, animals provide that love spontaneously. A lioness does not need to be taught how to give birth, how to suckle, etc. Humans do, or at least they do in societies that like to think of themselves as sophisticated. Parenting is a subject for study, for theory. We write books about it, we hold courses, we even change direction, as one fashionable expert gives way to another. This applies to all the activities that animals perform naturally, and it is symptomatic of the loss of animal spontaneity that it makes us forget what we are.

Lest the religious believer be carried away with the notion of love being evidence of the designer's beneficent nature, we need to redress the balance by mentioning another process without which we cannot survive – namely, eating. When life according to the atheist sprang spontaneously into existence, and spontaneously created its own reproductive system, it also originated an extraordinary process of fuelling. The complexities of the digestive system need not concern us here, though. In this context, we are considering the nature of humans and other animals as a reflection of their possible designer, and eating is the very converse of the love we have just lauded. If the absorption of other matter is a scientific necessity (and we must face the fact that life requires energy, and energy requires fuel), why – even before the arrival of humans – did the designer not confine the concept of food to things without feelings? Drink too is essential to life, but it is probably safe to assume that water has no awareness, no sensitivity to pain. It is a moot point whether plants have feelings (though modern research continues to reveal aspects of their intelligence). But animals most certainly do. To make the survival of some animals dependent on their killing other animals seems cruel in the extreme. And totally unnecessary.

When eventually we humans came on the scene, the pattern was already clear. We were ready to kill and eat anything. Not only that, but other patterns were also clear: animals would fight for territory, for mates, for leadership. Violence was integral to the fabric of life. And from all this violent competition and conflict, from the endless struggle for survival and power, comes much that we call sin. How absurd, then, to claim that Adam and Eve were in any way responsible for it, when the entire system of selfishness and destruction was established long before them.

So far as we know, our ancestors lived much like animals: they inhabited caves, reproduced, nurtured their young, went out to hunt and kill, and taught their children

to do the same. The fact that they devised tools to make the task easier does not mean that the task itself was any different. But if we now leap forward to modern humans, we find two things: 1) that the task has been institutionalized, and 2) that it has been vastly expanded.

The repercussions of “institutionalization” reach into most areas of our existence. We have already mentioned the possibility that our senses have been dulled by the dominance of our intellect, and when it comes to food, shelter, defence/attack, education and all the other facets of our push for survival, we have created an enormous range of mechanisms that hide the animal nature of the processes. Our food industry is an extension of the hunt; our houses are an extension of the caves; our arms industry is an extension of teeth and claws; our schools are an extension of parenting, and so on.

But despite our extraordinary self-awareness, we remain helpless in the grip of the same instincts that govern other animals. We are, if you like, still “programmed”, and no matter how much we may rationalize, analyse and theorize, the basics remain exactly the same. Instead of hunting, gathering, etc., we go to the office so that we can pay for the kill or the fruit, for the cave, for the protection, for the parenting. This is a major problem for all human-centred religions: they cannot accept the idea that man was not at the forefront of their god’s thinking when he began the life process. Even though they know that the so-called animal kingdom preceded the human kingdom by millions of years, they still cling to the idea that the *real* beginning was the arrival of humans, and that humans have a unique place in the pattern. They do not ask why it took their god so long to put us here, and they do not see that the savagery of our human world is no more than a continuation of the system that has made nature “red in tooth and claw”.

Why does it matter? When Darwin first propounded his theory, there was an outcry against the idea that humans and monkeys were descended from a common ancestor. It was as if people were in denial of their animal nature, and in denial of the facts placed before their eyes (the physiological similarities, and the shared basic needs). But perhaps the denial went and still goes deeper – right into the heart of the hypothetical designer. Once we acknowledge the fact that, for all our sophistication, we are only part of a developing process that began with creatures we deem to be inferior to ourselves, we open up the terrifying possibility that if there is a God, we are not in safe hands.

12. Religion

We have already noted the fact that the fossil record has not yet produced a single dinosaur church. It is a fairly safe bet that it never will. From present-day observation, it would seem that animals other than ourselves do not worship, although admittedly our inability to understand animal language makes it dangerous to state this as a given truth. Religion, then, is one area of existence that we probably do not share with other animals.

Man's extra levels of consciousness have enabled him both to worship and to deny his designer. We have considered at some length the case against atheism, which is relatively straightforward: in addition to psychic experiences, life and all its associated processes are too intricate to have come about by chance. We have also considered the alternative, which is far from straightforward: a designer. To recap on this: if there is such a being, it may be physical, it may be "spiritual", it may be dead, it may be absent, it may still be present. We have considered its possible nature and its possible motivations. What we have not yet considered is the impact on human society of human speculations regarding the designer.

If we believe in a conscious creator or creators, we must face all the possible scenarios listed above, and since this is precisely the area of existence that is dealt with by religion, we can scarcely ignore the descriptions offered to us. Each religion claims to have captured the truth, which in itself makes all of them suspect, but what most of them have in common is the idea that the designer is interested in human affairs. In monotheistic religions (Judaism, Christianity, Islam) there is also an abiding faith in the beneficence of the deity, while polytheistic religions like Hinduism at least offer the believer a variety of gods and goddesses - a pleasing equal opportunities policy here - ranging from the adorable Krishna to the terrifying Kali. (It has been claimed that Hinduism boasts over 300 million gods, although it is also claimed that every one of these merely represents particular aspects of the one Supreme Being.) As far as interest in human affairs is concerned, this seems logical (if the designer is still around), as there would be little point in its creating an on-going saga if it was *not* interested. But what humans cannot bear is the thought of a malevolent or even an indifferent designer. This is the ultimate nightmare.

The Bible, however, is full of examples of God's cruelty and injustice. Right from the start, it creates the tree of the knowledge of good and evil (which it created because it created all things) together with the serpent which, in its omniscience, it

knows will tempt Eve. As a result of the fall, which it thus engineers and of which it already knows the outcome, it proceeds to condemn all of us for our "original sin", and this according to Christianity can only be overcome through baptism and loyalty to Jesus. "He that believeth on him is not condemned; but he that believeth not is condemned already, because he hath not believed in the name of the only begotten Son of God" (John 3:18). At a stroke, then, John's Christian God condemns not only the non-believers, but also the unbaptised - every Jew, Muslim, Hindu, Buddhist, etc. that ever lived, not to mention those poor unfortunate souls that have never heard of Jesus or were unlucky enough to be alive BC. Can any of us truly believe in, let alone condone such unfairness?

The answer is yes. Jehovah's Witnesses even assert that the number of souls saved will be limited to 144,000: "And I heard the voice of harpers harping with their harps....and no man could learn that song but the hundred and forty and four thousand, which were redeemed from the earth." It's not clear if the harpers harping with their harps were among the chosen few, but even if we add them to the 144,000, it still seems grossly unfair that all the good folk of the Old Testament, not to mention those of other cultures, should be condemned.

But the tone, as we have seen, was set right from the start. Consider the tale of Cain and Abel: "Cain brought of the fruit of the ground an offering unto the Lord. And Abel, he also brought of the firstlings of the flock and of the fat thereof. And the Lord had respect unto Abel and to his offering: But unto Cain and to his offering he had not respect." Why? It would seem that the Lord was happy to see innocent, pain-sensitive lambs slaughtered in his name, but didn't much fancy the vegetarian diet.

Noah's flood is such a sweet tale of good old Noah and the two-by-two menagerie that we conveniently forget how the Lord deliberately destroyed every man, woman, child and unborn child (not to mention the animals) on Earth. The harrowing scenes that we now see on our TV, when tsunamis and hurricanes smash cities and drown their inhabitants, would have been nothing compared to the destruction the angry Lord deliberately wreaked on Noah's contemporaries.

Of all the books in the Old Testament, that of Job comes closest to challenging the idea of God's beneficence. Even the Lord describes him as "a perfect and an upright man", and yet he deliberately destroys this good man's family, home and property. Initially, Job accepts his fate, but eventually the agony is too great, and he rails

against the injustice of it all in some of the finest poetry to be found in the biblical history of human suffering:

"Thou knowest that I am not wicked...Thine hands have made me and fashioned me round about; yet thou dost destroy me. Remember, I beseech thee, that thou hast made me as the clay; and wilt thou bring me into dust again? Hast thou not poured me out as milk, and curdled me like cheese?" Eventually, after much debate with his friends, Job gets his answer from God himself, and what an answer it is: a long list of all God's achievements and mighty powers. "Where wast thou when I laid the foundations of the earth?" he asks. "Knowest thou the ordinances of heaven? Canst thou set the dominion thereof in the earth? Canst thou lift up thy voice to the clouds, that abundance of waters may cover thee? Canst thou send lightnings, that they may go, and say unto thee, Here we *are*?" The Lord's basic response to Job's criticism of his divine cruelty and injustice is to boast of his powers and to belittle his suffering victim. Sadly, though not surprisingly, the perfect and upright man is cowed, and meekly gives in: "I know that thou canst do every thing, and that no thought can be withholden from thee...Wherefore I abhor myself, and repent in dust and ashes." And God rewards him with thousands of sheep and camels, seven sons, and three amazingly good-looking daughters.

The New Testament, as we have seen, culminates in bloody execution, with the Lord allowing his "only begotten son" to die an excruciatingly painful death in order to "redeem" mankind for the original sin that God himself had engineered at the start of the story. This redemption will be granted if we believe in Jesus, but won't if we don't, so what exactly was the point of the execution in the first place? We could profess our love of Jesus, and obey his commandments, even if he'd died of old age. No wonder he cried out in despair at God's forsaking him.

The list of the Lord's cruelties and injustices is endless, and yet the Jewish, Christian and Islamic God is praised for his infinite goodness. Hence the great unanswered question posed by theodicy. So what is the truth-seeker to make of all this? As someone brought up in the western tradition, I read these tales and cannot equate the God of the Bible with the God of these religions. The written "evidence" that we are urged to study provides no comforting answer to the burning questions of how evil originated or of why the designer inflicts such arbitrary pain on his creations, even when they are upright (Job) or innocent (every babe slaughtered in God's indiscriminate catastrophes). Even if I were to accept St Thomas Aquinas's

explanation of evil as man's abuse of free will, necessary for doing good, or Leibniz's view of it as the necessary contrast to highlight the goodness of goodness in this the best of all possible worlds, it still won't separate God from the origin of evil. How could a first-cause, all-powerful, all-knowing God create out of itself a world which it knows will produce evil, and yet be all-good? And what can excuse *its* cruelty, as opposed to that of us humans?

Let us not, however, equate religion with God. Maybe, as we discussed in the section on "origins", the tales are true and the interpretation is false. After all, the Flood is an event common to many histories and cultures: it is part of the Epic of Gilgamesh, recounted in a text from the library of Ashurbanipal of Nineveh (who reigned 668-627 BC), and even earlier is the myth of Ziusudra, the Sumerian Noah. The Chinese ruler Yü conquered the Great Flood, and the Aztecs, Incas and Maya all had their equivalent of the tale. Events are recounted, passed down from generation to generation, eventually written down by someone - generally long after the event itself - and lo and behold, we have a myth that might once have been a history. The borderline between truth and fiction becomes impossibly blurred, each telling is fashioned by the teller, and if he or she believes in God, then of course God is assigned his major role. The reader of the story must draw his own conclusions. In the case of the flood, which indiscriminately destroyed both humans and animals, one is left with the same choice as usual: accident or design? And if it was by design, then maybe the designer is indeed cruel and unjust. So why pretend otherwise?

What we have here is an extraordinary capacity to dismiss or ignore contrary evidence. It is precisely the same head-in-the-sand tactic that marks the atheist's insistence on the inventive genius of unconscious matter. Another analogy might be the child who closes his eyes in order not to be seen. Why do we do this? Perhaps it all goes back to survival instincts, and is our means of coping with fear.

That we all have to die is the only certainty we have, and so it is amazing that we do not spend every minute of the waking day trembling with terror. But we shut death out most of the time. We get on with living. If we didn't, we would soon become gibbering wrecks. Shutting out unpleasant truths is part of our mechanism for survival. Another of those mechanisms is to talk ourselves into believing what we want to believe. Politicians are particularly adept at this: when they have made a mistake, or have told lies, they will seize on any half-truth, any glimmer of justification that will rescue their image, not only in the eyes of others but also in their

own, because very few people are able to live with the knowledge that they have been wrong or are perceived to have been wrong. Not even scientists are immune from the process of self-delusion. History is filled with cases of scientists who have falsified evidence, or have ignored and even suppressed evidence that goes against their findings.

Why would an atheist ignore the evidence for design? Perhaps for the same reason as a theologian will ignore the evidence for a less than benign god. We do not like the idea of being watched, and we do not like the idea of someone having total power over us. Worst of all is not only to be watched by and subject to someone with total power, but also to know that the someone is or may be ill-disposed towards us. Besides, even if the someone were benevolent, he would still be in authority, and he would lay down laws and make us feel obliged to obey. Freedom from such authority is an attractive proposition. Given the choice between that and serving an obscure but distinctly threatening power, most people would, I suspect, choose freedom. That freedom is guaranteed by atheism - which of course does not mean freedom from moral and ethical principles or the need for empathy and compassion which should lie at the heart of human behaviour and of all societies. (Atheists, contrary to some religious propaganda, can be no less caring than theists, and may well be even more so when religion turns into bigotry.)

On the other hand, to be alone in the universe, to have no prospect of help from above, to contemplate one's own oblivion – these are equally daunting prospects. So we embrace the concept of the deity. Especially in poorer societies, the divine creator is often integral to the hope for a better future. But hope and comfort will not be nourished by the concept of a cruel or arbitrarily partial designer, any more than they would be under the rule of a cruel or arbitrarily partial human dictator, and so we cherish the concept of the just and loving god. If the not so loving god is evoked, it is in the context of punishment – be good or else the bogeyman will get you.

For an agnostic, all things theoretically are possible, though all seem equally impossible, but fear should not come into the equation. The criterion should be truth. And since we do not have an undisputed truth, we ought to remain open-minded. Should I then have taken seriously the belief of the pre-war Japanese that their Mikado was descended directly from the sun-goddess Amaterasu Omikami and was therefore sacred and inviolable (a faith rudely shattered by their defeat in 1945)?

Should I believe with the Ngoni people of East Africa that if they pour beer into a pot, pray to their rain-god, drink the rest of the beer, and then do a song and dance, the rains will come? When I watch a Western, and see the native Americans in their war paint, leaping round their totem poles singing songs I do not understand, should I accept that their link with the designer is just as feasible as any other? The answer has to be yes. If I'm expected to take seriously the Catholic claim that the Pope derives his authority directly from Jesus, and is therefore infallible, and if I'm expected to take seriously the genuflecting before a statue flecked with red paint, the splashing of "holy" water on the forehead, the consumption of "consecrated" bread and wine, the counting of beads, the mumbling of verses and archaic formulae, the gaudy costumes, the miraculous narratives, then of course I must take their non-European counterparts seriously, for there is absolutely no difference between them. Either they are equally valid, or they are equally absurd, depending on whether or not there is a designer who is paying attention.

This, of course, we do not know. In its way, the very fact of our ignorance is comforting. Let us by all means continue the search – indeed it is our nature to do so – but let us ask our questions with calm acceptance of our ignorance, and with the impartiality that ought to be the hallmark of science. People spend vast amounts of time predicting the future: weather forecasts, football pools, opinion polls...but the future will come anyway, and our predictions have no value beside the actual happening. Very well, then, let us enjoy the present, and when/if the truth is revealed to us in due course, we shall know it. If it is not, we shan't. There may be exciting times ahead, or there may be nothing, but either way, we shall be no worse off than we are now.

As far as religion itself is concerned, and its impact on human society, let us give it due credit for bringing consolation to those in need of relief, for providing moral and ethical guidance where its laws are not oppressive, for its charitable works, and for offering us a possible explanation of life's deepest mysteries. On the other hand, let us not ignore the evils committed in its name and, in many cases, by its instigation, and let us not be misled by its inconsistencies and its cover-ups. As with everything else in the accidental fabric or the deliberate design, religion is a mixture of good and bad.

13. The arts

So far we have stressed the animal nature of humans, but we have distinguished them from the beasts because of their heightened consciousness (which, among other things, has given them the capacity to deny or worship the power that may have designed them). Language in its broadest sense is not unique to humans, since all creatures have various means of communication, and even the use of tools is only an extension of nature, although our resultant technologies clearly give us enormous advantages over all other species.

There are, however, some areas of our lives in which we appear to differ strikingly from the beasts: we have an insatiable curiosity which has led to the pursuit of knowledge for its own sake. Animals may be inquisitive, but there is no reason to suppose that they will investigate the world's phenomena for any reason other than their relevance to survival. We, however, need to know. It's true that the practical applications of science fit in with the whole evolutionary process as it pushes on towards some kind of perfection, but we will investigate all things, regardless of practical value. We are aware of mysteries, and are uncomfortable until we have solved them. The atheist would argue that religion is a misguided attempt to solve a mystery by manufacturing a solution that entails another mystery, whereas the believer would argue that atheism is a misguided attempt to solve a mystery by claiming that there *is* no mystery or, at best, science will one day provide materialist answers to every question.

Of all our human activities, the arts are what seem to take us furthest away from the animals whose ancestry we share. Music above all epitomizes the aesthetic sense which transcends understanding. The animal kingdom produces its own sounds, of course, but so far as we know, these are functional and form part of the communicatory processes. They are indispensable to survival. Some of the greatest minds in our culture pay homage to the work of composers, painters, sculptors and writers, and our lives would be infinitely poorer without them. And yet generally speaking, they are of no practical value. They may provide usable insights into the way the human mind and human society function, or challenge our modes of perception, or draw our attention to facets of the world we might otherwise be unaware of. But how many poems or novels, paintings or sculptures, have actually changed the way the world functions? Not even the plays of Shakespeare – although they have spawned a vast industry and keep thousands of people in employment – can

be described as indispensable or even contributory to the survival and continuation of our species. Music, though, is the art most remote from the practical world, and its appeal presents an insurmountable challenge to our understanding.

Why should a combination of sounds with no articulate meaning (let us, for argument's sake, consider only instrumental music here) have such a profound effect on us? Why do I want to weep at the end of Tchaikovsky's 6th Symphony, melt within at the adagio of Schubert's C-major String Quintet, wave my arms, tap my feet, dance like a dervish during the last movement of Beethoven's 7th?

In everyday life we experience emotions such as love, fear, joy, etc. without questioning what processes actually take place to make us "feel" them. We take them – as we take most of our functions, both physical and mental – for granted (until they go wrong). I blink, breathe, sit, stand, move, etc. without ever thinking about how I do it. The body takes over as soon as the mind decides on an action – or if it is an ongoing action like breathing, the body performs it without my even instructing it to do so. Emotions are the same: my "feeling" of love, fear, joy comes automatically according to the situation, and I do not ask what is going on inside me. I merely relate the feeling to the situation. With music, there is not even a situation to relate to. Only meaningless sounds. To a degree, the same applies to art and sculpture – whatever the nature of their appeal, they are normally unrelated to our own, real lives. Why, then, do they "move" us?

The question inevitably takes us back to origins. In terms of the purely physical universe, where do emotions and aesthetics spring from? Remember that the atheist's starting point is mindlessness – total inanimateness. Even if you can accept the extraordinary coincidence of inanimate matter forming itself at one and the same time into something live and able to reproduce itself, what gave birth to the hitherto non-existent and – so far as we know – also non-physical spheres of "feeling" and, especially, of artistic expression, which in itself is of no practical value (the crucial force that drives evolution)?

There is an additional mystery here. Any writer who visits a primary school will confirm that one of the most frequently asked questions is: "Where do you get your ideas from?" Small children are aware of the problem, even if they do not see its implications. In the creation of artworks, there are strange mechanisms in operation. Ideas generally spring from the so-called subconscious mind. Suddenly, out of the blue, a writer will get an idea: some will then begin to plan their tale, whereas others

will simply allow the idea to develop of its own accord. Even those who plan will tell you that more often than not the characters force them to abandon the plan. They take on a life of their own. We do not understand the mechanism ourselves. Michelangelo once said that the statue was *already* in the marble; he only had to find it.

Perhaps I might be allowed a little digression here, as there may be an interesting parallel between the process of writing plays and novels and that of a possible God's possible approach to the "writing" of life, and especially human life. It lies in the autonomy of the characters. If we imagine the designer now as the writer, it comes up with its brilliant idea of living creatures imbued with its own spirit, and then eventually hits on the variation of characters with complete consciousness of themselves. From then on, it watches – and maybe even records – what they do. According to the Bible, it occasionally intervenes, but eventually it probably decides not to do so. The characters themselves must run the story against a background of ever changing conditions, to maintain a degree of unpredictability and to present renewed challenges. And this principle of *laissez-faire* might even cover the whole history of life as a possible God gives full freedom to James A. Shapiro's intelligent cells to design their own means of survival. The creator of the show then sits back and watches (though of course, just like the playwright, it can intervene if it wants to). For atheists this freedom is taken for granted. Either way, such autonomy can be viewed as a very feasible explanation of life's history, with its ever changing comings and goings, patterns and stories.

Let us now return to the mystery of origins. Where do ideas and melodies come from? Anyone - theist, atheist or agnostic - can ruminate on the workings of the subconscious mind as it and the conscious mind perceive and grapple with the realities of everyday life. These demand a response. But can anyone explain the origin and effects of melodies? Theists might perhaps claim that they are the medium through which their God does the composing - but occasionally the message gets garbled and perhaps God also dictates the revisions. Others might speculate on some variation of panpsychism, in which there is a unifying consciousness full of sounds and ideas that different people tune into in different ways, according to the individuality of their own conscious and subconscious minds. Dawkins is a music lover, but understandably sneers at any argument "linking the existence of great art to the existence of God". However, in *The God Delusion* that is all he can do. There is no mention of any mystery concerning how the music he loves comes into the minds

of the composers he loves and creates effects within his own mind. Dismissing God is all he is interested in.

I'm afraid my stock answer to the child's question is to acknowledge the mystery, and to admit that I can't solve it: "I don't know". There is no shame in this, and there is if anything more excitement, because an unsolved mystery is always more fascinating than one that has been solved. This applies to life as it does to art, and we continue to search for answers, because that is our nature. But of course the really important message is to enjoy the products of all the mysteries while we can. Not knowing the source should never spoil the love. At least theists, atheists and agnostics can all agree on that!

14. Politics and economics

Another obvious parallel is that between the designer and the Great Leader. History is littered with men (though interestingly, not many women) who believe or believed themselves to be living gods. Their aim is to redesign the world, and they nurture their own image even to the extent of erecting statues and inventing divine names for themselves. Other humans are there only for their benefit.

Of course, not all leaders are of that ilk. Some may even start out with genuine hopes and plans for the betterment of humankind. But in order to enter politics, one must first have the desire to change whatever is wrong with the world, and secondly have the belief that one can and should do so. These characteristics are already dangerous, since the desire and the belief are no guarantee of intelligence or human understanding. The arrogance of political, religious and philosophical fanatics who claim to “know” the truth is a massive threat to the wellbeing of anyone who comes under their influence.

So too is the blinkered vision of those who destroy the balance of nature for the sake of short-term profit. Whether that balance is the product of natural evolution or deliberate design is immaterial, since the result will be the same. Those who lead the processes of destruction (and it is humans who take these decisions, even if they hide themselves behind the façades of the corporations) impose lines of thought that are based either on claiming to “know” or on deliberately brushing aside those ideas that run counter to their “knowledge”.

It may be argued by those who are committed to a single thought system that without such commitment there can be no decisions and no actions, but of course that depends on commitment to what. A commitment to open-mindedness and tolerance should surely be one hallmark of any fair and balanced society. Conflict arises from commitment to blinkered vision; my family/tribe/country is superior to yours; my religion is true and yours is false; my company's profits are all that matter; I want to be monarch of all I survey. The basic commitment of all religious and non-religious systems - political, economic, social - should be the betterment of the human condition through the provision of food, shelter, healthcare, etc for all humans, and a respect for the environment which enables us and our fellow creatures to stay alive. Once again, theists, atheists and agnostics can surely agree on that!

15. What should be taught in schools?

This is one of the most controversial topics of the moment, since particularly in America the Creationists have been making a strong bid to force their world view into the curriculum. Sadly, the concept of Intelligent Design has been used as a cover for Creationism, which gives the latter an undeserved shade of scientific respectability and the former an undeserved shade of religious fundamentalism. ID is the basis of the case against atheism, but it is no more conclusive as an argument for the Creationists' God than Darwin's theory of natural selection is conclusive as an argument for the atheists' god of chance.

In *The God Delusion*, Richard Dawkins argues against the religious indoctrination of children (though one suspects that he would have no problem if they underwent anti-religious indoctrination). Few would dispute Wordsworth's assertion that "the Child is Father of the Man", especially in the light of the Jesuits' notorious educational slogan ("Give me a child until he is seven, and I will give you the man"). But without an Orwellian thought-police force, you cannot prevent parents from passing on their beliefs. Indeed if you tried to do so, where would state interference end? The histories of Nazi Germany and countless modern dictatorships give us the horrendous answer to that question. Besides, even in a comparatively free society, *any* single-track approach to the so-called "deeper" questions could lead to conflict within the home if the domestic belief is different from that taught in the educational establishment. If a child is told at home that there is a loving God looking after him, and at school he/she is told that there is no such thing as God, and science alone can give us reliable

answers, or only one God is true and all others are false, the result will be confusion and conflict rather than enlightenment and harmony.

This is where agnosticism comes into its own. Until there is universal recognition of the fact that *no-one* can claim a monopoly on truth, confusion and conflict are inevitable. Schoolteachers should not take it upon themselves to inculcate young minds with any one version, no matter how sure they may be of their particular beliefs. If anti-religious indoctrination is a sin, so too is religious indoctrination. Objectivity is all.

In view of the current dispute, however, let us be specific. The theory of evolution is pure science. It is based on scientific observation, and is argued from a scientific standpoint. It should therefore be taught in science lessons. However, Creationism and atheism are obviously not based on science, and if the question of origin comes up in class, no teacher has the right to push forward one of these faiths to the exclusion of the others. The answer has to be all - theist, atheist, and agnostic - or nothing. I'm in favour of all. When the child has been given the information, it can mull things over for itself and, in due course, come to its own conclusions.

So where does this leave religious education as such? There has to be objectivity. A single faith establishment can only breed prejudice, ignorance and intolerance. Instruction should encompass at least the most widespread faiths, including those that are not designer-orientated, such as Buddhism (the quest for human enlightenment), humanism (the belief that humans are the ultimate authority) and atheism (belief in chance), as well as the option to remain open-minded (agnosticism). But above all, what should be emphasized are those aspects of faith and religion that have common ground and that will lead young people to a greater understanding of human worth. Most religious systems encompass some form of social code that condemns sin and vice, and advocates neighbourly love and considerateness as well as worship of their god. The Jews have their Ten Commandments (Exodus 20: 2-17), and Jesus, when asked which was the greatest of these, picked two: "Thou shalt love the Lord thy God with all thy heart" etc., and "Thou shalt love thy neighbour as thyself" (Matthew 22, 37-39). The Qu'ran is filled with similar precepts: "You shall not serve any save God; and to be good to parents, and the near kinsman, and to orphans, and to the needy; and speak good to men, and perform the prayer, and pay the alms" (*The Cow*, 75-80). The most famous Hindu of modern times, Mahatma Gandhi, preached and practised non-violence, self-sacrifice and reconciliation. For Buddhists, the path to Enlightenment

entails "right views; right aspirations; right speech; right conduct; right livelihood; right effort; right mindfulness; and right contemplation" (from the *Dhammacakkappavattana Sutta*). And Richard Dawkins himself quotes from an atheist website : "Do not do to others what you would not want them to do to you. In all things strive to do no harm. Treat your fellow human beings, your fellow living things, and the world in general with love, honesty, faithfulness and respect. Do not overlook evil or shrink from administering justice, but always be ready to forgive wrongdoing freely admitted and honestly regretted. Live life with a sense of joy and wonder" (<http://www.ebonmusings.org/atheism/new10c.html>).

This is the common ground, and it should not be swamped by efforts to prove that one faith is truer than another.

16. Miscellaneous

Among topics frequently raised on the website were free will, the beginning of time, and what is reality?

Free will

I must confess that I'm not interested in the Augustinian belief in predestination (an omniscient God already knows everything in advance), and as far as I'm concerned the answer to the question whether we have free will depends entirely on definition: freedom from what? Based on the precept that each of us is an individual self, my answer is: If you define free will as the autonomous ability of an individual within given constraints to make decisions independently from outside influences, then yes, we have it. ("Within given constraints" means physical limitations - we are not free to flap our ears and fly, or to walk out of prison.) If you define it as the autonomous ability of an individual to make decisions independently from causes and effects - including all the influences that have made us who we are - we don't have it. The former argues that no matter what those influences may be, they go to make up my autonomous individuality, and so all decisions are made by me, and me alone. The latter argues that my autonomous individuality, and hence every decision, has been shaped by circumstances beyond my control. Take your pick.

The beginning of time

There is widespread belief that the Big Bang marked the beginning of our universe and of time. There was no "before". It requires an extraordinary leap of faith to believe that this seemingly infinite expanse of matter sprang from nothing. And what constitutes "time" is - like free will - a matter of definition. I would define it as the sequence of before - present - after, and this is manifested by the process of cause and effect. We have absolutely no idea what caused the Big Bang (if that is indeed what happened), and so there can be no scientific evidence that there was no "before". Therefore there can be no scientific evidence that the Big Bang marked the beginning of time. Theists say that God is timeless, but the word is meaningless if we don't define 'time'. If their God caused the Big Bang, then clearly there is a before, and not even they can tell us what other causes and effects/befores and afters he might have created during his eternal past.

What is reality?

I have been amazed to hear from some folk who are engaged in the world of quantum physics and theory that they consider quantum reality to be the ultimate reality. The quantum world is a complete mystery to me, as I suspect it is to most outsiders, and I'm certainly in no position to question the findings of the experts, but for the life of me I cannot understand how they can prioritise realities. I totally accept that our own perception of reality is subjective. That does not, however, mean that there is no such thing as objective reality, although the nearest we can get to it is through some form of consensus. My stock answer in all these discussions on the relativity of realities is to invite my interlocutor to step in front of a moving bus.

17. A Mad World

In conclusion, it might be enlightening to look at our present world through the eyes of a possible designer, to see the truly astonishing follies we have come up with.

Leaving aside the positive advances in technology, of which the designer itself would certainly be proud, the top priority for insanity has to go to the destruction of the environment. Our conscious intelligence has led us inexorably to sitting on the end of a branch a hundred feet up, and sawing through it. With the destruction of our own world, we shall inflict untold suffering on millions of people – assuming the human race survives at all – and yet the wise leaders of our planet do precious little to stop it.

Not far behind, in this collective madness, is the fact that while the rich prosper by destroying the planet, the poor are the main victims of disease, natural disasters, and wars. In the west, mountains of food are destroyed or discarded, and at precisely the same time, other members of the same species starve to death. This extraordinarily intelligent race, capable now of exploring outer space, is totally unable to devise a system to preserve its own habitat and to protect itself from itself.

We apparently need leaders, and so we set them up - or allow them to set themselves up - as gods to rule over us, even though they may have no ability to do so wisely. We in England put someone in charge of education one day, and the next day ask them to take charge of the country's health. They must pretend to be experts, and we must pretend that they are. We have a collective suspension of disbelief much akin to the faith of religion and of atheism when it comes to those who govern us, although the faith is usually dispelled in a very short time.

In fairness to our politicians, there is no political system that can cope with the vast complexity of society as it has evolved, but that complexity is the result of our own misguided attempts at "progress". When humans were confined to small groups, the problems were also confined: humans did not need social welfare, imports and exports, police forces, educational institutions, transport networks, prisons, etc.

This chapter, though, set out to deal not so much with problems as with collective madness. What would the designer make of crowds of people gathering together and going into paroxysms of pleasure or despair when a ball goes into a net or a hole or a basket, while they remain indifferent to other humans dying all around them? A man who can kick a ball into a goal or sing a catchy song will be valued perhaps a hundred times more than a man trying to heal or save the sick. A sunflower will cost you perhaps 50p, but a painting of a sunflower will cost you more than you will earn in a lifetime. A hero may die in poverty, but the actor who portrays him will be paid millions for doing so. It seems that reality is not what we want. The artificial world of made-up values is what we cherish. Perhaps that, in the last analysis, is why religious believers and atheists make their leaps in the dark. They cannot bear reality.

Let me, however, conclude with our starting-point of agnosticism, and offer you two alternative forms of madness: 1) countless numbers of people, sums of money, buildings, institutions, wars, miseries, joys, works of art have been devoted to or have sprung from human worship of something that never existed; 2) the designer's creations are just beginning to understand, after centuries of conscious endeavour,

how life functions, but they are still unable to design an organism like themselves that can spring from inanimate matter into living existence, reproduce itself, adapt to changing environments, invent new mechanisms, and pass on its adaptations and innovations to the organisms it engenders. They believe, however, that if they ever can consciously and deliberately design such an organism, it will prove that they themselves were not designed.

Take your pick.

(Back Cover) **AN AGNOSTIC'S BRIEF GUIDE TO THE UNIVERSE**

"In my most extreme fluctuations I have never been an atheist in the sense of denying the existence of a God.— I think that generally (& more and more so as I grow older) but not always, an agnostic would be the most correct description of my state of mind."

(Charles Darwin, in a letter written to Sir John Fordyce, 7 May 1879)

Modern theists and atheists are frequently guilty of misrepresenting Darwin as the promoter of an irrational faith in the creative genius of nothingness. But as an agnostic, he clearly knew that it is as unscientific to claim that life, reproduction, heredity, adaptability and consciousness burst spontaneously into existence as it is to attribute these miracles to an unknown, omnipotent, omniscient, sourceless and eternal mind. Both theism and atheism require the leap into the dark which we call faith. Agnostics are simply unable to make such a leap. That should not be viewed as something good or bad in itself – after all, one faith or the other has to be closer to the truth – but it does call for open-mindedness, the lack of which is becoming ever more damaging to the human race, as it is to the planet in general.

In this brief guide, D.H.Wilson points out various flaws in the atheist argument, as epitomized by Richard Dawkins' *The God Delusion*, but at the same time poses fundamental questions about the designer figure common to the main monotheistic religions, as well as about other deities worshipped in other religions. By opening up the different fields of speculation which both atheism and religious dogma seek to close, he confronts us with a variety of possible explanations of life, as well as prospects ranging from perfect peace to fascinating worlds in other dimensions. The truth is hidden somewhere in these speculations, no matter how improbable they may all appear.

