

Inside Front Cover

We are all atheists about most of the gods that humanity has ever believed in. Some of us just go one god further.

Preface to the Paperback Edition

[...] religious opinion is the one kind of parental opinion that – by almost universal consent – can be fastened upon children who are, in truth, too young to know what their opinion really is. There is no such thing as a Christian child: only a child of Christian parents. (18)

Preface

[...] a picture of the Manhattan skyline with the caption 'Imagine a world without religion.' [...] Imagine, with John Lennon, a world with no religion. Imagine no suicide bombers, no 9/11, no 7/7, no Crusades, no witch-hunts, no Gunpowder Plot, no Indian partition, no Israeli/Palestinian wars, no Serb/Croat/Muslim massacres, no persecution of Jews as 'Christ-killers', no Northern Ireland 'troubles', no 'honour killings', no shiny-suited bouffant-haired televangelists fleecing gullible people of their money ('God wants you to give til it hurts'). Imagine no Taliban to blow up ancient statues, no public beheadings of blasphemers, no flogging of female skin for the crime of showing an inch of it. Incidentally, my colleague Desmond Morris informs me that John Lennon's magnificent song is sometimes performed in America with the phrase 'and no religion too' expurgated. One version even has the effrontery to change it to 'and *one* religion too'. (24)

If you were born in Arkansas and you think Christianity is true and Islam false, knowing full well that you would think the opposite if you had been born in Afghanistan, you are the victim of childhood indoctrination. *Mutatis mutandis* if you were born in Afghanistan. (25)

Being an atheist is nothing to be apologetic about. On the contrary, it is something to be proud of, standing tall to face the far horizon, for atheism nearly always indicates a healthy independence of mind and, indeed, a healthy mind. (26)

A Gallup poll taken in 1999 asked Americans whether they would vote for an otherwise well-qualified person who was a woman (95 per cent would), Roman Catholic (94 per cent would), Jew (92 per cent), black (92), Mormon (79 per cent), homosexual (79 per cent) or atheist (49 per cent). Clearly we have a long way to go. (26)

[...] I am inclined to follow Robert M. Pirsing, author of *Zen and the Art of Motorcycle Maintenance*: 'When one person suffers from a delusion, it is called insanity. When many people suffer from a delusion it is called Religion.' (28)

CHAPTER I

A DEEPLY RELIGIOUS NON-BELIEVER

Here's a particular example of our society's overweening respect for religion, one that

really matters. By far the easiest grounds for gaining conscientious objector status in wartime are religious. You can be a brilliant moral philosopher with a prize-winning doctoral thesis expounding the evils of war, and still be given a hard time by a draft board evaluating your claim to be a conscientious objector. Yet if you can say that one or both of your parents is a Quaker you sail through like a breeze, no matter how inarticulate and illiterate you may be on the theory of pacifism or, indeed, Quakerism itself.

At the opposite end of the spectrum from pacifism, we have a pusillanimous reluctance to use religious names for warring factions. In Northern Ireland, Catholics and Protestants are euphemized to 'Nationalists' and 'Loyalists' respectively. The very word 'religions' is bowdlerized to 'communities', as in 'inter-community warfare'. Iraq, as a consequence of the Anglo-American invasion of 2003, degenerated into sectarian civil war between Sunni and Shia Muslims. Clearly a religious conflict – yet in the *Independent* of 20 May 2006 the front-page headline and first leading article both described it as 'ethnic cleansing'. 'Ethnic' in this context is yet another euphemism. The original usage of 'ethnic cleansing' in the former Yugoslavia is also arguably a euphemism for religious cleansing, involving Orthodox Serbs, Catholic Croats and Muslim Bosnians. (43)

On 21 February 2006 the United States Supreme Court ruled, in accordance with the Constitution, that a church in New Mexico should be exempt from the law, which everybody else has to obey, against the taking of hallucinogenic drugs. Faithful members of the Centro Espirita Beneficiente Uniao do Vegetal believe that they can understand God only by drinking hoasca tea, which contains the illegal hallucinogenic drug dimethyltryptamine. Note that it is sufficient that they *believe* that the drug enhances their understanding. They do not have to produce evidence. Conversely, there is plenty of evidence that cannabis eases the nausea and discomfort of cancer sufferers undergoing chemotherapy. Yet, again in accordance with the Constitution, the Supreme Court ruled in 2005 that all patients who use cannabis for medicinal purposes are vulnerable to federal prosecution (even in the minority of states where such specialist use is legalized). (44)

The *Los Angeles Times* (10 April 2006) reported that numerous Christian groups on campuses around the United States were suing their universities for enforcing anti-discrimination rules, including prohibitions against harassing or abusing homosexuals. As a typical example, in 2004 James Nixon, a twelve-year-old boy in Ohio, won the right in court to wear a T-shirt to school bearing the words 'Homosexuality is a sin, Islam is a lie, abortion is murder. Some issues are just black and white!' (45)

The previous September [2005], the Danish newspaper *Jyllands-Posten* published twelve cartoons depicting the prophet Muhammad. Over the next three months, indignation was carefully and systematically nurtured throughout the Islamic world by a small group of Muslims living in Denmark, led by two imams who had been granted sanctuary there. In late 2005 these malevolent exiles travelled from Denmark to Egypt bearing a dossier, which was copied and circulated from there to the whole Islamic world, including, importantly, Indonesia. The dossier contained falsehoods about alleged maltreatment of Muslims in Denmark, and the tendentious lie that *Jyllands-Posten* was a government-run newspaper. It also contained the twelve cartoons which, crucially, the imams had supplemented with three additional images whose origin was mysterious but which certainly had no connection with Denmark. Unlike the original twelve, these three additions were genuinely offensive – or would have been if they had, as the zealous

propagandists alleged, depicted Muhammad. A particularly damaging one of these three was not a cartoon at all but a faxed photograph of a bearded man wearing a fake pig's snout held on with elastic it has subsequently turned out that this was an Associated Press photograph of a Frenchman entered for a pig-squealing contest at a country fair in France. The photograph had no connection whatsoever with the prophet Muhammad, no connection with Islam, and no connection with Denmark. But the Muslim activists, on their mischief-stirring hike to Cairo, implied all three connections ... with predictable results (46-47)

CHAPTER 2

THE GOD HYPOTHESIS

The religion of one age is the literary entertainment of the next – Ralph Waldo Emerson

The God of the Old Testament is arguably the most unpleasant character in all fiction: jealous and proud of it; a petty, unjust, unforgiving control-freak; a vindictive, bloodthirsty ethnic cleanser; a misogynistic, homophobic, racist, infanticidal, genocidal, filicidal, pestilential, megalomaniacal, sadomasochistic, capricious malevolent bully. (51)

The aptly named Oral Roberts once told his television audience that God would kill him unless they gave him \$8 million (53)

Jefferson heaped ridicule on the doctrine that, as he put it, 'There are three Gods', in his critique of Calvinism. But it is especially the Roman Catholic branch of Christianity that pushes its recurrent flirtation with polytheism towards run-away inflation. The Trinity is (are?) joined by Mary, 'Queen of Heaven', a goddess in all but name, who surely runs God himself a close second as a target of prayers. The pantheon is further swollen by an army of saints, whose intercessory power makes them, if not demigods, well worth approaching on their own specialist subjects. The Catholic Community Forum helpfully lists 5,120 saints, together with their areas of expertise, with include abdominal pains, abuse victims, anorexia, arms dealers, blacksmiths, broken bones, bomb technicians and bowel disorders, to venture no further than the Bs. And we mustn't forget the four Choirs of Angelic Hosts, arrayed in nine orders: Seraphim, Cherubim, Thrones, Dominians, Virtues, Powers, Principalities, Archangels (heads of all hosts), and just plain old Angels, including our closest friends, the ever-watchful Guardian Angels. What impresses me about Catholic mythology is partly its tasteless kitsch but mostly the airy nonchalance with which these people make up the details as they go along. It is just shamelessly invented. (55-56)

[Pope John Paul II said in 1981 after his failed assassination] 'A maternal hand guided the bullet.' One cannot help wondering why she didn't guide it to miss him altogether. (56)

[...] the fact that the United States was *not* founded as a Christian nation was early states in the terms of a treaty with Tripoli, drafted in 1796 under George Washington and signed by John Adams in 1799:

As the Government of the United States of America is not, in any sense, founded on the Christian religion; as it has in itself no character of enmity against the laws, religion, or tranquility, of Musselmen; and as the said States never have entered into any war or act of hostility against any Mehomitan nation, it is declared by the parties that no pretext arising from

religious opinions shall ever produce an interruption of the harmony existing between the two countries. (61)

Yet another hypothesis [why the US is so religious] is that the religiosity of America stems paradoxically from the secularism of its constitution. Precisely because America is legally secular, religion has become free enterprise. Rival churches compete for congregations – not least for the fat tithes that they bring – and the competition is waged with all the aggressive hard-sell techniques of the marketplace. What works for soap flakes works for God, and the result is something approaching religious mania among today's less educated classes. (62)

David Mills, in his admirable book *Atheist Universe*, tells a story which you would dismiss as an unrealistic caricature of police bigotry if it were fiction. A Christian faith-healer ran a "Miracle Crusade" which came to Mills' home town once a year. Among other things, the faith-healer encouraged diabetics to throw away their insulin, and cancer patients to give up their chemotherapy and pray for a miracle instead. Reasonable enough, Mills decided to organize a peaceful demonstration to warn people but he made the mistake of going to the police to tell them of his intention and ask for police protection against possible attacks. From supporters of the faith-healer. The first police officer to whom he spoke asked, 'Is you gonna protest fir him or 'gin him?' (meaning for or against the faith-healer). When Mills replied, 'Against him,' the policeman said that he himself planned to attend the rally and intended to spit personally in Mills's face as he marched past Mills's demonstration.

Mills decided to try his luck with a second police officer. This one said that if any of the faith-healer's supporters violently confronted Mills, the officer would arrest Mills because he was 'trying to interfere with God's work'. Mills went home and tried telephoning the police station in the hope of finding more sympathy at a senior level. He was finally connected to a sergeant who said, 'To hell with you, Buddy. No policeman wants to protect a goddamned atheist. I hope somebody bloodies you up good. Apparently adverbs were in short supply in his police station, along with the milk of human kindness and a sense of duty. Mills relates that he spoke to about seven or eight policemen that day. None of them was helpful, and most of them directly threatened Mills with violence. (66)

Let us, then, take the idea of a spectrum of probabilities seriously, and place human judgments about the existence of God along it, between two extremes of opposite certainty. The spectrum is continuous, but it can be represented by the following seven milestones along the way.

1. Strong theist. 100 per cent probability of God. In the words of C. G. Jung, 'I do not believe, I *know*.'
2. Very high probability but short of 100 per cent. *De facto* theist. 'I cannot know for certain, but I strongly believe in God and live my life on the assumption that he is there.'
3. Higher than 50 per cent but not very high. Technically agnostic but leaning towards theism. 'I am very uncertain, but I am inclined to believe in God.'
4. Exactly 50 per cent. Completely impartial agnostic. 'God's existence and non-existence are exactly equiprobable.'
5. Lower than 50 per cent but not very low. Technically agnostic but leaning towards atheism. 'I don't know whether God exists but I'm inclined to be sceptical.'
6. Very low probability, but short of zero. *De facto* atheist. 'I cannot know for certain

but I think God is very improbable, and I live my life on the assumption that he is not there.'

7. Strong atheist. 'I know there is no God, with the same conviction as Jung "knows" there is one.'

I'd be surprised to meet many people in category 7, but I include it for symmetry with category 1, which is well populated. It is in the nature of faith that one is capable, like Jung, of holding a belief without adequate reason to do so (Jung also believed that particular books on his shelf spontaneously exploded with a loud bang). Atheists do not have faith; a reason alone could not propel one to total conviction that anything definitely does not exist. Hence category 7 is in practice rather emptier than its opposite number, category 1, which has many devoted inhabitants. I count myself in category 6, but leaning towards 7 – I am agnostic only to the extent that I am agnostic about fairies at the bottom of the garden. (73-74)

A popular deity on the Internet at present – and as undisprovable as Yahweh or any other – is the Flying Spaghetti Monster, who, many claim, has touched them with his noodly appendage. I am delighted to see that the *Gospel of the Flying Spaghetti Monster* has not been published as a book, to great acclaim. I haven't read it myself, but who needs to read a gospel when you just *know* it's true? By the way, it had to happen – a Great Schism has already occurred, resulting in the *Reformed Church of the Flying Spaghetti Monster*. (76)

[...] the burden of proof rests with the believers, not the non-believers. (76)

[...] when asked whether I am an atheist, to point out that the questioner is also an atheist when considering Zeus, Apollo, Amon Ra, Mithras, Baal, Thor, Wotan, the Golden Calf and the Flying Spaghetti Monster. I just go one god further. (77)

Perhaps there are some genuinely profound and meaningful questions that are forever beyond the reach of science. Maybe quantum theory is already knocking on the door of the unfathomable. But if science cannot answer some ultimate question, what makes anybody think that religion can? (80)

[Chicago geneticist Jerry Coyne wrote:] It's not just about evolution versus creationism. To scientists like Dawkins and Wilson [E. O. Wilson, the celebrated Harvard biologist], the *real* war is between rationalism and superstition. Science is but one form of rationalism, while religion is the most common form of superstition. Creationism is just a symptom of what they see as the greater enemy: religion. While religion can exist without creationism, creationism cannot exist without religion. (92)

Jocelyn Bell Burnell, the radio astronomer who first discovered the pulsar in 1967, was moved by the precision of its 1.33-second periodicity to name it, tongue in cheek, the LGM (Little Green Men) signal. She later found a second pulsar, elsewhere in the sky and of different periodicity, which pretty much disposed of the LGM hypothesis. [...] More than a thousand pulsars have now been found in our galaxy, and it is generally accepted that each one is a spinning neutron star emitting radio energy that sweeps around like a lighthouse beam. It is amazing to think of a star rotating on a timescale of seconds (imagine if each of our days lasted 1.33 seconds instead of 24 hours). (97)

Whether we ever get to know about them [other ET intelligence] or not, there are very

probably alien civilizations that are superhuman, to the point of being god-like in ways that exceed anything a theologian could possibly imagine. Their technical achievements would seem as supernatural to us as ours would seem to a Dark Age peasant transported to the twenty-first century. Imagine his response to a laptop computer, a mobile telephone, a hydrogen bomb or a jumbo jet. As Arthur C. Clarke put it, in his Third Law: 'Any sufficiently advanced technology is indistinguishable from magic.' The miracles wrought by our technology would have seemed to the ancient no less remarkable than the tales of Moses parting the waters, or Jesus walking upon them. The aliens of our SETI signal would be to us like gods, just as missionaries were treated as gods (and exploited the undeserved honour to the hilt) when they turned up in Stone Age cultures bearing guns, telescopes, matches, and almanacs predicting eclipses to the second. (98)

CHAPTER 3 ARGUMENTS FOR GOD'S EXISTENCE

The five 'proofs' asserted by Thomas Aquinas in the thirteenth century don't prove anything, and are easily [...] exposed as vacuous.

1. *The Unmoved Mover*. Nothing moves without a prior mover. This leads us to a regress, from which the only escape is God. Something had to make the first move, and that something we call God.
2. *The Uncaused Cause*. Nothing is caused by itself. Every effect has a prior cause, and again we are pushed back into regress. This has to be terminated by a first cause, which we call God.
3. *The Cosmological Argument*. There must have been a time when no physical things existed. But, since physical things exist now, there must have been something non-physical to bring them into existence, and that something we call God.

[...] the properties normally ascribed to God: omnipotence, omniscience, goodness, creativity of design, to say nothing of such human attributes as listening to prayers, forgiving sins and reading innermost thoughts. Incidentally, it has not escaped the notice of logicians that omniscience and omnipotence are mutually incompatible. If god is omniscient, he must already know how he is going to intervene to change the course of history using his omnipotence. But that means he can't change his mind about his intervention, which means he is not omnipotent. [...]

4. *The Argument from Degree*. We notice that things in the world differ. There are degrees of, say, goodness or perfection. But we judge these degrees only by comparison with a maximum. Humans can be both good and bad, so the maximum goodness cannot rest in us. Therefore there must be some other maximum to set the standard for perfection, and we call that maximum God.

That's an argument? You might as well say, people vary in smelliness but we can make the comparison only by reference to a perfect maximum of conceivable smelliness.

5. *The Teleological Argument, or Argument from Design*. Things in the world, especially living things, look as though they have been designed. Nothing that we know looks designed unless it is designed. Therefore there must have been a designer, and we call him God. [...]

There has probably never been a more devastating rout of popular belief by clever reasoning than Charles Darwin's destruction of the argument from design. It was so unexpected. Thanks to Darwin, it is no longer true to say that nothing that we know looks designed unless it is designed. (100-103)

The most famous of the *a priori* arguments, those that rely upon pure armchair ratiocination, is the *ontological argument*, proposed by St Anselm of Canterbury in 1078 and restated in different forms by numerous philosophers ever since. [...] Let me translate this infantile argument into the appropriate language, which is the language of the playground:

'Bet you I can prove God exist.'

'Bet you can't.'

'Right then, imagine the most perfect perfect perfect thing possible.'

'Okay, now what?'

'Now, is that perfect perfect perfect thing real? Does it exist?'

'No, it's only in my mind.'

'But if it was real it would be even more perfect, because a really really perfect thing would have to be better than a silly old imaginary thing. So I've proved that God exist. Nur Nurny Nur Nur. All atheists are fools.' (104)

One of the cleverer and more mature of my undergraduate contemporaries, who was deeply religious, went camping in the Scottish isles. In the middle of the night he and his girlfriend were woken in their tent by the voice of the devil – Satan himself; there could be no possible doubt: the voice was in every sense diabolical. My friend would never forget this horrifying experience, and it was one of the factors that later drove him to be ordained. My youthful self was impressed by his story, and I recounted it to a gathering of zoologists relaxing in the Rose and Crown Inn, Oxford. Two of them happened to be experienced ornithologists, and they roared with laughter. 'Manx Shearwater!' they shouted in delighted chorus. One of them added that the diabolical shrieks and cackles of this species have earned it, in various parts of the world and various languages, the local nickname 'Devil Bird'.

Many people believe in God because they believe they have seen a vision of him – or of an angel or a virgin in blue – with their own eyes. Or he speaks to them inside their heads. This argument from personal experience is the one that is most convincing to those who claim to have had one. But it is the least convincing to anyone else, and anyone knowledgeable about psychology. (112)

Constructing models is something the human brain is very good at. When we are asleep it is called dreaming when we are awake we call it imagination, or when it is exceptionally vivid, hallucination. (116)

David Hume's pithy test for a miracle comes irresistibly to mind: 'No testimony is sufficient to establish a miracle, unless the testimony be of such a kind, that its falsehood would be more miraculous than the fact which it endeavours to establish.' (116-117)

A good example of the colouring by religious agendas is the whole heart-warming legend of Jesus' birth in Bethlehem, followed by Herod's massacre of the innocents. When the gospels were written, many years after Jesus' death, nobody knew where he was born. But an Old Testament prophecy (Micah 5: 2) had led Jews to expect that the long-awaited Messiah would be born in Bethlehem. In the light of this prophecy, John's gospel specifically remarks that his followers were surprised that he was *not* born in Bethlehem: 'Others said, This is the Christ. But some said, Shall Christ come out of Galilee? Hath not the scripture said, That Christ cometh of the seed of David, and out of the town of Bethlehem, where David was?' (118)

In the December 24 issue of *Free Inquiry*, Tom Flynn, the Editor of that excellent magazine, assembled a collection of articles documenting the contradictions and gaping holes in the well-loved Christmas story. Flynn himself lists the many contradictions between Matthew and Luke, the only two evangelists who treat the birth of Jesus at all. Robert Gillooly shows how all the essential features of the Jesus legend, including the star in the east, the virgin birth, the veneration of the baby by kings, the miracles, the execution, the resurrection and the ascension are borrowed – every last one of them – from other religions already in existence in the Mediterranean and Near East region. Flynn suggests the Matthew's desire to fulfill messianic prophecies (descent from David, birth in Bethlehem) for the benefit of Jewish readers came into headlong collision with Luke's desire to adapt Christianity for the Gentiles, and hence to press the familiar hot buttons of pagan Hellenistic religions (virgin birth, worship by kings, etc.). The resulting contradictions are glaring, but consistently overlooked by the faithful. (119-120)

The gospels that didn't make it [into the Bible] were omitted by those ecclesiastics perhaps because they included stories that were even more embarrassingly implausible than those in the four canonical ones. The Infant Gospel of Thomas, for example, has numerous anecdotes about the child Jesus abusing his magical powers in the manner of a mischievous fairy, impishly transforming his playmates into goats, or turning mud into sparrows, or giving his father a hand with the carpentry by miraculously lengthening a piece of wood. (121-122)

Newton did indeed claim to be religious. So did almost everybody until – significantly I think – the nineteenth century, when there was less social and judicial pressure than in earlier centuries to profess religion, and more scientific support for abandoning it. (124)

Francis Crick, Watson's co-founder of the whole molecular genetics revolution, resigned his fellowship at Churchill College, Cambridge, because of the college's decision to build a chapel (at the behest of a benefactor). In my interview with Watson at Clara, I conscientiously put it to him that, unlike him and Crick, some people see no conflict between science and religion, because they claim science is about how things work and religion is about what it is all for. Watson retorted: 'Well I don't think we're *for* anything. We're just products of evolution. You can say, "Gee, your life must be pretty bleak if you don't think there's a purpose." But I'm anticipating having a god lunch.' We did have a good lunch, too. (126)

A study in the leading journal *Nature* by Larson and Witham in 1998 showed that of those American scientists considered eminent enough by their peers to have been elected to the National Academy of Sciences (equivalent to being a Fellow of the Royal Society in Britain) only about 7 per cent believe in a personal God. This overwhelming preponderance of atheists is almost the exact opposite of the profile of the American population at large, of whom more than 90 per cent are believers in some sort of supernatural being. (126)

[...] religiosity is indeed negatively correlated with education (more highly educated people are less likely to be religious). Religiosity is also negatively correlated with interest in science and (strongly) with political liberalism. (129)

'Of 43 studies carried out since 1927 on the relationship between religious belief and one's intelligence and/or education level, all but four found an inverse connection. That

is, the higher one's intelligence or education level, the less one is likely to be religious or hold "beliefs" of any kind.' (129)

'Theodicy' (the vindication of divine providence in the face of the existence of evil) keeps theologians awake at night. (135)

Simply postulate a nasty god – such as the one who stalks every page of the Old Testament. Or, if you don't like that, invent a separate evil god, call him Satan, and blame his cosmic battle against the good god for the evil in the world. Or – a more sophisticated solution – postulate a god with grander things to do than fuss about human distress. (135)

CHAPTER 4 WHY THERE ALMOST CERTAINLY IS NO GOD

Natural selection not only explains the whole of life; it also raises our consciousness to the power of science to explain how organized complexity can emerge from simple beginnings without any deliberate guidance. (141)

That scientifically savvy philosopher Daniel Dennett pointed out that evolution counters one of the oldest ideas we have: 'the idea that it takes a big fancy smart thing to make a lesser thing. (142)

What is it that makes natural selection succeed as a solution to the problem of improbability, where chance and design both fail at the starting gate? The answer is that natural selection is a cumulative process, which breaks the problem of improbability up into small pieces. Each of the small pieces is slightly improbable, but not prohibitively so. When large numbers of these slightly improbable events are stacked up in series, the end product of the accumulation is very very improbable indeed, improbable enough to be far beyond the reach of chance. It is these end products that form the subjects of the creationist's wearisomely recycled argument. The creationist completely misses the point, because he (women should for once not mind being excluded by the pronoun) insists on treating the genesis of statistical improbability as a single, one-off event. He doesn't understand the power of *accumulation*. (147)

'What is the use of half an eye?' and 'What is the use of half a wing?' are both instances of the argument from 'irreducible complexity'. A functioning unit is said to be irreducibly complex if the removal of one of its parts causes the whole to cease functioning. This has been assumed to be self-evident for both eyes and wings. But as soon as we give these assumptions a moment's thought, we immediately see the fallacy. A cataract patient with the lens of her eye surgically removed can't see clear images without glasses, but can see enough not to bump into a tree or fall over a cliff. Half a wing is indeed not as good as a whole wing, but it is certainly better than no wing at all. Half a wing could save your life by easing your fall from a tree of a certain height. And 51 per cent of a wing could save you if you fall from a slightly taller tree. Whatever fraction of a wing you have, there is a fall from which it will save your life where a slightly smaller winglet would not. The thought experiment of trees of different height, from which one might fall, is just one way to see, in theory, that there must be a smooth gradient of advantage all the way from 1 per cent of a wing to 100 per cent. The forests are replete with gliding or parachuting animals illustrating, in practice, every step of the way up that particular

slope of Mount Improbable. (149)

[...] one of the truly bad effects of religion is that it teaches us that it is a virtue to be satisfied with not understanding. (152)

Martin Rees, in *Just Six Numbers*, lists six fundamental constants, which are believed to hold all around the universe. Each of these six numbers is finely tuned in the sense that, if it were slightly different, the universe would be comprehensively different and presumably unfriendly to life.

An example of Rees's six numbers is the magnitude of the so-called 'strong' force, the force that binds the components of an atomic nucleus: the nuclear force that has to be overcome when one 'splits' the atom. It is measured as E , the proportion of the mass of a hydrogen nucleus that is converted to energy when hydrogen fuses to form helium. The value of this number in our universe is 0.007, and it looks as though it had to be very close to this value in order for any chemistry (which is a prerequisite for life) to exist. Chemistry as we know it consists of the combination and recombination of the ninety or so naturally occurring elements of the periodic table. Hydrogen is the simplest and commonest of the elements. All the other elements in the universe are made ultimately from hydrogen by nuclear fusion. Nuclear fusion is a difficult process which occurs in the intensely hot conditions of the interiors of stars (and in hydrogen bombs). Relatively small stars, such as our sun, can make only light elements such as helium, the second lightest in the periodic table after hydrogen. It takes larger and hotter stars to develop the high temperatures needed to forge most of the heavier elements, in a cascade of nuclear fusion processes whose details were worked out by Fred Hoyle and two colleagues [...]. These big stars may explode as supernovas, scattering their materials, including the elements of the periodic table, in dust clouds. These dust clouds eventually condense to form new stars and planets, including our own. This is why earth is rich in elements over and above the ubiquitous hydrogen: elements without which chemistry, and life, would be impossible.

The relevant point here is that the value of the strong force crucially determines how far up the periodic table the nuclear fusion cascade goes. If the strong force were too small, say 0.006 instead of 0.007, the universe would contain nothing but hydrogen, and no interesting chemistry could result. If it were too large, say 0.008, all the hydrogen would have fused to make heavier elements. A chemistry without hydrogen could not generate life as we know it. For one thing, there would be no water. The Goldilocks value – 0.007 – is just right for yielding the richness of elements that we need for an interesting and life-supporting chemistry. (170-171)

An intriguing version of the multiverse theory arises out of considerations of the ultimate fate of our universe. Depending upon the values of numbers such as Martin Rees's six constants, our universe may be destined to expand indefinitely, or it may stabilize at an equilibrium, or the expansion may reverse itself and go into contraction, culminating in the so-called 'big crunch'. Some big crunch models have the universe then bouncing back into expansion, and so on indefinitely with, say, a 20-billion-year cycle time. The standard model of our universe says that time itself began in the big bang, along with space, some 13 billion years ago. The serial big crunch model would amend that statement: our time and space did indeed begin in our big bang, but this was just the latest in a long series of big bangs, each one initiated by the big crunch that terminated the previous universe in the series. Nobody understands what goes on in singularities such as the big bang, so it is conceivable that the laws and constants are reset to new

values, each time. If bang-expansion-contraction-crunch cycles have been going on for ever like a cosmic accordion, we have a serial, rather than a parallel, version of the multiverse. Once again, the anthropic principle does its explanatory duty. Of all the universes in the series, only a minority have their 'dials' tuned to biogeneic conditions. And, of course, the present universe has to be one of that minority, because we are in it. As it turns out, this serial version of the multiverse must now be judged less likely than it once was, because recent evidence is starting to steer us away from the big crunch model. It now looks as though our own universe is destined to expand for ever. (174)

[...] any God capable of designing a universe, carefully and foresightfully tuned to lead to our evolution, must be a supremely complex and improbable entity who needs an ever bigger explanation than the one he is supposed to provide. (176)

when pressed, many educated Christians today are too loyal to deny the virgin birth and the resurrection. But it embarrasses them because their rational minds know it is absurd, so they would much rather not be asked. (187)

[...] I shall summarize [the chapter] as a series of six numbered points.

1. One of the greatest challenges to the human intellect, over the centuries, has been to explain how the complex, improbable appearance of design in the universe arises.
2. The natural temptation is to attribute the appearance of design to actual design itself. In the case of a man-made artefact such as a watch, the designed really was an intelligent engineer. It is tempting to apply the same logic to an eye or a wing, a spider or a person.
3. The temptation is a false one, because the designer hypothesis immediately raises the larger problem of who designed the designer. The whole problem we started out with was the problem of explaining statistical improbability. It is obviously no solution to postulate something even more improbable. We need a 'crane', not a 'skyhook', for only a crane can do the business of working up gradually and plausibly from simplicity to otherwise improbable complexity.
4. The most ingenious and powerful crane so far discovered is Darwinian evolution by natural selection. Darwin and his successors have shown how living creatures, with their spectacular statistical improbability and appearance of design, have evolved by slow, gradual degrees from simple beginnings. We can now safely say that the illusion of design in living creatures is just that – an illusion.
5. We don't yet have an equivalent crane for physics. Some kind of multiverse theory could in principle do for physics the same explanatory work as Darwinism does for biology. This kind of explanation is superficially less satisfying than the biological version of Darwinism, because it makes heavier demands on luck. But the anthropic principle entitles us to postulate far more luck than our limited human intuition is comfortable with.
6. We should not give up hope of a better crane arising in physics, something as powerful as Darwinism is for biology. But even in the absence of a strongly satisfying crane to match the biological one, the relatively weak cranes we have at present are, when abetted by the anthropic principle, self-evidently better than the self-defeating skyhook hypothesis of an intelligent design. (187-189)

Knowing that we are products of Darwinian evolution, we should ask what pressure or pressures exerted by natural selection originally favoured the impulse to religion. The question gains urgency from standard Darwinian considerations of economy. Religion is so wasteful, so extravagant; and Darwinian selection habitually targets and eliminates waste. (190)

To an evolutionist, religious rituals 'stand out like peacocks in a sunlit glade' (Dan Dennett's phrase). [...] It is time-consuming, energy-consuming, often as extravagantly ornate as the plumage of a bird of paradise. Religion can endanger the life of the pious individual, as well as the lives of others. Thousands of people have been tortured for their loyalty to a religion, persecuted by zealots for what is in many cases a scarcely distinguishable alternative faith. Religion devours resources, sometimes on a massive scale. A medieval cathedral could consume a hundred man-centuries in its construction, yet was never used as a dwelling, or for any recognizably useful purpose. Was it some kind of architectural peacock's tail? If so, at whom was the advertisement aimed? Sacred music and devotional paintings largely monopolized medieval and Renaissance talent. Devout people have died for their gods and killed for them; whipped blood from their backs, sworn themselves to a lifetime of celibacy or to lonely silence, all in the service of religion. What is it all for? What is the benefit of religion?

By 'benefit', the Darwinian normally means some enhancement to the survival of the individual's genes. What is missing from this is the important point that Darwinian benefit is not restricted to the genes of the individual organism. There are three possible alternative targets of benefit. One arises from the theory of group selection [...]. The second follows from the theory that I advocated in *The Extended Phenotype*: the individual you are watching may be working under the manipulative influence of genes in another individual, perhaps a parasite. Dan Dennett reminds us that the common cold is universal to all human peoples in much the same way as religion is, yet we would not want to suggest that colds benefit us. Plenty of examples are known of animals manipulated into behaving in such a way as to benefit the transmission of a parasite to its next host. I encapsulated the point in my 'central theorem of the extended phenotype': 'An animal's behaviour tends to maximize the survival of the genes "for" that behaviour, whether or not those genes happen to be in the body of the particular animal performing it.'

Third, the 'central theorem' may substitute for 'genes' the more general term 'replicators'. The fact that religion is ubiquitous probably means that it has worked to the benefit of something, but it may not be us or our genes. It may be to the benefit of only the religious ideas themselves, to the extent that they behave in a somewhat gene-like way, as replicators. (192-193)

The old Northern Ireland joke, 'Yes, but are you a Protestant atheist or a Catholic atheist?', is spiked with bitter truth. (194)

In George Bernard Shaw's words, 'The fact that a believer is happier than a skeptic is no more to the point than the fact that a drunken man is happier than a sober one'. (194)

If neuroscientists find a 'god centre' in the brain, Darwinian scientists like me will still want to understand the natural selection pressure that favoured it. Why did those of our ancestors who had a genetic tendency to grow a god centre survive to have more grandchildren than rivals who didn't? (197)

I am one of an increasing number of biologists who see religion as a *by-product* of something else. More generally, I believe that we who speculate about Darwinian survival value need to 'think by-product'. When we ask about the survival value of anything, we may be asking the wrong question. We need to rewrite the question in a more helpful way. Perhaps the feature we are interested in (religion in this case) doesn't have a direct survival value of its own, but is a by-product of something else that does. (200)

We observe large numbers of people – in many areas it amounts to 100 per cent – who hold beliefs that flatly contradict demonstrable scientific facts as well as rival religions followed by others. People not only hold these beliefs with passionate certitude, but devote time and resources to costly activities that flow from holding them. They die for them, or kill for them. We marvel at this, just as we marvelled at the 'self-immolation behaviour' of the moths. Baffled, we ask why. But my point is that we may be asking the wrong question. The religious behavior may be a misfiring, an unfortunate by-product of an underlying psychological propensity which in other circumstances is, or once was, useful. On this view, the propensity that was naturally selected in our ancestors was not religion *per se*; it had some other benefit, and it only incidentally manifests itself as religious behaviour we shall understand religious behaviour only after we have renamed it.

If, then, religious is a by-product of something else, what is that something else? [...] My specific hypothesis is about children. More than any other species, we survive by the accumulated experience of previous generations, and that experience needs to be passed on to children for their protection and well-being. Theoretically, children might learn from personal experience not to go too near a cliff edge, not to eat untried red berries, not to swim in crocodile-infested waters. But, to say the least, there will be a selective advantage to child brains that possess the rule of thumb: believe, without question, whatever your grown-ups tell you. Obey your parents; obey the tribal elders, especially when they adopt a solemn, minatory tone. Trust your elders without question. This is a generally valuable rule for a child. (202-203)

Natural selection builds child brains with a tendency to believe whatever their parents and tribal elders tell them. Such trusting obedience is valuable for survival [...]. but the flip side of trusting obedience is slavish gullibility. The inevitable by-product is vulnerability to infection by mind viruses. (205)

Religious leaders are well aware of the vulnerability of the child brain, and the importance of getting the indoctrination in early. The Jesuit boast, 'Give me the child for his first seven years, and I'll give you the man,' is no less accurate (or sinister) for being hackneyed. In more recent times, James Dobson, founder of today's infamous Focus on the Family' movement, is equally acquainted with the principle: 'Those who control what young people are taught, and what they experience – what they see, hear, think, and believe – will determine the future course for the nation'. (206)

The ethologist Robert Hinde, in *Why Gods Persist*, and the anthropologists Pascal Boyer, in *Religion Explained*, and Scott Atran, in *In Gods We Trust*, have independently promoted the general idea of religion as a by-product of normal psychological dispositions – many by-products, I should say, for the anthropologists especially are concerned to emphasize the diversity of the world's religions as well as what they have in common. The findings of anthropologists seem weird to us only because they are

unfamiliar. All religious beliefs seem weird to those not brought up in them. (206-207)

Evolutionary psychologists suggest that, just as the eye is an evolved organ for seeing, and the wing an evolved organ for flying, so the brain is a collection of organs (or 'modules') for dealing with a set of specialist data-processing needs. There is a module for dealing with kinship, a module for dealing with reciprocal exchanges, a module for dealing with empathy, and so on. Religion can be seen as a by-product of the misfiring of several of these modules, for example the modules for forming theories of other minds, for forming coalitions, and for discriminating in favour of in-group members and against strangers. (208-209)

A dualist acknowledges a fundamental distinction between matter and mind. A monist, by contrast, believes that mind is a manifestation of matter – material in a brain or perhaps a computer – and cannot exist apart from matter. A dualist believes the mind is some kind of disembodied spirit that *inhabits* the body and therefore conceivably could leave the body and exist somewhere else. Dualists readily interpret mental illness as 'possession by devils', those devils being spirits whose residence in the body is temporary, such that they might be 'cast out'. Dualists personify inanimate physical objects at the slightest opportunity, seeing spirits and demons even in waterfalls and clouds. (209)

The assignment of purpose to everything is called teleology. Children are native teleologists, and many never grow out of it.

Native dualism and native teleology predispose us, given the right conditions, to religion, just as my moths' light-compass reaction predisposed them to inadvertent 'suicide'. Our innate dualism prepares us to believe in a 'soul' which inhabits the body rather than being integrally part of the body. Such a disembodied spirit can easily be imagined to move on somewhere else after the death of the body. We can also easily imagine the existence of a deity as pure spirit, not an emergent property of complex matter but existing independently of matter. Even more obviously, childish teleology sets us up for religion. If everything has a purpose, whose purpose is it? God's, of course. (210)

We hyperactively detect agents where there are none, and this makes us suspect malice or benignity where, in fact, nature is only indifferent. (214)

Other by-product explanations of religion have been proposed by Hinde, Shermer, Boyer, Atran, Bloom, Dennett, Keleman and others. One especially intriguing possibility mentioned by Dennett is that the irrationality of religion is a by-product of a particular built-in irrationality mechanism in the brain: our tendency, which presumably has genetic advantages, to fall in love. (214)

Certainly, religious faith has something of the same character as falling in love (and both have many of the attributes of being high on an addictive drug). The neuropsychiatrist John Smythies cautions that there are significant differences between the brain areas activated by the two kinds of mania. Nevertheless, he notes some similarities too:

One facet of the many faces of religion is intense love focused on one supernatural person, i.e. God, plus reverence for icons of that person. Human life is driven largely by our selfish genes and by the processes of reinforcement. Much positive reinforcement derives from religion: warm and

comforting feelings of being loved and protected in a dangerous worlds, loss of fear of death, hep from the hills in response to prayer in difficult times, etc. Likewise, romantic love for another real person (usually of the other sex) exhibits the same intense concentration on the other and related positive reinforcements. These feelings can be triggered by icons of the other, such as letters, photographs, and even, as in Victorian times, locks of hair. The state of being in love has many physiological accompaniments, such as sighing like a furnace. (215-216)

I surmise that religions, like languages, evolve with sufficient randomness, from beginnings that are sufficiently arbitrary, to generate the bewildering – and sometimes dangerous – richness of diversity that we observe. At the same time, it is possible that a form of natural selection, coupled with the fundamental uniformity of human psychology, sees to it that the diverse religions share significant features in common. Many religions, for example, teach the objectively but subjectively appealing doctrine that our personalities survive our bodily death. The idea of immortality itself survives and spreads because it caters to wishful thinking. And wishful thinking counts, because human psychology has a near-universal tendency to let belief be coloured by desire. (220-221)

We are finally equipped to turn to the memetic theory of religion. Some religious ideas, like some genes, might survive because of absolute merit. These memes would survive in any meme pool, regardless of the other memes that surround them. (I must repeat the vitally important point that 'merit' in this sense means only 'ability to survive in the pool'. It carries no value judgement apart from that.) Some religious ideas survive because they are compatible with other memes that are already numerous in the meme pool – as part of a memplex. The following is a partial list of religious memes that might plausibly have survival value in the meme pool, either because of absolute 'merit' or because of compatibility with an existing memplex:

- You will survive your own death.
- If you die a martyr, you will go to an especially wonderful part of paradise where you will enjoy seventy-two virgins (spare a thought for the unfortunate virgins).
- Heretics, blasphemers and apostates should be killed (or otherwise punished, for example by ostracism from their families).
- Belief in God is a supreme virtue. If you find your belief wavering, work hard at restoring it, and beg God to help your unbelief. [...]
- Faith (belief without evidence) is a virtue. The more your beliefs defy the evidence, the more virtuous you are. Virtuoso believers who can manage to believe something really weird, unsupported and insupportable, in the teeth of evidence and reason, are especially highly rewarded.
- Everybody, even those who do not hold religious beliefs, must respect them with a higher level of automatic and unquestioned respect than that accorded to other kinds of belief [...].
- There are some weird things (such as the Trinity, transubstantiation, incarnation) that we are not *meant* to understand. Don't even *try* to understand one of these, for the attempt might destroy it. Learn how to gain fulfillment in calling it a *mystery*. Remember Martin Luther's virulent condemnations of reason, [...] and think how protective of meme survival they would be.
- Beautiful music, art and scriptures are themselves self-replicating tokens of religious ideas.

Some of the above list probably have absolute survival value and would flourish in

any memplex. But, as with genes, some memes survive only against the right background of other memes, leading to the build-up of alternative memplexes. Two different religions might be seen as two alternative memplexes. Perhaps Islam is analogous to a carnivorous gene complex, Buddhism to a herbivorous one. The idea of one religion are not 'better' than those of the other in any absolute sense, any more than carnivorous genes are 'better' than herbivorous ones. Religious memes of this kind don't necessarily have any absolute aptitude for survival; nevertheless, they are good in the sense that they flourish in the presence of other memes of their own religion, but not in the presence of memes of the other religion. On this model, Roman Catholicism and Islam, say, were not necessarily designed by individual people, but evolved separately as alternative collections of memes that flourish in the presence of other members of the same memplex.

Organized religions are organized by people; by priests and bishops, rabbis, imams and ayatollahs. But, to reiterate the point I made with respect to Martin Luther, that doesn't mean they were conceived and designed by people. Even where religions have been exploited and manipulated to the benefit of powerful individuals, the strong possibility remains that the detailed form of each religion has been largely shaped by unconscious evolution. Not by genetic natural selection, which is too slow to account for the rapid evolution and divergence of religions. The role of genetic natural selection in the story is to provide the brain, with its predilections and biases – the hardware platform and low-level system software which form the background to memetic selection. Given this background, memetic natural selection of some kind seems to me to offer a plausible account of the detailed evolution of particular religions. In the early stages of a religion's evolution, before it becomes organized, simple memes survive by virtue of their universal appeal to human psychology. This is where the meme theory of religion and the psychological by-product theory of religion overlap. The later stages, where a religion becomes organized, elaborate and arbitrarily different from other religions, are quite well handled by the theory of memplexes – cartels of mutually compatible memes. This doesn't rule out the additional role of deliberate manipulation by priests and others. Religions probably are, at least in part, intelligently designed, as are schools and fashions in art. (231-233)

In *The Life of Brian*, one of the many things the Monty Python team got right was the extreme rapidity with which a new religious cult can get started. It can spring up almost overnight and then become incorporated into a culture, where it plays a disquietingly dominant role. The 'cargo cults' of Pacific Melanesia and New Guinea provide the most famous real life example. The entire history of some of these cults, from initiation to expiry, is wrapped up within living memory. Unlike the cult of Jesus, the origins of which are not reliably attested, we can see the whole course of events laid out before our eyes [...]. it is fascinating to guess that the cult of Christianity almost certainly began in very much the same way, and spread initially at the same high speed. (234)

[...] religions spring up from almost nothing. [Here are] four lessons about the origin of religions generally [...]. First is the amazing speed with which a cult can spring up. Second is the speed with which the origination process covers its tracks. The third lesson springs from the independent emergence of similar cults on different islands. The systematic study of these similarities can tell us something about human psychology and its susceptibility to religion. Fourth, the cargo cults are similar, not just to each other but to older religions. Christianity and other ancient religions that have spread worldwide presumably began as local cults like that of John Frum. Indeed, scholars such as Geza

Vermes, Professor of Jewish Studies at Oxford University, have suggested that Jesus was one of many such charismatic figures who emerged in Palestine around his time, surrounded by similar legends. Most of those cults died away. The one that survived, on this view, is the one that we encounter today. And, as the centuries go by, it has been honed by further evolution (memetic selection, if you like that way of putting it; not if you don't) into the sophisticated system – or rather diverging sets of descendant systems – that dominate large parts of the world today. The deaths of charismatic modern figures such as Haile Selassie, Elvis Presley and Princess Diana offer other opportunities to study the rapid rise of cults and their subsequent memetic evolution. (239)

CHAPTER VI THE ROOTS OF MORALITY: WHY ARE WE GOOD?

Many religious people find it hard to imagine how, without religion, one can be good, or would even want to be good. [...] But the doubts go further, and drive some religious people to paroxysm of hatred against those who don't share their faith. This is important, because moral considerations lie hidden behind religious attitudes to other topics that have no real link with morality. A great deal of the opposition to the teaching of evolution has no connection with evolution itself, or with anything scientific, but is spurred on by moral outrage. This ranges from the naïve 'If you teach children that they evolved from monkeys, then they will act like monkeys' to the more sophisticated underlying motivation for the whole 'wedge' strategy of 'intelligent design' [...]. (241)

Altruistic giving may be an advertisement of dominance or superiority. Anthropologists know it as the Potlatch Effect, named after the custom whereby rival chieftains of Pacific north-west tribes vie with each other in duels of ruinously generous feasts. In extreme cases, bouts of retaliatory entertaining continue until one side is reduced to penury, leaving the winner not much better off. Veblen's concept of 'conspicuous consumption' strikes a chord with many observers of the modern scene. Zahavi's contribution, unregarded by biologists for many years until vindicated by brilliant mathematical models from the evolutionary theorist Alan Grafen, has been to provide an evolutionary version of the potlatch idea. Zahavi studies Arabian babblers, little brown birds who live in social groups and breed cooperatively. Like many small birds, babblers give warning cries, and they also donate food to each other. A standard Darwinian investigation of such altruistic acts would look, first, for reciprocation and kinship relationship among the birds. When a babbler feeds a companion, is it in the expectation of being fed at a later date? Or is it recipient of the favour a close genetic relative? Zahavi's interpretation is radically unexpected. Dominant babblers assert their dominance by feeding subordinates. To use the sort of anthropomorphic language Zahavi delights in, the dominant bird is saying to equivalent of, 'Look how superior I am to you, I can afford to give you food'. Or 'Look how superior I am, I can afford to make myself vulnerable to hawks by sitting on a high branch, acting as a sentinel to warn the rest of the flock feeding on the ground'. The observations of Zahavi and his colleagues suggest that babblers actively compete for the dangerous role of sentinel. And when a subordinate babbler attempts to offer food to a dominant individual, the apparent generosity is violently rebuffed. The essence of Zahavi's idea is that advertisements of superiority are authenticated by their cost. Only a genuinely superior individual can afford to advertise the fact by means of a costly gift. Individuals buy success, for example in attracting mates, through costly demonstrations of superiority, including ostentatious generosity and public-spirited risk-taking. (250-

251)

Sexual lust is the driving force behind a large proportion of human ambition and struggle, and much of it constitutes a misfiring. There is no reason why the same should not be true of the lust to be generous and compassionate, if this is the misfired consequence of ancestral village life. The best way for natural selection to build in both kinds of lust in ancestral times was to install rules of thumb in the brain. Those rules still influence us today, even where circumstances make them inappropriate to their original functions. (254)

If our moral sense, like our sexual desire, is indeed rooted deep in our Darwinian past, predating religion, we should expect that research on the human mind would reveal some moral universals, crossing geographical and cultural barriers, and also, crucially, religious barriers. The Harvard biologist Marc Hauser, in his book *Moral Minds: How Nature Designed our Universal Sense of Right and Wrong*, has enlarged upon a fruitful line of thought experiments originally suggested by moral philosophers. [...] The message of Hauser's book, to anticipate it in his own words, is this 'Driving our moral judgments is a universal moral grammar, a faculty of the mind that evolved over millions of years to include a set of principles for building a range of possible moral systems. As with language, the principles that make up our moral grammar fly beneath the radar of our awareness'. (254-255)

The main conclusion of Hauser and Singer's study was that there is no statistically significant difference between atheists and religious believers in making [moral] judgements. This seems compatible with the view, which I and many others hold, that we do not need God in order to be good – or evil. (258)

If there is no god, why be good? Posted like that, the question sounds positively ignoble. When a religious person puts it to me in this way (and many of them do), my immediate temptation is to issue the following challenge: 'Do you really mean to tell me the only reason you try to be good is to gain God's approval and reward, or to avoid his disapproval and punishment? That's not morality, that's just sucking up, apple-polishing, looking over your shoulder at the great surveillance camera in the sky, or the still small wiretap inside your head, monitoring your every move, even your every base thought'. As Einstein said, 'If people are good only because they fear punishment, and hope for reward, then we are a sorry lot indeed'. Michael Shermer, in *The Science of Good and Evil*, calls it a debate stopper. If you agree that, in the absence of God, you would 'commit robbery, rape, and murder', you reveal yourself as an immoral person, 'and we would be well advised to steer a wide course around you'. If, on the other hand, you admit that you would continue to be a good person even when not under divine surveillance, you have fatally undermined your claim that God is necessary for us to be good. I suspect that quite a lot of religious people do think religion is what motivates them to be good, especially if they belong to one of those faiths that systematically exploits personal guilt. (259)

Gregory S. Paul, in the *Journal of Religion and Society* (2005), systematically compared seventeen economically developed nations, and reached the devastating conclusion that 'higher rates of belief in and worship of a creator correlate with higher rates of homicide, juvenile and early mortality, STD infection rates, teen pregnancy and abortion in the prosperous democracies'. (262-263)

As the distinguished Spanish film director Luis Bunuel said, 'God and Country are an unbeatable team; they break all records for oppression and bloodshed'. (266)

CHAPTER VII THE 'GOOD' BOOK AND THE CHANGING MORAL *ZEITGEIST*

To be fair, much of the Bible is not systematically evil but just plain weird, as you would expect of a chaotically cobbled-together anthology of disjointed documents, composed, revised, translated, distorted and 'improved' by hundreds of anonymous authors, editors and copyists, unknown to us and mostly unknown to each other, spanning nine centuries. This may explain some of the sheer strangeness of the Bible. (268)

Begin in Genesis with the well-loved story of Noah, derived from the Babylonian myth of Uta-Napsthim and known from the older mythologies of several cultures. The legend of the animals going into the ark two and two is charming, but the moral of the story of Noah is appalling. God took a dim view of humans, so he (with the exception of one family) drowned the lot of them including children and also, for good measure, the rest of the (presumably blameless) animals as well.

Of course, irritated theologians will protest that we don't take the book of Genesis literally any more. But that is my whole point! We pick and choose which bits of scripture to believe, which bits to write off as symbols or allegories. Such picking and choosing is a matter of personal decision, just as much, or as little, as the atheist's decision to follow this moral precept or that was a personal decision, without an absolute foundation. If one of these is 'morality flying by the seat of its pants', so is the other. (269)

By the way, what presumptuous egocentricity to believe that earth-shaking events, on the scale at which a god (or a tectonic plate) might operate, must always have a human connection. Why should a divine being, with creation and eternity on his mind, care a fig for petty human malefactions? (270)

The story of Lot and the Sodomites is eerily echoed in chapter 19 of the book of Judges, where an unnamed Levite (priest) was travelling with his concubine in Gibeah. They spent the night in the house of a hospitable old man. While they were eating their supper, the men of the city came and beat on the door, demanding that the old man should hand over his male guest 'so that we may know him'. In almost exactly the same words as Lot, the old man said: 'Nay, my brethren, nay, I pray you, do not so wickedly; seeing that this man is come into mine house do not this folly. Behold, here is my daughter a maiden, and his concubine; them I will bring out now, and humble ye them, and do with them what seemeth good unto you; but unto this man do not so vile a thing' (judges 19:23-4). again, the misogynistic ethos comes through, loud and clear. I find the phrase 'humble ye them' particularly chilling. Enjoy yourselves by humiliating and raping my daughter and this priest's concubine, but show a proper respect for my guest who is, after all, male. In spite of the similarity between the two stories, the *denouement* was less happy for the Levite's concubine than for Lot's daughters. (272-273)

Such unpleasant episodes in Abraham's story are mere peccadilloes compared with the infamous tale of the sacrificing of his son Isaac (Muslims scripture tells the same story about Abraham's older son, Ishmael). God ordered Abraham to make a burnt offering of his longed-for son. Abraham built an altar, put firewood upon it, and trussed Isaac up on

top of the wood. His murdering knife was already in his hand when an angel dramatically intervened with the news of a last-minute change of plan: God was only joking after all, 'tempting' Abraham, and testing his faith. A modern moralist cannot help but wonder how a child could ever recover from such psychological trauma. By the standards of modern morality, this disgraceful story is an example simultaneously of child abuse, bullying in two asymmetrical power relationships, and the first recorded use of the Nuremberg defence: "I was only obeying orders". Yet the legend is one of the great foundational myths of all three monotheistic religions. (274-275)

In Judges, chapter 11, the military leader Jephthah made a bargain with God that, if God would guarantee Jephthah's victory over the Ammonites, Jephthah would, without fail, sacrifice as a burnt offering 'whatsoever cometh forth of the doors of my house to meet me, when I return'. Jephthah did indeed defeat the Ammonites ('with a very great slaughter', as is par for the course in the book of Judges) and he returned home victorious. Not surprisingly, his daughter, his only child, came out of the house to greet him (with timbrels and dances) and – alas – she was the first living thing to do so. Understandably Jephthah rent his clothes, but there was nothing he could do about it. God was obviously looking forward to the promised burnt offering, and in the circumstances the daughter very decently agreed to be sacrificed. She asked only that she should be allowed to go into the mountains for two months to bewail her virginity. At the end of this time she meekly returned, and Jephthah cooked her. God did not see fit to intervene on this occasion. (275-276)

I know, yes, of course, of course, times have changed, and no religious leader today (apart from the likes of the Taliban or the American Christian equivalent) thinks like Moses. But that is my whole point. All I am establishing is that modern morality, wherever else it comes from, does not come from the Bible. Apologists cannot get away with claiming that religion provides them with some sort of inside track to defining what is good and what is bad – a privileged source unavailable to atheists. They cannot get away with it, not even if they employ that favourite trick of interpreting selected scriptures as 'symbolic' rather than literal. By what criterion do you *decide* which passages are symbolic, which literal. (279-280)

Do those people who hold up the Bible as an inspiration to moral rectitude have the slightest notion of what is actually written in it? The following offences merit the death penalty, according to Leviticus 20: cursing your parents; committing adultery; making love to your stepmother or your daughter-in-law; homosexuality; marrying a woman and her daughter; bestiality (and, to add injury to insult, the unfortunate beast is to be killed too). You also get executed, of course, for working on the sabbath: the point is made again and again throughout the Old Testament. In Numbers 15, the children of Israel found a man in the wilderness gathering sticks on the forbidden day. They arrested him and then asked God what to do with him. As it turned out, God was in no mood for half-measures that day. 'And the Lord said unto Moses, The man shall surely be put to death: all the congregation shall stone him with stones without the camp. And all the congregation brought him without the camp, and stoned him with stones, and he died.' (281)

So far, so vindictive: par for the Old Testament course. New Testament theology adds a new injustice, topped off by a new sadomasochism whose viciousness even the Old Testament barely exceeds. It is, when you think about it, remarkable that a religion

should adopt an instrument of torture and execution as its sacred symbol, often worn around the neck. Lenny Bruce rightly quipped that 'If Jesus had been killed twenty years ago, Catholic school children would be wearing little electric chairs around their necks instead of crosses'. But the theology and punishment-theory behind it is even worse. The sin of Adam and Eve is thought to have passed down the male line – transmitted in the semen according to Augustine. What kind of ethical philosophy is it that condemns every child, even before it is born, to inherit the sin of a remote ancestor? Augustine, by the way, who rightly regarded himself as something of a personal authority on sin, was responsible for coining the phrase 'original sin'. Before him it was known as 'ancestral sin'. Augustine's pronouncements and debates epitomize, for me, the unhealthy preoccupation of early Christian theologians with sin. (285)

But now, the sado-masochism. God incarnated himself as a man, Jesus, in order that he should be tortured and executed in *atonement* for the hereditary sin of Adam. Ever since Paul expounded this repellent doctrine, Jesus has been worshipped as the *redeemer* of all our sins. Not just the past sin of Adam: *future* sins as well, whether future people decided to commit them or not! (286)

Tamarin ran a fascinating control group in his experiment. A different group of 168 Israeli children were given the same test from a book of Joshua, but with Joshua's own name replaced by 'General Lin' and 'Israel' replaced by 'a Chinese kingdom 3,000 years ago'. Now the experiment gave opposite results. Only 7 per cent approved of General Lin's behaviour, and 75 per cent disapproved. In other words, when their loyalty to Judaism was removed from the calculations, the majority of the children agreed with the moral judgements that most modern humans would share. Joshua's action was a deed of barbaric genocide. But it all looks different from a religious point of view. And the difference starts early in life. It was religion that made the difference between children condemning genocide and condoning it.

In the later half of Hartung's paper, he moves on to the New Testament. To give a brief summary of his thesis, Jesus was a devotee of the same in-group morality – coupled with out-group hostility – that was taken for granted in the Old Testament. Jesus was a loyal Jew. It was Paul who invented the idea of taking the Jewish God to the Gentiles. Hartung puts it more bluntly than I dare: 'Jesus would have turned over in his grave if he had known that Paul would be taking his plan to the pigs'. (292)

[From Hartung's paper] The Bible is a blueprint of in-group morality, complete with instructions for genocide, enslavement of out-groups, and world domination. But the Bible is not evil by virtue of its objectives or even its glorification of murder, cruelty, and rape. Many ancient works do that – The Iliad, the Icelandic Sagas, the tales of the ancient Syrians and the inscriptions of the ancient Mayans, for example. But no one is selling the Iliad as a foundation of morality. Therein lies the problem. The Bible is sold, and bought, as a guide to how people should live their lives. And it is, by far, the world's all-time best seller. (293)

Religion is undoubtedly a divisive force, and this is one of the main accusations levelled against it. But it is frequently and rightly said that wars, and feuds between religious groups or sects, are seldom actually about theological disagreements. (294)

The warring tribes would have intermarried and long since dissolved into each other.

From Kosovo to Palestine, from Iraq to Sudan, from Ulster to the Indian sub-continent, look carefully at any region of the world where you find intractable enmity and violence between rival groups today. I cannot guarantee that you'll find religions as the dominant labels for in-groups and out-groups. But is a good bet. (294-295)

I do not deny that humanity's powerful tendencies towards in-group loyalties and out-group hostilities would exist even in the absence of religion. Fans of rival football teams are an example of the phenomenon writ small. Even football supporters sometimes divide along religious lines, as in the case of Glasgow Rangers and Glasgow Celtic. Languages (as in Belgium), races and tribes (especially in Africa) can be important divisive tokens. But religion amplifies and exacerbates the damage in at least three ways:

- Labelling of children. Children are described as 'Catholic children' or 'Protestant children' etc. from an early age, and certainly far too early for them to have made up their own minds on what they think about religion [...].
- Segregated schools. Children are educated, again often from a very early age, with members of a religious in-group and separately from children whose families adhere to other religions. It is not an exaggeration to say that the troubles in North Ireland would disappear in a generation if segregated schooling were abolished.
- Taboos against 'marrying out'. This perpetuates hereditary feuds and vendettas by preventing the mingling of feuding groups. Intermarriage, if it were permitted, would naturally tend to mollify enmities. (295-296)

Here is one set of 'New Ten Commandments' from today, which I happen to find on an atheist website.

- Do not do to others what you would not want them to do to you.
- In all things, strive to cause 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.
- Always seek to be learning something new.
- Test all things; always check your ideas against the facts, and be ready to discard even a cherished belief if it does not conform to them.
- Never seek to censor or cut yourself off from dissent; always respect the right of others to disagree with you.
- Form independent opinions on the basis of your own reason and experience; do not allow yourself to be led blindly by others.
- Question everything [...].
- Always devise your rules as if you didn't know whether you were going to be at the top or the bottom of the pecking order.
- The individual who cuts up the food gets last pick [...].
- Enjoy your own sex life (so long as it damages nobody else) and leave others to enjoy theirs in private whatever their inclinations, which are none of your business.
- Do not discriminate or oppress on the basis of sex, race or (as far as possible) species.
- Do not indoctrinate your children. Teach them how to think for themselves, how to

- evaluate evidence, and how to disagree with you.
- Value the future on a timescale longer than your own. (298-300)

Here are some dates at which women were granted the vote:

- New Zealand 1893
- Australia 1902
- Finland 1906
- Norway 1913
- United States 1920
- Britain 1928
- France 1945
- Belgium 1946
- Switzerland 1971
- Kuwait 2006 (301)

'Hitler and Stalin were atheists. What have you got to say about that?' The question comes up after just about every public lecture that I ever give on the subject of religion, and in most of my radio interviews as well. It is put in a truculent way, indignantly freighted with two assumptions: not only (1) were Stalin and Hitler atheists, but (2) they did their terrible deeds *because* they were atheists. Assumption (1) is true for Stalin and dubious for Hitler. But assumption (1) is irrelevant anyway, because assumption (2) is false. It is certainly illogical if it is thought to follow from (1). even if we accept that Hitler and Stalin shared atheism in common, they both also had moustaches, as does Saddam Hussein. So what? The interesting question is not whether evil (or good) individual human beings were religious or were atheists. We are not in the business of counting evil heads and compiling tow rival foll calls of iniquity. The fact that Nazi belt buckles were inscribed with '*Gott mit uns*' [meaning '*God with us*'] doesn't prove anything, at least not without a lot more discussion. What matters is not whether Hitler and Stalin were atheists, but whether atheism systematically *influences* people to do bad things. There is not the smallest evidence that it does. (309)

Stalin was probably an atheist and Hitler probably wasn't; but even if they were both atheists, the bottom line of the Stalin/Hitler debating point is very simple. Individual atheists may do evil things but they don't do evil things in the name of atheism. Stalin and Hitler did extremely evil things, in the name of, respectively, dogmatic and doctrinaire Marxism, and an insane and unscientific eugenics theory tinged with sub-Wagnerian ravings. Religious wars really are fought in the name of religion, and they have been horribly frequent in history. I cannot think of any war that has been fought in the name of atheism. Why should it? A war might be motivated by economic greed, by political ambition, by ethnic or racial prejudice, by deep grievance or revenge, or by patriotic belief in the destiny of a nation. Even more plausible as a motive for war in an unshakeable faith that one's own religion is the only true one, reinforced by a holy book that explicitly condemns all heretics and followers of rival religions to death, and explicitly promises that the soldiers of God will go straight to martyrs' heaven. (315-316)

CHAPTER VIII

WHAT'S WRONG WITH RELIGION? WHY BE SO HOSTILE?

As a scientist, I am hostile to fundamentalist religion because it actively debauches the scientific enterprise. It teaches us not to change our minds, and not to want to know

exciting things that are available to be known. It subverts science and saps the intellect. (321)

In 2006 in Afghanistan, Abdul Rahman was sentenced to death for converting to Christianity. Did he kill anyone, hurt anybody, steal anything, damage anything? No. All he did was changed his mind. Internally and privately, he changed his mind. He entertained certain *thoughts* which were not to the liking of the ruling party of his country. And this, remember, is not the Afghanistan of the Taliban but the 'liberated' Afghanistan of Hamid Karzai, set up by the American-led coalition. Mr Rahman finally escaped execution, but only on a plea of insanity, and only after intense international pressure. He has now sought asylum in Italy, to avoid being murdered by zealots eager to do their Islamic duty. It is still an article of the *constitution* of 'liberated' Afghanistan that the penalty for apostasy is death. Apostasy, remember, doesn't mean actual harm to persons or property. It is pure thoughtcrime, to use George Orwell's 1984 terminology, and the official punishment for it under Islamic law is death. On 3 September 1992, to take one example where it was actually carried out, Sadiq Abdul Karim Malallah was publicly beheaded in Saudi Arabia after being lawfully convicted of apostasy and blasphemy. (324-325)

But let's have no complacency in Christendom. As recently as 1922 in Britain, John William Gott was sentenced to nine month's hard labour for blasphemy: he compared Jesus to a clown. Almost unbelievably, the crime of blasphemy is still on the statute book in Britain, and in 2005 a Christian group tried to bring a private prosecution for blasphemy against the BBC for broadcasting *Jerry Springer, the Opera*. (325)

In Afghanistan under the Taliban, the official punishment for homosexuality was execution, by the tasteful method of burial alive under a wall pushed over on top of the victim. The 'crime' itself being a private act, performed by consenting adults who were doing nobody else any harm, were again have here the classic hallmark of religious absolutism. My own country has no right to be smug. Private homosexuality was a criminal offence in Britain up until – astonishingly – 1967. In 1954 the British mathematician Alan Turing, a candidate along with John von Neumann for the title of father of the computer, committed suicide after being convicted of the criminal offence of homosexual behaviour in private. Admittedly Turing was not buried alive under a wall pushed over by a tank. He was offered a choice between two years in prison (you can imagine how the other prisoners would have treated him) and a course of hormone injections which could be said to amount to chemical castration, and would have caused him to grow breasts. His final, private choice was an apple that he had injected with cyanide. (326-327)

An embryo is a 'baby', killing it is murder, and that's that: end of discussion. Much follows from this absolutist stance. For a start, embryonic stem-cell research must cease, despite its huge potential for medical science, because it entails the deaths of embryonic cells. The inconsistency is apparent when you reflect that society already accepts IVF (in vitro fertilization), in which doctors routinely stimulate women to produce surplus eggs, to be fertilized outside the body. As many as a dozen viable zygotes may be produced, of which two or three are then implanted in the uterus. The expectation is that, of these, only one or possibly two will survive. IVF, therefore, kills conceptuses at two stages of the procedure, and society in general has no problem with this. For twenty-five years, IVF has been a standard procedure for bringing joy into the lives of childless couples. (332)

A certain kind of religious mind cannot see the moral difference between killing a microscopic cluster of cells on the one hand, and killing a full-grown doctor on the other. [...] Mark Juergensmeyer, in his chilling book *Terror in the Mind of God*, prints a photograph of the Reverend Michael Bray with his friend the Reverend Paul Hill, holding a banner reading: 'Is it wrong to stop the murder of innocent babies?' Both look like nice, rather preppy young men, smiling engagingly, casually well-dressed, the very opposite of staring-eye loonies. Yet they and their friends of the Army of God (AOG) made it their business to set fire to abortion clinics, and they have made no secret of their desire to kill doctors. On 29 July 1994, Paul Hill took a shotgun and murdered Dr. John Britton and his bodyguard James Barrett outside Britton's clinic in Pensacola, Florida. He then gave himself up to the police, saying he had killed the doctor to prevent the future deaths of 'innocent babies'. (333)

Strong opponents of abortion are almost all deeply religious. The sincere supporters of abortion, whether personally religious or not, are likely to follow a non-religious, consequentialist moral philosophy, perhaps invoking Jeremy Bentham's question, 'Can they *suffer*?' Paul Hill and Michael Bray saw no moral difference between killing an embryo and killing a doctor except that the embryo was, to them, a blamelessly innocent 'baby'. The consequentialist sees all the difference in the world. An early embryo has the sentience, as well as the semblance, of a tadpole. A doctor is a grown-up conscious being with hopes, loves, aspirations, fears, a massive store of humane knowledge, the capacity for deep emotion, very probably a devastated widow and orphaned children, perhaps elderly parents who dote on him. (335-336)

'About the terminating of pregnancy, I want your opinion. The father was syphilitic, the mother tuberculous. Of the four children born, the first was blind, the second died, the third was deaf and dumb, the fourth was also tuberculous. What would you have done?'

'I would have terminated the pregnancy.'

'Then you would have murdered Beethoven.' [...]

This is, in fact, a fully fledged urban legend, a fabrication, deliberately disseminated by people with a vested interest in spreading it. [...] 'The reasoning behind this odious little argument is breathtakingly fallacious, for unless it is being suggested that there is some causal connection between having a tubercular mother and a syphilitic father and giving birth to a musical genius the world is no more likely to be deprived of a Beethoven by abortion than by chaste abstinence from intercourse'. [...] decision *not* to have an abortion in 1888 gave us Adolph Hitler. (337-338)

[...] the logical conclusion to the 'human potential' argument is that we potentially deprive a human soul of the gift of existence every time we fail to seize any opportunity for sexual intercourse. Every refusal of any offer of copulation by a fertile individual is, by this dopey 'pro-life' logic, tantamount to the murder of a potent child! Even resisting rape could be represented as murdering a potential baby (and, by the way, there are plenty of 'pro-life' campaigners who would deny abortion even to women who have been brutally raped). The Beethoven argument is, we can clearly see, very bad logic indeed. Its surreal idiocy is best summed up in that splendid song 'Every sperm is scared' sung by Michael Palin, with a chorus of hundreds of children, in the Monty Python film *The Meaning of Life* (if you haven't seen it, please do). The Great Beethoven Fallacy is a typical example of the kind of logical mess we get into when our minds are befuddled by religiously inspired

absolutism. (339)

As long as we accept the principles that religious faith must be respected simply because it is religious faith, it is hard to withhold respect from the faith of Osama bin Laden and the suicide bombers. The alternative, one so transparent that it should need no urging, is to abandon the principle of automatic respect for religious faith. This is one reason why I do everything in my power to warn people against faith itself, not just against so-called 'extremist' faith. The teachings of 'moderate' religion, though not extremist in themselves, are an open invitation to extremism. (345-346)

More generally (and this applies to Christianity no less than to Islam), what is really pernicious is the practice of teaching children that faith itself is a virtue. Faith is an evil precisely because it requires no justification and brooks no argument. Teaching children that unquestioned faith is a virtue primes them – given certain other ingredients that are not hard to come by – to grow up into potentially lethal weapons for future jihads or crusades. Immunized against fear by the promise of a martyr's paradise, the authentic faith-head deserves a high place in the history of armaments, alongside the longbow, the warhorse, the tank and the cluster bomb. If children were taught to question and think through their beliefs, instead of being taught the superior virtue of faith without question, it is a good bet that there would be no suicide bombers. Suicide bombers do what they do because they really believe what they were taught in their religious schools: that duty to God exceeds all other priorities, and that martyrdom in his service will be rewarded in the gardens of Paradise. And they were taught *that* lesson not necessarily by extremist fanatics but by decent, gentle, mainstream religious instructors, who lined them up in their madrasas, sitting in rows, rhythmically nodding their innocent little heads up and down while they learned every word of the holy book like demented parrots. Faith can be very very dangerous, and deliberately to implant it into the vulnerable mind of an innocent child is a grievous wrong. (347-348)

CHAPTER IX CHILDHOOD, ABUSE AND THE ESCAPE FROM RELIGION

In 1858 Edgardo Mortara, a six-year-old child of Jewish parents living in Bologna, was legally seized by the papal police acting under orders from the inquisition. Edgardo was forcibly dragged away from his weeping mother and distraught father to the Catechumens (house for the conversion of Jews and Muslims) in Rome, and thereafter brought up as a Roman Catholic. Aside from occasional brief visits under close priestly supervision, his parents never saw him again. The story is told by David I. Kertzer in his remarkable book, *The Kidnapping of Edgardo Mortara*. (349)

Once, in the question time after a lecture in Dublin, I was asked what I thought about the widely publicized cases of sexual abuse by Catholic priests in Ireland. I replied that, horrible as sexual abuse no doubt was, the damage was arguably less than the long-term psychological damage inflicted by bringing the child up Catholic in the first place. [...] I received a letter from an American woman in her forties who had been brought up Roman Catholic. At the age of seven, she told me, two unpleasant things had happened to her. She was sexually abused by her parish priest in his car. And, around the same time, a little schoolfriend of hers, who had tragically died, went to hell because she was a Protestant. Or so my corespondent had been led to believe by the then official doctrine of her parents' church. Her view as a mature adult was that, of these two examples of

Roman Catholic child abuse, the one physical and the other mental, the second was by far the worst. She wrote:

Being fondled by the priest simply left the impression (from the mind of a 7 year old) as 'yucky' while the memory of my friend going to hell was one of cold, immeasurable fear. I never lost sleep because of the priest – but I spent many a night being terrified that the people I loved would go to Hell it gave me nightmares. (356-357)

It is said that Alfred Hitchcock, the great cinematic specialist in the art of frightening people, was once driving through Switzerland when he suddenly pointed out of the car window and said, 'That's the most frightening sight I have ever seen.' It was a priest in conversation with a little boy, his hand on the boy's shoulder. Hitchcock leaned out of the car window and shouted, 'Run little boy! Run for your life!' (357)

Another of my television interviewees was Pastor Keenan Roberts, from the same state of Colorado as Pastor Ted. Pastor Roberts's particular brand of nuttiness takes the form of what he calls Hell Houses. A Hell House is a place where children are brought, by their parents or their Christian schools, to be scared witless over what might happen to them after they die. Actors play our fearsome tableaux of particular 'sins' like abortion and homosexuality, with a scarlet-clad devil in gloating attendance. These are a prelude to the *pièce de resistance*, Hell Itself, complete with realistic sulphurous smell of burning brimstone and the agonized screams of the forever damned. (359)

Jill Mytton [a psychiatrist interviewed on "The Root of All Evil"] was brought up to be terrified of hell, escaped from Christianity as an adult, and now counsels and helps others similarly traumatized in childhood: 'If I think back to my childhood, it's one dominated by fear. And it was the fear of disapproval while in the present, but also of eternal damnation. And for a child, images of hell-fire and gnashing of teeth are actually very real. They are not metaphorical at all'. I then asked her to spell out what she had actually been told about hell, as a child, and her eventual reply was as moving as her expressive face during the long hesitation before she answered: 'It's strange, isn't it? After all this time it still has the power to ... affect me ... when you ... when you ask me that question. Hell is a fearful place. It's complete rejection by God. It's complete judgement, there is real fire, there is real torment, real torture, and it goes on for ever so there is no respite from it'. (361-362)

I thank my own parents for taking the view that children should be taught not so much *what* to think as *how* to think. If, having been fairly and properly exposed to all the scientific evidence, they grow up and decide that the Bible is literally true or that the movements of the planets rule their lives, that is their privilege. The important point is that it is *their* privilege to decide what they shall think, and not their parents' privilege to impose it by *force majeure*. And this, of course, is especially important when we reflect that children become the parents of the next generation, in a position to pass on whatever indoctrination may have moulded them. (367)

It is the source of squirming internal conflict in the minds of nice liberal people who, on the one hand, cannot bear suffering and cruelty, but on the other hand have been trained by postmodernists and relativists to respect other cultures no less than their own. Female genital mutilation (sometimes called circumcision) is undoubtedly hideously painful, it sabotages sexual pleasure in woman (indeed, this is probably its underlying

purpose), and one half of the decent liberal mind wants to abolish the practice. The other half, however, 'respects' ethnic cultures and feels that we should not interfere if 'they' want to mutilate 'their' girls. The point, of course, is that 'their' girls are actually the girls' *own* girls, and their wishes should not be ignored. Trickier to answer, what if a girl says she wants to be circumcised? But *would* she, with the hindsight of a fully informed adult, wish that it had never happened? Humphrey makes the point that no adult woman who somehow missed out on circumcision as a child volunteers for the operation later in life. (369-370)

The Supreme Court was asked to rule in 1972, when some Amish parents in Wisconsin withdrew their children from high school. The very idea of education beyond a certain age was contrary to Amish religious values, and scientific education especially so. The State of Wisconsin took the parents to court, claiming that the children were being deprived of their right to an education. After passing up through the courts, the case eventually reached the United States Supreme Court, which handed down a split (6:1) decision in favour of the parents. The majority opinion, written by Chief Justice Warren Burger, included the following: 'As the record shows, compulsory school attendance to age 16 for Amish children carries with it a very real threat of undermining the Amish community and religious practice as they exist today; they must either abandon belief and be assimilated into society at large, or be forced to migrate to some other and more tolerant region.'

Justice William O. Douglas's minority opinion was that the children themselves should have been consulted. Did they really want to cut short their education? Did they, indeed, really want to stay in the Amish religion? Nicholas Humphrey would have gone further. Even if the children had been asked and had expressed a preference for the Amish religion, can we suppose that they would have done so if they had been educated and informed about the available alternatives? For this to be plausible, shouldn't there be examples of young people from the outside world voting with their feet and volunteering to join the Amish? Justice Douglas went further in a slightly different direction. He saw no particular reason to give the *religious* views of parents special status in deciding how far they should be allowed to deprive their children of education. If religion is grounds for exemption, might there not be secular beliefs that also qualify? (371)

And now, here's another charming picture. At Christmas-time one year my daily newspaper, the *Independent*, was looking for a seasonal image and found a heart-warmingly ecumenical one at a school nativity play. The Three Wise Men were played by, as the caption glowingly said, Shadbreet (a Sikh), Musharaff (a Muslim) and Adele (a Christian), all aged four.

Charming? Heart-warming? No, it is not, it is neither, it is grotesque. How could any decent person think it right to label four-year-old children with the cosmic and theological opinions of their parents? To see this, imagine an identical photograph, with the caption changed as follows: "Shadbreet (a Keynesian), Musharaff (a Monetarist) and Adele (a Marxist), all aged four'. Wouldn't this be a candidate for irate letters of protest? It certainly should be. Yet, because of the weirdly privileged status of religion, not a squeak was heard, not is it ever heard on any similar occasion. (379-380)

A good case can indeed be made for the educational benefits of teaching comparative religion. Certainly my own doubts were first aroused, at the age of about nine, by the lesson (which came not from school but from my parents) that the Christian religion in which I was brought up was only one of many mutually incompatible belief-systems.

Religious apologists themselves realize this and it often frightens them. After that nativity play story in the *Independent*, not a single letter to the Editor complained of the religious labelling of the four-year-olds. The only negative letter came from 'The Campaign for Real Education', whose spokesman, Nick Seaton, said multi-faith religious education was extremely dangerous because 'Children these days are taught that all religions are of equal worth, which means that their own has no special value'. Yes indeed that is exactly what it means. Well might this spokesman worry. On another occasion, the same individual said, 'To present all faiths as equally valid is wrong. Everybody is entitled to think their faith is superior to others, be they Hindus, Jews, Muslims or Christians – otherwise what's the point in having faith?' (382)

Three-quarters of Catholics and Protestants could not name a single Old Testament prophet. More than two-thirds didn't know who preached the Sermon on the Mount. A substantial number thought that Moses was one of Jesus's twelve apostles. That, to repeat, was in the United States, which is dramatically more religious than other parts of the developed world. (383)

CHAPTER X A MUCH NEEDED GAP?

Does religion fill a much needed gap? It is often said that there is a God-shaped gap in the brain which needs to be filled: we have a psychological need for God – imaginary friend, father, big brother, confessor, confidant – and the needs has to be satisfied whether God really exists or not. But could it be that God clutters up a gap that we'd be better off filling with something else? Science, perhaps? Art? Human friendship? Humanism? Love of this life in the real world, giving no credence to other lives beyond the grave? A love of nature, or what the great entomologist E. O. Wilson has called *Biophilia*?

Religion has at one time or another been thought to fill four main roles in human life: explanation, exhortation, consolation and inspiration. Historically, religion aspired to *explain* our own existence and the nature of the universe in which we find ourselves. In this role it is now completely superseded by science [...]. By *exhortation* I mean moral instruction on how we ought to behave [...]. I have not so far done justice to *consolation* and *inspiration*, and this final chapter will briefly deal with them. As a preliminary to consolation itself, I want to begin with the childhood phenomenon of the 'imaginary friend', which I believe has affinities with religious belief. (388-389)

Did gods, in their role as consolers and counsellors, evolve from [childhood imaginary friends], by a sort of psychological 'pedomorphosis'? Pedomorphosis is the retention into adulthood of childhood characteristics. Pekinese dogs have pedomorphic faces: the adults look like puppies. It is a well-known pattern in evolution, widely accepted as important for the development of such human characteristics as our bulbous forehead and short jaws. Evolutionists have described us as juvenile apes, and it is certainly true that juvenile chimpanzees and gorillas look more like humans than adult ones do. Could religions have evolved originally by gradual postponement, over generations, of the moment in life when children gave up their [childhood imaginary friends] just as we slowed down, during evolution, the flattening of our foreheads and the protrusion of our jaws? (391-392)

It is time to face up to the important role that God plays in consoling us; and the

humanitarian challenge, if he does not exist, to put something in his place. Many people who concede that God probably doesn't exist, and that he is not necessary for morality, still come back with what they often regard as a trump card: the alleged psychological or emotional *need* for a god. If you take religion away, people truculently ask, what are you going to put in its place? What have you to offer the dying patients, the weeping bereaved, the lonely Eleanor Rigbys for whom God is their only friend?

The first thing to say in response to this is something that should need no saying. Religions' power to console doesn't make it true. Even if we make a huge concession; even if it were conclusively demonstrated that belief in God's existence is completely essential to human psychological and emotional well-being; even if all atheists were despairing neurotics driven to suicide by relentless cosmic angst – none of this would contribute the tiniest jot or tittle of evidence that religious belief is true. It might be evidence in favour of the desirability of convincing yourself that God exists, even if he doesn't. (394)

A philosopher points out that there is nothing special about the moment when an old man dies. The child that he once was 'died' long ago, not by suddenly ceasing to live but by growing up. Each of Shakespeare's seven ages of man 'dies' by slowly morphing into the next. From this point of view, the moment when the old man finally expires is no different from the slow 'deaths' throughout his life. A man who does not relish the prospect of his own death may find this changed perspective consoling. Or maybe not, but it is a potential example of consolation through reflection. Mark Twain's dismissal of the fear of death is another: 'I do not fear death. I had been dead for billions and billions of years before I was born, and had not suffered the slightest inconvenience from it'. (396)

Polls suggest that approximately 95 per cent of the population of the United States believe they will survive their own death. Aspiring martyrs aside, I can't help wondering how many moderate religious people who claim such belief really hold it, in their heart of hearts. If they were truly sincere shouldn't they all behave like the Abbot of Ampleforth? When Cardinal Basil Hume told him that he was dying, the abbot was delighted for him: 'Congratulations! That's brilliant news. I wish I was coming with you'. The abbot, it seems, really was a sincere believer. But it is precisely because it is so rare and unexpected that his story catches our attention, almost provokes our amusement – in a fashion reminiscent of the cartoon of a young woman carrying a 'Make love not war' banner, stark naked, and with a bystander exclaiming, 'Now that's what I call sincerity!' Why don't all Christians and Muslims say something like the abbot when they hear that a friend is dying? When a devout woman is told by the doctor that she has only months to live, why doesn't she beam with excited anticipation, as if she has just won a holiday in the Seychelles? 'I can't wait!' Why don't faithful visitors at her bedside shower her with messages for those that have gone before? 'Do give my love to Uncle Robert when you see him ...' (398-399)

In the same vein, what are we to make of the observation of a senior nurse of my acquaintance, with a lifetime's experience in running a home for old people, where death is a regular occurrence? She has noticed over the years that the individuals who are most afraid of death are the religious ones. Her observation would need to be substantiated statistically but, assuming she is right, what is going on here? Whatever it is, it doesn't, on the face of it, speak strongly of religion's power to comfort the dying. (400-401)

In medieval times, the Church used to sell 'indulgences' for money. This amounted to paying for some number of days' remission from purgatory, and the Church literally (and with breathtaking presumption) issued signed certificates specifying the number of days off that had been purchased. The Roman Catholic Church is an institution for whose gains the phrase 'ill-gotten' might have been specially invented. And of all its money-making ripoffs, the selling of indulgences must surely rank among the greatest con tricks in history, the medieval equivalent of the Nigerian Internet scam but far more successful.

As recently as 1903, Pope Pius X was still able to tabulate the number of days' remission from purgatory that each rank in the hierarchy was entitled to grant: cardinals two hundred days, archbishops a hundred days, bishops a mere fifty days. By his time, however, indulgences were no longer sold directly for money. Even in the Middle Ages, money was not the only currency in which you could buy parole from purgatory. You could pay in prayers too, either your own before death or the prayers of others on your behalf, after your death. And money could buy prayers. If you were rich, you could lay down provision for your soul in perpetuity. (401-402)

The essential evidence for the existence of purgatory is this. If the dead simply went to heaven or hell on the basis of their sins while on Earth, there would be no point in praying for them. 'For why pray for the dead, if there be no belief in the power of prayer to afford solace to those who as yet are excluded from the sight of God'. And we do pray for the dead, don't we? Therefore purgatory must exist, otherwise our prayers would be pointless! Q.E.D. This seriously is an example of what passes for reasoning in the theological mind.

That remarkable *non sequitur* is mirrored, on a larger scale, in another common deployment of the Argument from Consolation. There must be a God, the argument goes, because, if there were not, life would be empty, pointless, futile, a desert of meaninglessness and insignificance. How can it be necessary to point out that the logic falls at the first fence? Maybe life *is* empty. Maybe our prayers for the dead really *are* pointless. To presume the opposite is to presume the truth of the very conclusion we seek to prove. The alleged syllogism is transparently circular. Life without your wife may very well be intolerable, barren and empty, but this unfortunately doesn't stop her being dead. There is something infantile in the presumption that somebody else (parents in the case of children, God in the case of adults) has a responsibility to give your life meaning and point. It is all of a piece with the infantilism of those who, the moment they twist their ankle, look around for someone to sue. Somebody else must be responsible for my well-being, and somebody else must be to blame if I am hurt. (403-404)

In *Unweaving the Rainbow* I tried to convey how lucky we are to be alive, given that the vast majority of people who could potentially be thrown up by the combinatorial lottery of DNA will in fact never be born. For those of us lucky enough to be here, I pictured the relative brevity of life by imagining a laser-thin spotlight creeping along a gigantic ruler of time. Everything before or after the spotlight is shrouded in the darkness of the dead past, or the darkness of the unknown future. We are staggeringly lucky to find ourselves in the spotlight. However brief our time in the sun, if we waste a second of it, or complain that it is dull or barren or (like a child) boring, couldn't this be seen as a callous insult to those unborn trillions who will never even be offered life in the first place? As many atheists have said better than me, the knowledge that we have only one life should make it all the more precious. The atheist view is correspondingly life-affirming and life-enhancing, while at the same time never being tainted with self-delusion, wishful thinking, or the whingeing self-pity of those who feel that life owes them something.

(404-405)