

# The Selfless Gene: Living with God and Darwin

by Charles Foster (Hodder & Stoughton, 2009)

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## Preface

Writes in response to the reductionism of (1) Dawkins & Co., and (2) creationists.

Until the recent rise of creationism from Seventh Day Adventism, Christianity and Darwinism had co-existed quite happily. Creationism (the belief that God created current species 6000-10,000 years ago in a literal week) and **Intelligent Design (ID)** are intellectually bankrupt. (ID attributes most development to **natural selection (NS)** but believes God stepped in to do the difficult bits that NS couldn't manage.)

There are complexity-generators in addition to NS; one of them may well have 'a reassuring character'.

Severe problems are raised by the scale of universal animal suffering.

One key fact is that for tens of thousands of years a type of man as anatomically modern as ourselves lived in Africa and the Levant entirely intuitively, without symbolic thought. Then 'behaviourally modern man' suddenly exploded into the world, changing things for ever. Very odd.

## Chapter 1: The Tangled Bank

The phrase is from Darwin's *On The Origin Of Species (TOOS)*, 1859, ch 14.

On the bank, a vast number of plants, insects, birds and animals are living inter-relatedly. There is both grandeur and horror here. Horror is in the death by predation of mammals in particular, who clearly suffer consciously.

- **Creationist view:** current species broadly as they were when created directly by God 6000 to 10,000 years ago. Subsequent **speciation has been only of a degenerative kind**. Man unrelated to any other species. The horrors stem from the Fall. Before that, all species were vegetarian and there was no death, pain or predation.
- **Evolutionist view:** the evolutionist senses he has much in common with other creatures. Believes universe formed c15 billion years ago and the earth c4.5 billion years ago. Believes life sprang into existence as soon as it could, c3.8 billions years ago, but doesn't know how. Believes early life forms were unicellular and that **general direction of evolution is towards greater size and complexity**. This is in line with the 'neo-Darwinian synthesis' (combination of NS with modern science of genetics started by Mendel).

NS operates on the results of random genetic changes that are prompted by several factors. E.g. changes in stripe patterns on snail shells make certain snails more vulnerable to being smashed and eaten by thrushes. Mammals were tiny and unimpressive in age of dinosaurs. Extinction of dinosaurs gave mammals their chance, and NS promoted them vigorously.

## Chapter 2: A Tale of Two Cities and Two Bigotries

The two cities are **North Oxford**, home of Richard Dawkins, chief exponent of scientism, and **North Kentucky**, where the Creationist Museum is located. There, men live alongside dinosaurs, indeed, they ride them! Both Dawkins and the Young Earth creationists (YECs) believe one simple idea explains everything in the world. Both also believe that the theory of evolution by NS excludes the existence of God.

The crisis of faith in Victorian England started long before publication of TOOS and bears little relation to it. It was caused more by the new awareness of animal pain, waste and death. Victorian Christianity accommodated Darwin's insights fairly comfortably. This accommodation persisted generally until the last few decades of the 20th century—the Scopes 'Monkey' Trial in 1925 was just a blip in the graph.

Roots of modern creationism go back to SDA's **Ellen G White**, who claimed God showed her in an 1864 vision that he had created the world in six 24-hour days and that the fossils were all artefacts of Noah's flood. Ideas promulgated

by Geo McCready Price in his *New Geology* (1923) and later popularised by **Henry Morris**. Creationism refuses to look at the plain evidence for evolution.

Darwinist Stephen Jay Gould developed theory of 'punctuated equilibrium' (often stasis in fossil record, interspersed with times of rapid change). Creationists have tried to claim him as supporting their views on the lack of transitional forms, much to his distaste. Dawkins (with Dennett) is the main spokesman for uncluttered evolutionism, which in his view explains everything. His **ultra-adaptationist** views (that ruthless NS governs absolutely everything) go far beyond what Darwin himself believed. And with the passage of time it is becoming ever clearer that things are much more complex.

### Chapter 3: Who's Right? Evidence and the Lack of It

They key players on both sides are better writers than they are scientists. They can produce some smart metaphors that usually prove unhelpful. E.g.:

- Fred Hoyle, astrophysicist, likened the chance of, say, a mouse being assembled by NS to the probability of a functioning Boeing 747 being assembled by a gale blowing through a junkyard. But chance is far from being the whole NS story; it just provides the basis on which NS gets to work, so the metaphor fails. Dawkins himself exposed the fallacy in it with his 'Weasel Program'. NS is cumulative.
- Dawkins's book *Climbing Mount Improbable*. A huge mountain with an unscaleable face has several peaks, each with a biological marvel on top. Observer asks how they got there; concludes they must have been placed there by a great Force in the Sky. An old man (Darwin) takes the observer round the back, where a succession of sloping foothills lead gradually up to the peaks. This is the path of NS.
- Dawkins's phrase 'selfish gene'. It has anthropomorphic appeal but is misleading. NS works on the whole creature, not its separate features, least of all at gene level.

Creationists and evolutionists both believe in evolution but disagree on the extent of it. Creationists say the direction of evolution since Noah has been downward, in the direction of degeneration, as a result of the Fall. No new info has been added to organisms. They also say that while evolution may have produced organisms that look different from pre-existing ones (e.g. breeds of dogs), they are merely variations on the original 'dog' that God created and that came out of the ark. They accept **micro-evolution** but not **macro-evolution** (the production of radical new types, more complex than the ones they sprung from). Evolutionists believe evolution has generated massive complexity. Nobody lives long enough to witness macro-evolution directly, but it is a reasonable assumption, they say, that micro-evolution, if it goes on long enough, will produce new species.

**Falsifiability**, i.e. being proved false: proper science is vulnerable, in that cherished theories can be fatally contradicted by new evidence. Darwinism is falsifiable, or at least some facets of it may be, though the evidence for the theory as a whole is so overwhelming that it is highly unlikely that the whole system would be proved wrong—but it *may* happen!

Creationism is difficult in this respect because of the 'God factor'. He *may* have warped time to squeeze 3.8 billion years of evolutionary time into 10,000 earth years, etc., but it seems odd that he should do so.

ID claims to be 'proper science' and as such should be taught in school. It accepts micro-evolution but brings God into the picture to design the more complex organisms that, it is alleged, NS could never produce. ID is not falsifiable because it is so vague. And many previously 'incomprehensible' structures have since been satisfactorily explained as a result of scientific discovery and research.

Universe is probably about 14 billion years old. The speed of light is a factor in this estimation. Creationists often claim that it has not been constant and is now much slower than it was; in the past, they claim, it was millions of time faster, allowing for a young earth etc. No evidence has been adduced for this contention. The earth is a relative newcomer to universe: about 4.5 billion years old—reduced by creationists to about 10,000 years, claiming that measurement systems like radiometric dating are hopelessly wrong. But the various measurement systems are all roughly in agreement. If rate of decay was hugely faster in the past, as NECs claim, it would have released levels of radioactivity incompatible with life. Even tree rings in Nevada show oldest as 11,800 years old. Seasonal strata in ice go back measurably 180,000 years.

Three evident trends in evolution: increased **size**, increased **complexity**, and **convergence**. Creationists deny them all, on the grounds that if the original creation was pronounced 'very good', the only way is down. Size and

complexity of organisms have increased with the passage of evolutionary time. Convergence means that many creatures that have evolved completely separately end up with similar features, like dolphins and sharks. Creationists say this is just God's 'style', similar to the way Rembrandt had his style, so similar features appear in different 'paintings'. Camera-type eyes like ours have evolved independently at least seven times. An octopus eye is almost identical to ours, but using different proteins. Evolution recruits what it needs from whatever is available. And the human eye is not optimal; it has its blind spot. That of the cephalopods doesn't and is therefore more efficient.

We live on 'a multi-storey car park for corpses'—the fossil graveyard. The **geologic column**. Four main divisions: Pre-Cambrian, Palaeozoic, Mesozoic, Cenozoic (oldest to youngest, bottom to top). Each has distinct fossil flora and fauna. E.g. dinosaurs in Mesozoic but not in Cenozoic. Creationists have to believe that there are no such distinctions, as all creatures were made in 'creation week', so humans and dinosaurs must have existed together. The evidence worldwide is against them. Also, there is clear evidence of Pre-Cambrian life, but creationists can't accept this as they link the 'Cambrian explosion' (of marine fossils) with the Genesis creation.

Some old life-forms continued when new ones evolved; others died out. But evidence for X developing from Y is strong. E.g. in early deposits you get basic sharks; in later ones you get much more refined sharks, and the basic ones often disappear. According to creationists and their view of 'depreciation', it should always be the other way round. Also there are **transitional forms**, though creationists can't admit it. E.g. feathers on some dinosaurs en route to becoming birds. And vestigial organs are a problem for creationists, though not for evolutionists.

**DNA science** confirms evolution. Mutations occur from time to time, mostly detrimental but a few giving massive new opportunities for development—chromosome doubling, for example. **Mutation** is the novelty-producing engine that evolution requires. The evolution of a new species takes far more time than the creationist timescale permits. The genome family tree tallies with the fossil evidence in the rocks, pointing strongly to common ancestry. Nature has a make-do mentality, pressing into service whatever material it finds available. There is a lot of 'junk' DNA, the by-product of mutation and recombination.

Macro-evolution can't be observed as no-one lives long enough. But all the signs are that it has taken place. Islands give some clues. Hawaii has 800 species of *Drosophila* fruit-flies—because there was less competition there than anywhere else. In such circumstances speciation progresses relatively fast (tens or hundreds of thousands of years). Creationists say God just wanted Hawaii to have the flies! The same can be said of East African cichlid fish (Lake Victoria) and Darwin's finches in the Galapagos.

Death and pain were around long before Adam. The cyanobacteria of 3.5 billion years ago were once alive and now are not. There is fossil evidence of predation from the very earliest times. The canine teeth of many dinosaurs were for meat-ripping. And they would crush masses of insects just by walking along. There was disease, too. Bone tumours have been found in dinosaurs 72 million years old and other cancers in much older ones, as well as osteoarthritis.

Some Christians hold that God, being a genius, designed the world optimally. This doesn't stand scrutiny. If true, it would mean optimally designed for a system in which selfishness and death rule, which doesn't reflect well on the designer. The plaiice is not well designed; it originally was an upright rather than flat fish, and the head and face have adapted to its flat form and manner. Starting from scratch would have produced a better job. The route of the laryngeal nerves, the panda's 'thumb' etc. indicate an adaptation of existing features rather than designing ideal ones to start with.

ID accepts some evolution but holds that God stepped in to design some items that are too clever and complex to have come about by NS. Such items, however, are regularly being proved to be by NS after all. And why should it be 'God' who is drawn in to explain the currently inexplicable? It could be some other as yet undiscovered mechanism. If ID is true, what about the gaps God *hasn't* chosen to fill, like giving Sudanese children immune systems able to cope with certain disease-causing bacteria? These and other bacteria have a *flagellum* that ID enthusiasts point to as an example of God's intervention.

A possible fast rate of NS is demonstrated in the evolution of antibiotic resistance. But this is a special case because of the nature of bacteria. Oxford snails and the peppered moth are cases studied relatively recently. They point to NS as the explanation for the way the world is, but cannot prove that it is the only one.

## Chapter 4: Caring and Sharing—The Evolution of Altruism and Community

**Sociability, co-operation and apparent altruism** are common in nature—flocks, herds, insect communities etc. Where do these features come from? Can they be explained by NS alone, as Dawkins et al maintain? They are normally put down to kin selection, reciprocal altruism, or group selection.

**Kin selection** means that one creature may die for another if that is the only way the species' genes can be passed on to future generations. But it is hard to believe any creature can think in such a rational way, overcoming the 'survive' mentality basic to NS. This theory is now in decline.

**Reciprocal altruism** is on the way up: 'You scratch my back, I'll scratch yours.' Costa Rican vampire bats regurgitate surplus blood to other bats, and only donors become recipients. Cleaning stations on coral reefs are another example. It takes a fairly big brain to remember who has helped you, and such behaviour is seen most in organisms with larger brains.

**Group selection** holds that NS can work not just at the level of the individual but also of the group. Co-operative groups have a selective advantage over others. Most biologists are sceptical about this view, but it has not been discredited completely. It works, say some, because individual creatures are safer in the group, so it is selfish after all. All agree that none of these three options explains all behaviour—especially when it comes to humans, who make sacrifices that are ridiculous when judged by the tenets of NS, especially in the realm of religious belief.

**Memes** cannot really explain it—if memes exist at all. If both genes and memes are selfish replicators, selfishness is a house divided and should have collapsed by now.

Explaining something is not the same as giving an account of its origins. Once altruism is seeded, one can see how it may continue on a NS basis, but how did NS let it seed in the first place when it cuts across the whole direction of NS? Also, the fact that one can show that an apparently altruistic act confers an advantage does not in itself prove that the act is not altruistic.

Community has to be explained, too. Evolution is the history of growing complexity and co-operation, seen even in the fossil record: fish shoal, dinosaurs graze together etc. Pure Darwinists insist it must all somehow reflect selfishness. But what if the apparent *selflessness* is in fact real? That opens up vast new possibilities. This is not to say that creatures consciously act that way—that would be anthropomorphism. Darwinian NS certainly operates, and does so on the basis of the ruthless suppression of the weak. But **a parallel form of NS might also have been at work that instils into the natural world a selflessness that is genuinely community-based.** It has been shown that, in humans, care-givers survive longer than care-receivers. Maybe some unconscious parallel to this takes place in other creatures? Maybe the two forces have been competing down the ages. So the lion maybe 'got its canines from the dark and its quintessential majesty from the light.' One of these two forces must have been 'the *primary* determinant of the direction and basic shape of nature.' Go for the 'selfless' option!

In a similar vein, how do we explain the '**extravagance**' of, say, the peacock's tail or the bower bird's palace? Darwinian NS allows only what is strictly necessary to gain the advantage and cannot comfortably explain such over the top features. It can explain why the peacock keeps the tail once it has got it, but can't explain why it was allowed to get it in the first place. This other force, it seems, is one that rejoices in **beauty for its own sake.**

## Chapter 5: The Biology of Awe—The Evolution of Religion

Religion doesn't fit neatly into Dawkins's system—it's far too messy. He has no convincing explanation of it at all, retreating into memes, whose existence he himself admits to doubting!

There is growing evidence that **religion is innate** in the human condition. Children start religious and gradually lose it, whereas Dawkins tries to say it is learned, rather than unlearned. Some say it comes from a spandrel, to deal with an awareness of our own mortality and our fear of it. But why should death be something to fear? No other creature seems to do. Others think it may be something to do with group selection, in that religion helps groups cohere and co-operate. That may be true, but the big unanswered question remains how it seeded in the first place? And why would NS tolerate such anti-Darwinian practices as self-sacrifice or celibacy?

## Chapter 6: The Tangled Book—The Creation Accounts in Genesis

OriGenesis believed the creation accounts to be figurative. So did Calvin.

Genesis is not a simple book. Its apparent simplicity comes from major refining. Genesis 1 and Genesis 2 are distinct yet complementary accounts. The discrepancies between them indicate that **the accounts are not to be taken literally**. Genesis 1 has a cosmic perspective. Genesis 2 is a more local anthropocentric account, with man appearing first, not last, and animals coming later. The 'tree of life' idea is lifted from the Mesopotamian 'Epic of Gilgamesh'. And a talking snake surely indicates we are in the realm of the figurative.

*Ha Adam* is generic, 'the human', until ch 4, where it becomes a personal name. There were other people about; Cain is afraid someone may kill him—and of course from among them he found a wife (not his sister in an incestuous marriage). Paul in Romans says 'sin came into the world through one man', completely overlooking Eve, showing that he knew why and how Genesis was written and treats it accordingly. 'The metaphor-phobes and mythopaths are missing such a lot.'

Scholars agree that the Genesis accounts are at least partly **polemical documents** aimed at counteracting the worldview and gods of Mesopotamia and Egypt. It is **anti-polytheistic**. It opens by stating that God and creatures are not the same, so only God must be worshipped. It insults astrological cults. The great lights, whose creation is deferred to Day 4, after the plants, are thereby demoted: 'It would make more sense to worship a cabbage than to bow down to the stars.' The sun and moon are really just lamps and clocks; they don't rule you. Everything is said to be 'good' except man and the sky, teaching the folly of looking either to yourself or the sky for guidance. In Mesopotamia the 7th day was one of ill-luck; here in Genesis it is a day for celebration.

Later parts of the Bible build on this foundation. Ps 104 shows the sea monster Leviathan being formed by God to 'frolic' in the sea—it has entertainment value—whereas Mesopotamian mythology saw sea monsters as part of the elemental forces of chaos that the creator had to subdue before creation could start. The Hebrew God seemed to like fun. And he did not view humans as slaves; instead, he delegated much of the management of the earth to them—to all of them, not just the kings.

**It is not certain that Genesis deals with creation *ex nihilo*.** There is no article in 'In beginning...', leaving it more open ended. In beginning what? And *bara* does not necessarily mean to make something out of nothing; it can mean re-creation. The first two verses of Genesis 1 suggest that something was already in existence, the earth as an amorphous mass. What God proceeds to do is remodel, divide, order and call things forth from what already exists. Much of this echoes with evolution. The whole 'bringing forth' aspect suggests that the plants and animals were somehow inherent in the earth. And the order of the Genesis 1 creation broadly parallels the order than modern science would give. If we rename dust 'DNA' we are close to the neo-Darwinian synthesis.

Genesis does not suggest, and certainly not insist on, the immutability of species. 'Kind' cannot be made to equate with the modern term 'species', and it does not at all imply genetic fixity; it probably just means 'type' in the general sense, as it does elsewhere in Scripture. Genesis does not mention amphibians. It mentions water creatures and land creatures, but not those that bridge the gap.

The Hebrew has a discordance between the announcement of each creative act ('Let there be light'; Let the earth put forth vegetation' etc.) and the announcement that the act has been accomplished ('And there was light' etc.). Only in the case of light is there a perfect match; only the light does precisely what it is told to do. God tells the earth, 'Grass grass', but instead the earth 'puts forth' grass—a small grammatical nuance, but the editors knew what they were doing. The recalcitrance increases as the story continues. God asks the waters to 'bring forth' the water creatures but there is no 'And it was so'. Instead, he has to create directly: 'So God created...' He gets the results he wanted but not, it seems, by quite the mechanism he intended. We see something similar earlier with the light and darkness, which God tells to separate completely. Instead 'there was evening and there was morning'—in dawn and twilight the two were already mingling. Later, in the Levitical code, some see the classification of birds of prey as unclean as suggesting that, somehow, predation has to a degree escaped the control of divine holiness.

If God was viewing the world that we see today, how could he pronounce this setup 'good' and 'very good' when there is so much **predation, waste, selfishness and death?** 'Good' has no moral overtones here, and probably no aesthetic ones either, but means 'fit for purpose', i.e. it works OK. Some say it was 'good' at that stage and only reached its current state after the Fall. But we have already seen that there was predation, suffering and death long before there was any man around to fall.

There may be a clue in the fact that God gave man vegetable matter to eat, and the same to animals and birds. The text says, 'And it was so.' But the fossil record clearly witnesses that it was not so. And it was not so according to the certain knowledge of the Genesis compilers. They knew about dogs and lions and that these had never been

vegetarian. So we conclude that, in this section at least, they were telling us not what happened but what was **God's dream for the world, his mission statement**. It is prophecy—one picked up by Isaiah, who portrays carnivores as vegetarian. So the 'very good' verdict is pronounced on the world he *aspired* to have, not the predatory world we now see.

Later, God allows people to be carnivorous. Only vegetarian food was taken on Noah's ark. After the Flood, Noah (unasked by God) slaughtered some of the animals in sacrifice to God, who comments that 'the inclination of the human heart is evil from youth'. Man has acquired a taste for animal flesh, and so have the animals. In conceding after the Flood that animals may be eaten God has not changed his mind about his long-term intention; he is making a resigned dispensation in view of the way man chose to exercise his free will. The associated laws (no meat with blood in it) remind us that God's original intention was that no blood should be spilled at all.

Despite God's apparent distaste for them, selfishness, waste and pain were in fact the fuel for the engine that produced so much diversity in the world. So who built that engine? **Something had gone wrong long before Eden**, as we have seen. Before Adam there was a snake in the garden whispering wicked things. God seems to have expected trouble from whatever it was that had not been completely subdued at creation time, otherwise why commission man to 'subdue' the earth?

## Chapter 7: The Ethical Problem—'...and it was very good'

Animal suffering is real and ubiquitous. Nature is gruesome. The NS that has produced so much colour, complexity and beauty has also produced untold suffering. The way the world is turns many people off God. If he is powerless to do things differently he is not omnipotent. If he could do it, but doesn't, he is malevolent. Apart from the signs in Genesis that God wanted something better, Scripture as a whole portrays God as comfortable with the way things are—lions seeking their food from God, etc. (Ps 104).

Some, like Aquinas and CS Lewis, say animals don't experience pain the way we do. The evidence now says otherwise. The distinction between consciousness (man) and sentience (animals) is no longer as clear as once thought. Some think the suffering is a price worth paying for the variety it generates, but deep down we all doubt it, as Ivan in *The Brothers Karamazov* clearly states. The problem is worst for Christians, who believe in a good, powerful God. He displayed his nature in Jesus, who went about healing and caring, and saying that the meek will inherit the earth.

The OT shows God not just as creator but also as sustainer, involved with his creation, which means he is keeping the suffering going, while the OT at the same time claims that he has 'compassion over all that he has made'. In the NT Jesus insists God knows about all his creatures, even the fall of a sparrow. Yet Jesus was a carnivore, involved in fishing and eating Passover lambs. He even once sacrificed a whole herd of pigs for one man's healing.

## Chapter 8: Vegetarian Lions and Fallen Angels—Solutions to the Ethical Problem

**Does the Fall of man explain it all?** Eden had clear geographical boundaries. Maybe, therefore, it was a highly atypical island of harmony surrounded by 'a crashing sea of predation and enmity'. It is not clear what 'the knowledge of good and evil' (which is just the word 'bad') really means. And there was no ban on eating the fruit of the tree of life.

Prompted by the snake, Adam and Eve sinned. God's sentence didn't strip them of immortality because they hadn't yet eaten of the tree of life. What follows suggests that if they had not eaten of the tree of the knowledge of good and evil they would probably never have eaten from the tree of life. But now they had, and so had to be thrown out to stop them doing so. If they hadn't taken from the tree of life, it seems, they would simply have eventually died in the normal human way. Returning to the ground from which they were taken seems to be just a description of what is normal rather than part of the sentence.

Enmity between the snake and men is mentioned as an outcome, but no hint that the whole natural world will henceforth be at war with man. Childbearing pain will increase, which implies it had existed before. Working the fields will be harder, but there is no suggestion that it wasn't hard before. Jewish scholars and the early church, therefore, had nothing like the advanced doctrine of the Fall that we tend to take for granted. The OT does not mention the origin or transmission of sin at all, nor do the Gospels. **Augustine**, with his Gnostic view of sex, produced the doctrine as we now tend to hold it. He was strongly shaped by Rom 5:12-21.

Three things in this passage stand out: (1) what happened in Eden had an effect on later humans; (2) that effect was 'death'; (3) the passage emphasises individual responsibility: 'death spread to all *because all sinned*.' The Gk *paraptoma* ('trespass') is a mild word normally meaning an inadvertent slip. And 'death' makes best sense in context when viewed as spiritual death. In 1 Cor 15, however, Paul seems to be making a link between physical death and Adam's sin. He is saying that Adam's dust-body, and ours, will return to dust unless you, through Christ, are made of the much more durable substance, 'spirit'.

Rom 8 says that the destiny of the natural world is somehow intertwined with that of man, but it stops short of specifying what its current problems actually are. But the 'labour' imagery does suggest that creation 'brings forth' new things and also indicates that it can do more than it has so far been permitted to do. One can, if one wishes, see the evolutionary process there. So the most that the NT says is that 'the appointed placators of the turbulent creation became part of the turbulence themselves, and so failed to mitigate some of the horror.'

Various attempts have been made to **explain suffering in the natural world**. Some just say the whole business is so mysterious that we can't hope to fathom it. We can never grasp the 'why' of childhood leukaemia or the natural history of the *Ichneumonidae* (who live inside caterpillars and feed off them). Others say the suffering is necessary, intrinsic to the process. The end is good and there is no other way of reaching it. Some things are intrinsically impossible even for God. Maybe we need the dark tones for the tonal range of the picture to be complete and aesthetically satisfying. But if God is like that, how can he be said to be good?

Better, perhaps, to say that **suffering is the price to be paid for free will to exist**—not just human free will, but in the created order as a whole. God does seem to like delegating, not just to humans but also to the created order: 'Let the earth put forth vegetation' etc. That may imply real choice on its part—that it had the capacity to rebel (and indeed the inclination to do so). But it is hard to believe that this freedom is so important as to be able to trump the happiness of individual creatures. Certainly there is no moral element in the choices made by, say, a rabbit, who is more likely to act on the basis of his genes than any imagined 'choice'. Pain may refine me, as a human, but there's no reason to believe it works for animals.

Whitehead's '**process theology**' makes God subject to the pain of his creatures, feeling with both the hunter and the hunted, but this system creates as many problems as it answers. Another approach is that of **kenotic thought**, which makes God subject to the forces of NS. He suffers with the frog being eaten by the snake and somehow that suffering is redemptive. But this philosophy assumes that the suffering was necessary in the first place, which has yet to be demonstrated. Kenotic thinkers say that if you take away the capacity for pain you take away the capacity for joy.

Theistic biologists have something to say on this. There is in fact no waste in NS, they say, because dead bodies in time become assimilated into living ones, and there is exactly as much death around as there is life (i.e. every creature that is born dies). Our pain receptors are so sensitive in order to keep us alert and safe. And God has provided analgesia in the natural world. Pain is necessary, but God does his best to minimise it. But how true this is for animals is questionable. For them the average is to have far more pain than joy.

We are forced back to the conclusion that God didn't want things that way, and is not responsible for it being that way. Jesus wept at the grave of Lazarus. He went about healing diseases and infirmities. So if God isn't responsible, who is?

This criminal will be immensely ancient. He will oppose God's rule, be the antithesis of his character and be the inciter of the rebellion we see in Genesis 1 & 2. He inspired the snake in Eden. He whispered, 'Don't grass grass; do your own thing.' It was his work that man was called to subdue. Here, Christianity speaks of a **fallen angel**—a creature, not a creator. If God had snuffed out this creature, would the world have been different? Only when man arrives on the scene with his moral consciousness does his freedom require the possibility of evil; nothing before him required it. So why didn't God remove the evil influence before then? We don't know. 'All we can say is that because he is love he loathes, it; because he is peace, he is at war with it; because he is ingenious, he can bring good things even out of bad; because he is almighty, he will ultimately triumph over it.' His Genesis 1 dream is in fact a plan. He put man in charge of the plan, but man instead became part of the problem.

Jesus marked a decisive step in the unfolding of the plan, the beginning of a **new creation**. He became part of the suffering creation that existed. He entered the evolutionary chain and became a victim of it. The Bible story that began in a garden ends in a garden-city. His resurrection body was the prototype of new creation realities. It proves that God loves matter. The earth will survive and be glorified, and so will its creatures. God has been pleased to

reconcile 'all things' to himself in Christ. 'If, and in so far as, an anteater needs to be redeemed, it will be.' It is a reconciliation not just between God and his creatures, but between the creatures, too.

## Chapter 9: The Ape in the Image—Human Evolution and the Book of Genesis

*Homo sapiens* emerged about 3.5 million years ago. Almost hairless; relatively huge head; long hind limbs; opposable thumb; unusual voice box (able to talk but possible to choke to death); sociable and co-operative. Hunted large and dangerous animals. Passion for art. Interested in own death and that of other members of species; seemed to believe in his own immortality. When they first appeared they shared the earth with the Neanderthals (*Homo neanderthalensis*)—for about 60,000 years. These had fire; lived in shelters covered with animal hides; basic tools and throwing spears; might possibly have hunted (not at all certain). Mostly likely no language at all. No art. Sometimes buried their dead but no evidence of any belief in the numinous or the afterlife.

The important thing about all this is that 'crucially modern *behaviour* arrived much later than the hardware which is necessary and apparently sufficient for that behaviour.' Most agree that old *Homo sapiens* came 'Out of Africa'. By 100,000 years ago at latest humans skeletally like us were in Africa and the Levant. But their lives, as creatures structurally modern but not yet 'behaviourally modern', seem to have been very similar those of the Neanderthals. Had they been 'behaviourally modern' they would probably not have tolerated the Neanderthals alongside themselves for so long.

About 45,000 years ago **Upper Palaeolithic** culture dawned in the Levant and Europe, and the Neanderthals very quickly disappeared. Peaceably marginalised? Genetically swamped? Ethnically cleansed? Probably the latter. It was 'an explosion of sensibility'—art, decoration, organisation, classification etc. Social and co-operative, with elaborate burial ceremonies.

What gave them the edge over the Neanderthals? Not brain size: Neanderthals had a bigger brain, and it is similar in all the higher primates. Whatever it was, it is probably linked to their unprecedented ability to see the world in the form of **symbols**. They could ask, 'What if...?' This may have been a by-product of language—or vice versa. What triggered their sudden emergence since they were not a new species? We don't currently know. Clear that the power of symbolic thought would quickly confer an advantage, but how it arrived in the first place remains a mystery. Is there perhaps a 'theological' factor?

In Genesis God does not pronounce man 'good'. Why? At that stage man had not been disobedient. But because he is a free being he is also incomplete or indeterminate; what he becomes will depend on what he will freely choose to be. So he is not 'good' in the sense of 'fit for purpose'. He has yet to respond to the call to be fruitful, reproduce, fill and subdue the earth, and to till and keep the garden, if not the earth. Man failed especially as a subduer; he rebelled and himself need to be subdued.

At the start of Genesis 2 the man described had not eaten from the available tree of life; he had no fear of death. God put him in a context of 'It's allowed' (with just the one exception)—man has free will; the delegation is real. The one prohibition suggests that he had in him, because of his free will, a tendency that would nudge him towards the tree of knowledge. It was an ordinary tree. But we can't learn about God, ourselves and the world from nature; proper obedience is what we are designed for. Experience and observation are not, in themselves, the ultimate wisdom.

The threat of death, if it means just physical death, is no real threat to a being with no deep concept of death or fear of it. And when they eat the fruit they do not in fact die that way. The compilers of Genesis clearly understood this, and sought to indicate that it meant a different kind of 'death'. Prior to this, the introduction of the animals to man, his appreciation of them but their inadequacy as meaningful partners, and the creation of Eve while Adam was out of the picture asleep, is a further way of indicating man's lack of self-sufficiency and his dependence on God. In Genesis 2 it is in the context of the animals that man first speaks. He also names and catalogues. These are all classic Upper Palaeolithic activities, possibly very early ones. And when Eve is produced Adam waxes poetic!

As soon as language and reason appear their limitations are exposed; the serpent shows how they can be twisted. This is another way of saying that, unaided, man cannot reach right conclusions without God's help. This doesn't mean he gets *everything* wrong; what the snake said contained some truth as well as error.

The first result of eating the forbidden fruit is an awareness of nakedness: they suddenly see themselves and one another fully for the first time. They also become aware of responsibility, and immediately try to shift it onto others.



They don't give straight answers to God's question: 'Language has not fallen with the forbidden fruit; it is in the very nature of language and reason to be inadequate.'

**The 'fall' of man (not a biblical term) actually *supplements* man rather than diminishing him.** 'The man has become like one of us, knowing good and evil.' 'The post-fall Adam looked *more* like God than the pre-fall Adam.' The image of God in him was enhanced—that was the problem. The death that day was **the death of innocence**, always the casualty of growing self-consciousness. A new kind of 'success' becomes available, but one seriously flawed and a poor exchange for the pre-fall naivety where much could be intuited but not explained. So **'the direct and immediate consequence of the "fall" is civilisation as we know it.'** Until the very end of the Bible God dislikes cities and all that goes along with them. The following chapters of Genesis parallel exactly what we know of the development of 'civilisation'.

If we need a **historical Adam and Eve** we should look for them **among the anatomically modern but behaviourally naive *Homo sapiens***. Just like the biblical Adam and Eve they had an abrupt change, non-anatomical yet profound. It caused them to start asking 'What if...?' And that is the question that has led to all the unpleasant parts of human history. It has also led to 'Mozart, general anaesthesia, Shakespeare, penicillin and the rule of law.' The cost of culture was a cost that God thought too high. Sadly, 'we can no longer see the majestic possibilities and the stupendous claims of innocence.'

The old hymn *Adam lay ybounden* suggests that 'the solution to the problem of the fall goes hugely beyond a repair; we are left so much better off that we ought to give extravagant thanks for the defect that brought the workman in.'

## Chapter 10: Living With God And Darwin

Dawkins et al credit Darwinism with an ability to explain everything; most serious scientists (including Darwin) make no such claims for it. YECs take a similar line with the Bible literally interpreted (and using the KJV). If one categorises evolution and the Bible in this simplistic way, there is no way both can be true. But most sound evangelical scholars take a more sensible interpretive approach to Scripture, and viewed this way, it is altogether compatible with a belief in evolution.

The facts show that something has been taking life in the direction of increasing complexity, expressed partly in *association*: increasing sociation and community, co-operation, selflessness and altruism. Hard-nosed selfishness, the basis of NS, could hardly have allowed such a trend to seed in the first place, so another force must have been at work alongside it. This is what gives us hope.