



Yes, we have to choose

**Being a review by David Anderson of Denis Alexander's
“Creation or Evolution – Do We Have To Choose?” (Monarch
Books, 2008)**

Denis Alexander's “Creation or Evolution – Do We Have To Choose?” reviewed by David Anderson, <https://david.dw-perspective.org.uk>.

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Introduction

Dr. Denis Alexander, a fellow of St. Edmund's College, Cambridge, and director of the "Faraday Institute for Science and Religion". Dr. Alexander is both an evangelical Christian and a professional biologist. He is also a Darwinist, not a creationist. The aim of his book is to explain why you should be one too.

I was given a copy of this book (its first edition) in Summer 2008, and its contents deeply concern me. Dr. Alexander professes to be an evangelical. The methods of Biblical interpretation which he applies in this book, however, are not. I do not agree with the book's overall thesis - that Darwinism can be harmonised with the Bible - but the non-evangelical hermeneutical (i.e. interpretative) methods which are used to justify that thesis concern me more. Dr. Alexander does not present any argument for his assumptions in this book, but simply presents them to the naive reader as unquestionable.

If evangelicals take the contents of this book to heart, they will not only be endorsing a certain set of conclusions regarding origins; they will also be embracing a seriously erroneous approach to interpreting the word of God as a whole, and its relationship to other areas of knowledge. Such an approach, if carried out consistently, will ultimately damage the whole structure of Biblical revelation and the gospel itself - a road down which I believe Dr. Alexander in this book has already begun to travel. I agree with Professor Andrew McIntosh, whose review in "Evangelical Times" published in September 2008 asserted as follows: "By writing this book, Alexander has placed himself on the side of liberal theologians and, in this reviewer's opinion, has departed seriously from the evangelical faith."

The following review was composed piece-by-piece after I had read the book once and decided to go through it again. It amplifies and justifies the above statement of concern. It is not a comprehensive review; there are many other issues of fact and interpretation I would take issue with. It is intended to focus on some key issues, especially the above ones. My particular thanks go to my wife for her love and particularly her patience with me, to David Cooke who proof-read and

made many corrections to the manuscript, to Professor McIntosh for supplying the fore-word and to Paul Taylor who helped to publish a physical edition.

The preface

In his preface, Dr. Alexander begins by stating that his book presupposes the entire authority of the Bible and so is mainly written for Christians. This is good to hear. He then goes on to say that the creation/evolution debate has generated too much heat and not enough light, and that we need to make sure we disagree in a loving way. The disagreement, he says, is not over an essential and central biblical doctrine. The fact that God created and sustains the universe is essential and central; but just how he did so (the methods and mechanisms) is a peripheral matter, an in-house debate in which we must speak with love to one another and on which we can fellowship whilst in disagreement.

I do not see any problem in conceding that many fine Christians have endorsed Darwinism, and that creationists are no more immune from using harsh or intemperate language than anyone else in heated matters is. It would not be hard to use Google to find people who are both creationists and staggeringly rude, as well as Christian Darwinists who speak respectfully and edifyingly.

We have an early clue, though, from this introduction, as to where the book is going to go. The Bible, we are going to discover, is basically empty of the significant content as to any of the how, where or when God created. It just tells us that he did, in a way that omits any details that relate to time or space. That is a slight overstatement, as Dr. Alexander will allow a few peripheral details that do not conflict with Darwinism to come in - but no others. The Bible gives a pleasant, ethereal spiritual interpretation of the world; Charles Darwin tells us the hard facts of history and science.

The "central / peripheral" distinction, if pushed in this way, ends up begging or obscuring the key question. Does Darwinism by its innate tendency undermine the Christian doctrine of creation? Is its nature to take away the foundations of Christian belief concerning a perfect creation at the beginning, a disastrous all-encompassing fall, the entrance of death to spoil God's "very good" creation, a plot-line and favoured line of descent from the beginning until the coming of Christ

as Saviour? Does the idea of evolution inherently imply some form of naturalism or deism (note that Darwin himself was a deist)? It might be possible for a man to introduce a family of termites in his basement without suffering any noticeable damage for a long time... but in the normal course of things there is only going to be one outcome.

It is one thing to note that embracing Darwin is not an automatic sign of damnation for everyone who does so. Well and good. But the real question is whether Darwinism undermines the actual gospel way of salvation, by breaking important logical links that are made in the Bible's historical plot-line. Here, creationist and atheist agree - if one is true, then the other cannot be. One implies this and the other implies that, and between the two there is fundamental contradiction. The world was created very good and subsequently fell; or, it began in chaos and has undergone gradual improvement since. God ordered all things by an immediate word at the beginning, or order only comes through ongoing and continuing processes which are still active today. Either one is true, or the other - but not both. We may both embrace Christ as Saviour; but if your teaching undermines the Biblical gospel, you will have to allow me the freedom to say so without accusing me of being unloving.

It is interesting, then, to come to the end of Dr. Alexander's book and read the postscript, because by then things have changed! Once the case has been made for the full compatibility of the Bible with Darwinism as God's method of creation, we are told that Christians who assault the teaching of evolution "are embarrassing", and they "bring the gospel into disrepute". They are ignorant and creating significant barriers to unbelievers to faith. They are a red herring which distract people from doing something useful. They are like the man in Matthew 25:14-30 who buried his talent in the ground (Dr. Alexander doesn't actually go on to spell out the parable's implication that presumably we will be cast into outer darkness where there is weeping and gnashing of teeth). I did not really feel the love there. Did Dr. Alexander's opinion change in between writing one and the other? Did he forget what he had written at the beginning by the time he reached the end? Was it just a bad day? Or perhaps he was just softening us up at the beginning, and then when he has made his case

and thinks he has persuaded us, he tells us what he really wants us to think? To talk about the motives is speculative – but the difference in tone is very evident.

The preface ends with the statement that Dr. Alexander hopes we will end up agreeing with him that the "Book of God's Word" and the "Book of God's Works" are in full harmony. I do not think any creationist ever doubted that those two “books” (if we may speak of them both equally as “books”) agree. What we will disagree over is as to whether either book has any harmony with Darwinism. The interesting question will be, as Dr. Alexander's book develops, how is he going to interpret those two books? Which interprets which? Which is authoritative and infallible, containing sufficient rules to interpret itself, and which is subject to the fallible judgments of fallen and foolish man? Are these two equal books, or are there differences in them that will affect how we relate them? We will see...

Chapter 1: What do we mean by creation?

Chapter 1 is titled "What do we mean by creation?", and seeks to give us a gentle general introduction to the question. First, Dr. Alexander makes the point that all Christians are in some sense of the word, "creationists" - we believe that everything that is is ultimately due to God. This is regardless of what we believe about how God created. Nevertheless, words are defined by their usage, and so Dr. Alexander accepts that the word "creationist" often, in today's discussion, is commonly used to mean something more - but the real thing is not to quibble over words. It is how we answer the key questions concerning how we interpret those early chapters of Genesis, and whether it is compatible with the theory of evolution, and so on. Very well; there is nothing worth pausing to quibble over here.

From there, Dr. Alexander goes on to explain that in interpreting the Bible, we have to use skill and caution. It is written in foreign languages, and comes from foreign eras and cultures. We must be sensitive to such things as genre, the expected audience, purpose, and any relevant extra-textual knowledge, and so on. The next few pages unpack these issues a little bit, and then we are given a brief word study of the Hebrew words which are usually translated in the semantic domain of create, creation, etc.

Frankly, as a piece of literature, I thought that this first chapter is rather plodding and not very well structured. The themes do not develop naturally so much as suddenly lurch. Still, that is by the by; it is Dr. Alexander's theology that worries me, not his literary skills (and the rest of the book is much better in this regard). This chapter is preliminary and there is not much meat on the table yet. There are, though, two issues which did catch my eye. Both were issues of omission, and this became a common theme for me as I went through the book. I found Dr. Alexander to be a skilful writer, widely read and informed, but ultimately, a bad theologian.

How so? Because when we boil it down, Dr. Alexander basically treats the Bible in the way that someone at the sweet store does the pick-and-mix counter. He has a blend he wants to create, and so he selects something from here, some from there, to get his final product. Something like brewing up a good coffee - half a handful of beans of this one, half of that one, so on and so forth, and voila - here's your drink: I hope you like it.

When Dr. Alexander (a self-conscious evangelical) introduces the key questions as to the interpretation of the Bible, I found him *in practice* to be very much in the modernist camp. What are his key principles for Biblical interpretation? These are what he gives us:

- What kind of language is being used?
- What kind of literature is it?
- What is the expected audience?
- What is the purpose of the text?
- What relevant extra-textual knowledge is there?

All fine and good, as far as it goes. The Bible is written in human language, and we must look to the ordinary meaning of the words in all their various contexts to understand what it means. Dr. Alexander emphasises that the Bible has dual authorship, and the authors use their own styles and write freely from their own minds. OK. But what is missing from this picture? It is the key principle that the Bible is as well as being in very important senses *like other books* (written in human language, in grammatical sentences and paragraphs, etc.), is also *not like any other book*. There are additional factors involved which have a significant impact on interpretation, and cannot be overlooked. Theological liberals treat the Bible as if it were any other ancient Eastern bit of literature, and stop with the list of questions above. Evangelical Christians, though, are meant to acknowledge that the above questions are important *but well short of sufficiency*, because we believe that the divine authorship of the Bible (which Dr. Alexander believes in) is primary, and that as a result it is indispensable in interpreting any one part of the Bible to compare it with the rest of the Bible. The Bible is our ultimate authority, and

therefore takes the prime place in interpreting itself. It is not our job to take this interesting fact here, that fact there, and blend them together to give a plausible and defensible theory of what Genesis means. True Christian exegesis means to find out what the Bible itself actually teaches us about the question of what Genesis really means. The freedom to brew up our own blend is not there for us - we've already been told how it should turn out.

For Genesis, that means that the correct interpretation of its early chapters is ultimately decided, not simply by how Genesis on its own could be read by a second-millennium-BC dweller of the east; but how Genesis is interpreted by the later authors of the Bible. This question is fundamental and primary, and it is not just a slip that Dr. Alexander misses it out. As I read through his book, I found that with the exception of a brief examination of Romans 5, there was no real effort to survey the questions, "How does the Bible itself interpret Genesis? How did Christ use its teachings and what was his and the apostles' hermeneutic? What are the results if we apply the hermeneutic from those places that they do interpret it consistently across the whole book?" Ultimately we will as we read on find that Dr. Alexander interprets Genesis against the background of a (selective) reconstruction of the paganism of the early east, and that for him forms the primary context.

The other notable omission occurs whilst Dr. Alexander is giving us some warnings about mistakes we can make in reading our Bibles. They are good warnings. Westerners can be prone to treating the Bible as if it were written in our own culture, which has been conditioned by the intellectual movements of the past couple of centuries - and such readings will just be alien to the true meaning. So, Dr. Alexander warns us against the danger of reading passages with excessive literalism - reading passages as if they were written by modernists without sensitivity to how the original writer intended them.

Where, though, I wonder is the opposite warning? We live in times dominated by Enlightenment thought. We live in the unpleasant afterglow of over a century of unbelieving theological liberalism. We live in times when people think of the Bible in terms of myth, ancient religious stories to do with the inner, private world of personal

opinion, and not the real world of time and space. Literalism has slain its thousands, but liberalism its tens of thousands. It is not excessive literalism which has ruined the mainline denominations of the professing Christian church; it is liberalism. So where is Dr. Alexander's warning that we might be in danger of treating straightforward matters of history as if they were not so? Of "spiritualising" away the Bible's historical assertions, and of (in Kantian style) erroneously removing the historical "husk" in order to get to the spiritual "kernel" ?Where are we alerted to the risks of facing the Bible's cold, hard assertions about real history, real space and time, and committing the sin of unbelief in their face? Where are we warned of the danger, like the Sadducees, of missing the text's plain teachings about the real world and reducing it to an ethereal spiritual core of mere moral teaching?

It is not a coincidence that Dr. Alexander missed that aspect out. That is where, as I shall seek to demonstrate, his book is ultimately going to take us in its handling of the book of Genesis.

Chapter 2: The Biblical doctrine of creation

Chapter 2 is entitled "The Biblical Doctrine of Creation", and is intended to complete the broad overview that began in chapter 1 ("What do we mean by creation?"). The next four chapters are on the question, "What do we mean by evolution?" and answering objections. After that, Dr. Alexander goes on to ask whether the accounts of creation given to us by the Bible and by the theory of evolution can be harmonised, and how. So, this chapter finishes off the overview of creation. In this chapter, Dr. Alexander discusses the Biblical concept of creation in broad terms, setting the parameters for the later discussion of how in particular we understand Genesis and what it has to do with Darwinism.

The headings will give you some idea of how the chapter develops. The first four offered are "four key points that emerge about God in relation to his creation"; "God is transcendent in relation to his creation", "God is immanent in his creation", "God is personal and Trinitarian in his creation", "The three tenses of creation", "Creation and miracles", and the longest section, "Does the Bible teach science?".

Looked at overall within the context of the question posed in the title of the book itself, this chapter is one enormous word fallacy. Specifically, it commits the fallacy of equivocation. This chapter does not deal with the doctrine of creation proper, i.e., the question of origins and what the Bible teaches about how the universe and everything in it began. Rather, it deals with the doctrine of God's relationship to the creation as it now exists, i.e. the doctrine of providence. Dr. Alexander attempts some kind of defence for this in the opening paragraph of the chapter. He says that the Bible's teaching on creation includes origins, but is much more than this, and we should not become too fixated on it; the majority of the teaching on creation is not found in Genesis, but throughout the whole Bible. The language of creation is much broader.

If we are talking about "the created order", then this is all fine and unobjectionable. But this is supposed to be a book about origins, not anything and everything to do with the created order. What we have here is simply a lexical fallacy. That statement would be going too far, if the next chapter was going to sharpen things up and be "The Biblical doctrine of origins" - i.e. if Dr. Alexander weren't simply going to discuss providence instead of origins. But in fact, that is just what he is going to do; this chapter finishes the overview of creation with scarcely a mention of origins. Under the heading "The three tenses of creation" we get only a few general words about the past creation; in a later chapter there will be some specific analysis of the early chapters of Genesis (there is none in this chapter, despite its title), but even that chapter will minimise the relevance of Genesis to the question of origins. That is why I call it a word fallacy. We use the word "creation" commonly to mean origins. But Dr. Alexander takes the word and then slides over into any concept connected with creation. Bringing in providence, Dr. Alexander essentially avoids discussing at all the doctrine of creation proper as understood in evangelical orthodoxy. That is an astonishing procedure when you have a Bible whose opening sentence is "in the beginning God created the heavens and the earth".

It is not, however, an incredible procedure from Dr. Alexander's point of view. In fact, it turns out to be an essential part of his strategy. As the book unfolds one thing becomes clear; Dr. Alexander's doctrine's ultimate end is to fold creation into providence and remove it as a separate category. Whilst the Scriptures teach that creation is indeed a past event at the beginning, Darwinism teaches that it is an ongoing process throughout almost the whole of history that continues at the present time. In fact, as far as higher life forms go, it is an ongoing process in which the "juicy" bits are very recent: overwhelmingly nearer to the present time than to the beginning of time. Dr. Alexander himself will explain in a later chapter, with impressive literary skill, that if we view the history of the universe as a 24 hour clock, then man only appeared on the scene 3 seconds ago, at 23:59:57. Man was not created in any meaningful sense "in the beginning", but (in reality) at the end. His creation is a result of God

working immanently in the created order through the Darwinian process - i.e., it is a result of providence, not of an original supernatural act.

That is why Dr. Alexander structures and proceeds in the chapter in the way he does. It is not simply that he wants to remind us of the uncontroversial fact that the vocabulary of the created order goes beyond origins. It is because his doctrines ultimately collapses the matter of origins into ongoing providence, and makes separate talk of origins to be redundant in practice.

Immanence and transcendence

Dr. Alexander's section on God's immanence in creation is almost 5 pages, whereas his transcendence gets only just over 1. Again, this is all fine as far as it goes. In the context of the book as a whole, though, this bit again appears to be some sort of intellectual softening-up exercise, and the one-sided emphasis is not an anomaly. Where we are going is that God's immanence in creation is going to be Dr. Alexander's answer to the objection that Darwinism is essentially an atheistic doctrine. As God is immanent everywhere, that includes him being immanent in the Darwinian process or any other theoretical or actual process, so therefore it cannot be atheistic. Working this out, though, is postponed to a later chapter. What we are really interested in now, are the two sections "Creation and miracles", and (next time) the longest of them all, "Does the Bible teach science?"

Creation and miracles

I will now attempt to present Dr. Alexander's argument in this section, very briefly summarised. It is good to put it in short form (which Dr. Alexander doesn't), because then its fallaciousness is much more quickly apparent:

- The Bible uses certain words to refer to miraculous events.
- These words are not used to refer specifically to the original creation.
- Therefore the original creation is not a miraculous event.

The section starts with a feature that becomes increasingly frequent as the book goes on - the anonymous bogeyman. Some Christians, we

are told, view God's creative actions as being equivalent to miracles. Fair enough; everything came out of nothing, and I think that is pretty miraculous; that is not really negotiable amongst Christians. Then, this: "Other Christians invoke miracles to explain the existence of those aspects of the created order which they believe can never be understood or explained by science." Well, that is again fair enough in one sense - understood one way, it is pretty much the standard definition of a miracle, if by "science" we mean those things we study which are the regular and orderly actions of God, and by "miracles" we mean those things which are extraordinary acts of God, or something akin to these rough-and-ready, un-nuanced descriptions. That would basically be a tautology. But who exactly are the "some Christians" and "other Christians"? I ask, because I do not think Dr. Alexander wants us to interpret him in this way. He is suggesting that there are some group of unthinking people out there who are indulging in the "God of the gaps" fallacy - "I do not understand this, therefore it is a miracle"; or, in its reduced form, "God did it." This kind of "some Christians believe..." line keeps cropping up in the book when Dr. Alexander wants to distance himself from the creationist position, but it seems that he knows, or at least suspects, that the thing he is suggesting is not actually the position of any mainstream or representative creationist. (If it were, then he could give references to the creationist literature, to demonstrate that it was the creationist position). Hence, he deploys the "some Christians believe..." rhetoric, which gets him out of having to document what he says, or show that reputable creationists actually believe it, but still leaves the suggestion lingering in the air for the undiscerning.

Putting that aside, though, we need to actually look at the argument itself. In my view, it is a further word fallacy, after that embodied by the chapter as a whole (see the previous section). Dr. Alexander picks out various words which are used in the context of miracles, signs, wonders, and so on. Then he observes that these words are not used in the creation account; then he concludes that therefore, creation is not a supernatural event. This, of course, then leaves the door open for us to accept that creation is through the Darwinian mechanism, which involves the outworking of predictable processes over a very long

period of time.

This kind of procedure in carrying out word studies is what gives study of the original languages a bad name. The root error in this case, is that Dr. Alexander makes the arbitrary restriction that only a certain group of key words is allowed to signal the world of miracles; if those words do not appear then it doesn't matter what words are used - we do not have a miracle. So even if the Bible were to say to me, "this was a supernatural event, Anderson, you dummy!", it still wouldn't be a supernatural event, because the word "sign", "wonder" or whatever doesn't appear in the sentence, and because the word "supernatural" wasn't on the list we drew up.

This observation becomes especially important when we observe which words Dr. Alexander actually has selected for his list. The words chosen are those which are used especially in connection with the miracles performed at the time of the Exodus, and those performed by Christ in his fulfilment - the greater Exodus he achieved through his death. They are the words to do with signs of redemption. Creation, of course, is not an act of redemption, and hence it is not a surprise to find that the vocabulary to do with the highlighting of acts of redemption through wonders and signs is not used in connection with creation. Creation and redemption are theologically distinct; to insist that the vocabulary of the supernatural in one category must be the same in the other is an invalid assertion. Dr. Alexander, though, asserts that this very absence is definite teaching for us that the creation event was through predictable processes instead of an immediate act of God, rather than being because creation is not redemption. This is as clear an example of a fallacious argument from silence as could be given.

Surely we have here one of those places where a truth is clear to a child who picks up a Bible, but obscure to the man who has buried himself in technical arguments, word studies, and the decision to rule our special creation a priori. A small child might not use the fancy words, but he would know that if you want to establish whether or not creation was a supernatural event, you should read the language of Genesis 1, and what the rest of the Bible says in reference to those early chapters. Alexander, though, manages to establish that Genesis 1

does not describe a supernatural event merely by noticing that the word group to do with signs of redemption is not used in that chapter, and without any examination of what words are actually used and more importantly, how they are connected to each other in sentences and paragraphs (as if the mere presence of this or that word decides what doctrine is or is not taught). I grieve at this chapter, because many naive readers will surely be impressed - "look, the man mentions words in Greek and Hebrew; he must be right!" But the fundamental structure of the argument is, as a piece of logical reasoning, simply illegitimate.

Does the Bible teach science?

The longest section in this chapter is under the heading "Does the Bible teach science?", and rounds off the two chapters which aim to give us an overview of the Biblical position, before we go on to get an overview of Darwinism. (The chapters after that then ask how the two can be integrated.)

There are some good points scored here against those who have a naive, Richard Dawkins-style take on how religious belief and scientific research can interact. Alexander aims some shots which hit the target in criticising some modernist assumptions. Here, we are talking about the idea that science is the primary arbiter of all truths – the position that says that any kind of "truth" which is not a "scientific truth" is an inferior species. This is the "empiricist" fallacy. The set of justified beliefs (i.e. things that we can believe to be true) is much larger than the set of beliefs subject to verification via repeatable experiments. I cannot, for example, carry out a series of repeatable, double-blind experiments to prove that prayer works, in the scientific sense. God specifically tells us in Scripture not to "put him to the test" in that way (Deuteronomy 6:16). I can, though, "prove" God's willingness to answer prayer by seeking to walk faithfully before him, repenting of sins and praying earnestly through his Son. This is not a "scientific" test, though – yet I am more than justified in believing that God delights to answer his children's prayers.

Dr. Alexander also seeks to explain something of the principle of "accommodation". That is to say, that the language of the Scriptures is

designed to be intelligible to its readers, who were to read it according to its purpose, not according to any arbitrary whim they should entertain. It is not to be read as if it were an edition of The International Physics Monthly. The words should not be interpreted as if they have coded technical and scientific meanings to demonstrate to us that in fact Moses was familiar with how mobile phones would work. Just because modern secularists think that "science" is a superior kind of truth does not mean we have to bend the Bible to comply. We are under no burden to show that it is science in order to stop it coming off second best.

In the presence of these criticisms of modernist errors, then, it is ironic and regrettable to see that ultimately Dr. Alexander takes a position which involves one of the biggest and most damaging to Christianity of them all. In his zeal to stop us from reading the Bible as science, Dr. Alexander comfortably avoids driving his cart into the ditch on the left hand side of the road. Sadly in my opinion he accomplishes this by making a bee-line into the ditch on the right side instead. The position which Dr. Alexander leaves us with is one right at the top of the list of modernist axioms. He comes down in practice (however much he would wish to disclaim doing so in an abstract way) to the following: ultimately, modern scientific journals contain objective science, and the Bible contains religious truths, and never the twain shall meet. The Bible is not intended to, and does not, teach us anything significant about the concrete world that you can see and touch; it contains spiritual truths for salvation. Hence Dr. Alexander approvingly quotes other writers with words like "the Holy Spirit did not desire that men should learn things that are useful to no one for salvation" and "[Scripture is] a Rule of our Faith and Obedience, [but not] a Judge of such Natural Truths as are to be found out by our own Industry and Experience" and "You receive no instruction on physical matters [from the Bible]. The message is a moral one".

This unnecessary division is ultimately a false dichotomy, and a rank modernist one. The God who has acted to save us is one who has acted in the world of space and time. His intervention is a historical one, involving real atoms and molecules. It is not an other-worldly salvation that only exists in an intangible spiritual realm, but in the

concrete one that we live in. In this part of the chapter, Dr. Alexander continues to employ the rhetorical strategy that has already been noted in this review. He sets up the question upon his own terms, with his own choice of dichotomies, and then brings in the "some Christians believe..." straw-man (ignoring actual mainstream Creationist beliefs) to set the backdrop that he will paint his own views against. The clear implication, given the purpose of the book, is that creationists believe that Genesis is to be read something like as if it were a copy of Newton's *Principia*, science written ahead of its time. Alexander writes, "A question that is often raised when thinking about the biblical doctrine of creation is whether the Bible itself presents its teachings on the subject as if they represented some form of modern science" and "There is a certain irony in the reflection that the keen atheist Prof. Richard Dawkins shares with some Christians their idea that religious and scientific truths belong to the same domain." Here are those strange bogey-men, "some Christians" again. Who are they?

Whatever its intention, the effect of the suggestion is to put into the reader's mind that this is what creationists think. That impression is confirmed because such hints are the only set of ideas and suggestions that Alexander contrasts his own view with. The book is meant to refute creationism, but the views described above are the views that Dr. Alexander actually refutes. Yet Dr. Alexander's descriptions (however we are meant to read them) of creationism are off-the-wall. Ultimately there is no excuse for this procedure. The briefest survey of creationist literature from any kind of mainstream source would show that Dr. Alexander has set up and shot down a legion of flaming straw-men. No mainstream creationist thinks that Genesis is intended to be interpreted using the paradigm of modern science.

The real question, which they raise again and again, is one of history. Genesis is not an other-worldly book, "written in timeless narratives" as Dr. Alexander says. It is very much time-bound. There is no "spiritual core" that we can split off the historical husk from, for example, in Genesis 5, such that we can dispense with the long, detailed genealogies of how Enos lived ninety years and gave birth to Canaan, or how Jared died aged nine hundred and sixty two. This is real-world history, because the Saviour who was coming was to be

born as a real flesh-and-blood man, with a real human ancestry going back to Adam. The Son of God came as a real person in the real world to redeem real people in the real world. Genesis has to be real history, precisely because contrary to secularism, the salvation which was coming was to be a real, public and historical one, not just a set of private ideas. The Saviour and his apostles, taught us to read Genesis as accurate history; but all questions of that kind are passed by by Alexander on his journey to arriving at the excessively neat scientific truth / spiritual truth divide which he leaves us with.

In conclusion, then, we see that Alexander side-steps all questions of *history*. He sets up the dichotomy, "Is Genesis modern science?", answers negatively, and then ignores the substance of what real-world creationists actually teach and argue. How are we to explain this procedure on his behalf? In the end, it does not matter. I again came away sad because the method used – of setting up the debate on your own terms whilst ignoring what your opponents actually say, and then displaying a lot of intelligence and rhetorical skill in his answer – will probably be persuasive to many naive readers. I can only hope that those readers will take the trouble to compare Dr. Alexander's presentation with a contrary position. To anyone who thinks that a case is only established when you represent your opponent accurately and on the strongest possible terms, this part of the book can only be judged as very weak indeed.

Chapter 3: What do we mean by evolution? Dating, DNA and genes

After 22 pages intended to give an overview of the Christian idea of creation, Alexander continues with 104 intended to give us an overview of the idea of evolution. Perhaps this imbalance was considered necessary because the intended readership of the book will be assumed to already know more about the former than the latter. On the other hand, it is an interesting reflection of a theme that, to my mind, runs throughout the book: Dr. Alexander is a very orthodox evolutionist, and very reluctant to tweak with anything that forms the present consensus in the mainstream scientific community; but as regards orthodox Christian theology, it has much less that is certain and can be tweaked and adapted quite at will. This may be an unfair analysis of the possible reason for the imbalance, so we will move on to the substance of the chapter.

This chapter, as the title suggests, introduces us to dating, DNA and genes; the next two chapters explain the topics of "natural selection and reproductive success" and "Speciation, fossils and the question of information", before a chapter addressing some objections ties the summary up.

I am a theologian and logician, not a biologist, so if Dr. Alexander has made any subtle errors in the finer points of explaining DNA and genes, I will not be detecting them any time soon. Much of this kind of material is uncontroversial. Dr. Alexander does not say one way or the other whether he thinks creationists would find it controversial. The ways in which DNA and genes can be observed to operate in the world today can be observed by everyone, and folded into a variety of different possible theories about the past. That outwardly quite different organisms have various similarities in their genes can be explained by many different and incompatible theories. Perhaps those organisms have a common ancestor and the similarities have been copied down the years and the divergent paths of Darwinian evolution. Perhaps those organisms have a common designer who intended his highest creature, man, to study and understand the living

world, and so for that and other reasons used similar designs in many of his creatures. Perhaps it is just a massive coincidence. Perhaps someone else has another theory about it. The point is that the observation itself is an essentially neutral fact; how we decide which theory it points to, if any, has to be decided on other grounds.

This is a good point to mention, then, that at no point in his book does Dr. Alexander explain to his readers that scientific research takes place in terms of paradigms. In scientific research, there is a model, and research is within that model. The model can then be considered to be strengthened by the research, or adapted in minor or major ways, or even scrapped, or perhaps we just put the research on the shelf because it puzzles us too much and we do not know what to do with it with our present limits of knowledge. However, only a small number of research scientists genuinely make a new advance in terms of the significant development of a model; the majority are involved in doing work that simply assumes the truth of a particular paradigm, or seeks to confirm it or possibly to tease it out a little bit. When it comes to comparing two competing paradigms (such as Darwinism or special creation), you cannot just point out that your paradigm helps to explain some things; that is not evidence of the paradigm's *superiority*. Evidence of superiority comes when you show that your paradigm explains things *better than the other one which you are comparing it with*, and does so across a wide range of data. Alexander, though, despite a few critiques of modernist thought here and there, allows his reader to go away thinking that science is simply a giant consensus, slowly, objectively and relentlessly grinding its way from neutral assumptions towards the discovery of all discoverable (natural) truth. For a creationist, that comes across as a classic and unfortunate Darwinist and Enlightenment rhetorical strategy: the simple reader is being prevented from thinking in terms of controlling world-views or paradigms, because the suggestion that philosophy or personal ignorance, bias or prejudice might play a part in flesh-and-blood scientists' work, or that they simply might be just barking up the whole wrong tree from the beginning in any particular area, would lead to evolution being given a more objective scrutiny than it could survive. That is to say: these chapters introducing evolution simply

describe whatever the present consensus is, and keep the significant matter of paradigms and competing models or world-views hidden.

It is instructive to notice just how thorough-going Dr. Alexander's debt to Enlightenment thinking is in these chapters. Biblical truth and scientific truth are, in his mind, in effect two separate, sealed sources of truth. Yes, the Christian scientist may pause during his work to praise the Creator for what wonderful things he has made; but Biblical truth is never allowed to set any boundaries or limits in his study - this would be a category mistake. Hence we have two self-contained chapters on creation, and now some on evolution, and these can stand quite independently of what's gone before. Dr. Alexander appears to (in practice – I'm sure he would disagree in theory) accept the Enlightenment fallacy of a "neutral" science hook, line and sinker. There is not a word to show us any awareness of the Christian idea of theology as the "queen of the sciences", where the Word of God is the ultimate source of revelation and authority, by which every external idea must be scrutinised and have its limits defined.

Hence it is, then, that in the section arguing for a very large age for the creation, there is simply no discussion of what limits Scripture puts upon it - even whether it does. There is nothing on this in the whole book. This fits in with the way Dr. Alexander has been going - the Bible tells us spiritual truths, but science tells us ones about the physical world. We noted in the last chapter that the question of whether Scripture tells us *historical* truths is one that Dr. Alexander simply side-steps. Of course, enormously long ages are needed to fit in the evolutionary hypothesis, so Dr. Alexander piles up various lists of things that (he says) are really, really old. From the creationist viewpoint, it is another exercise in moving swiftly on conveniently omitting to discuss any of the difficulties.

For example, if there really was a global flood, then many of the assumptions used in these things are simply wrong. If you find a nearly full bucket in my bathroom under a dripping tap, you might measure the rate of dripping and then calculate how long it took to get so full - a few weeks. In fact I filled that bucket myself and then turned the tap off 5 minutes ago, and it has got a little drip. You now know that, because I have told you so. By giving you a key to the past,

by revealing an otherwise unknowable truth, I have shown you that you are going wrong if you just do some sums that assume that as things are now, so they have ever been. In the same way, the word of God is our key to the past. If there was a world-wide flood, as it says, then we have to factor that into our calculations; we cannot simply assume that present processes can unlock our past if we just wind the clock back and do the sums. Dr. Alexander, though, follows the secular model totally on the significant points. In the secular approach, only data from the physical present can control our interpretation of the past, and the Bible must be treated as if it either does not exist or as if it says nothing on the matter. Being a professing evangelical and not an atheist, Dr. Alexander plumps for the latter: dating and the age of this or that is fixed by science, only by science, and the Bible is a book with nothing significant to say on matters of ancient history. We have here again the practical outworking of the "two books" fallacy (whether Dr. Alexander actually believes it or not). By this, I mean a presentation of the "two books" idea of revelation that is subverted to undermine key truths about the actual content of the Bible: science teaches us about history and the physical world, whilst the Bible (only) teaches us spiritual values.

This chapter is preliminary. It also contains some material about encoding and non-encoding sections of our DNA, which we do not need to discuss yet. This is intended to pave the way for Dr. Alexander's proof of common ancestry. We will come to that in due time.

Chapter 4: What do we mean by evolution? Natural selection and reproductive success

In this middle chapter seeking to explain the theory of evolution, Dr. Alexander seeks to explain the heart of modern Darwinian theory. Having discussed a little about the dating and genetics, we now get to the key idea: the combination of the continuous production of diversity, filtered by natural selection, is what produces the useful improvements necessary to fill all the ecological niches of life.

Alexander explains the concept well. Three known processes (not just mutations, but also sexual reproduction and gene flow) produce variety. This variety is then put through the reality test. Those that are beneficial (in the sense of leading to longer life (and hence more time to produce offspring) or some other reproductive advantage) "survive" by being passed on to successive generations; the others are weeded out. The picture we are meant to have is well-described by Richard Dawkins as the "blind watchmaker" - there is an ever-rolling conveyor belt of possible modifications, and at the end the no-good ones are dumped in history's bin. The good ones survive, and thus the process is pretty much guaranteed to produce continual development.

It's a good story, but...

Now, though, we have to apply our own set of "reality filters" to this idea. The first thing to flag up is that creationism has no quarrel with the idea of "descent with modification". It is a truism that nobody is a simple clone of either parent. There is nothing innate in creationism that is against the idea of one generation being better adapted to its surroundings than the one before. It is perfectly possible, as a concept, to believe that the Creator endowed his creatures with capabilities latent in their genes that should only be activated or come to observable expression at a distant generation. In fact, creationists really not only can, but *must* believe this. If only a very limited number of animals survived the Biblical flood, then it has then to be believed that those animals had, within their gene-pool,

sufficient potential to fill the earth again with all of its present variety.

Modification with descent, then, is not controversial. The big question is whether the modifications possible through this mechanism have limits or not. Put more simply - must a modified fish remain a fish, or can it eventually modify all the way to becoming a goat, as Darwinism teaches? Are the possibilities for change bounded, or unbounded? Strictly, that is the question that Dr. Alexander turns to in chapter 5. It is also to the point here, though, because in fact two of the mechanisms for generating variety that he describes do nothing of the kind - as concerns the *kind* of variety relevant to his purposes.

The fifteen of squares

On page 80, Dr. Alexander complains that evolution is sometimes erroneously represented as only involving one process - genetic mutations - that creates novelty. Indeed it is so represented, by friend and foe alike - because that is the way it is. In sexual reproduction, there is a recombining of the genes of the parents - but recombination is not the generation of novelty. When a hand of cards is returned to the dealer, he shuffles and recombines them in interesting new ways, introducing a new game. But whatever happens in that game, it is still the same 52 cards, and you will never turn over your hand to discover you have received the fifteen of squares, or that it is actually going to be a game of "Snakes and Ladders". Recombination shuffles what is there - it does not create genuine novelty. Alexander makes the point I have made above - that there can be apparent novelty, because the recombination could bring genes to express themselves in ways that they had not been able to in the old combination. That, though, is irrelevant to the point. The novelty gets expressed for the first time here - but it was generated previously. A mechanism that expresses already-existing potential is not a mechanism that makes potential: we have to go elsewhere to find that: which leaves us with two.

Gene flow is the same story. The duplicating, rearranging, inserting, etcetera, of information is a distinct concept from the generation of novel information. The question that the Darwinist cannot answer is "where does the information actually come from?" There is no problem for a creationist in believing in not just three, but

three million, if necessary, biological mechanisms for the shuffling of information. If you took this review to the local copy shop to duplicate it, you might find afterwards that their machine double-printed a page, or added a blank page, or output the pages in the wrong order. What you would be a bit shocked to find would be that page 42 was now a report on the Boston Marathon, or the second act of Hamlet.

Dr. Alexander glosses over that critical distinction, and it is a weakness that surfaces several times in the book. The genetic code is a code, and as such can be analysed by the mathematical tools used to analyse codes. It is information, and as such falls within the boundaries of information theory. Throughout the book, Alexander either (by his omissions at crucial points) appears to the reader to be unaware that information theory exists, or when he addresses it tries to argue that it should not be allowed to apply to biology, or that a special version should be allowed for dealing with biology. In this chapter he takes the "behave as if it is not there" approach and these issues are glossed over. From that angle, these parts of the chapter are simply an instance of the equivocation fallacy. There is a real distinction between the concepts of directionless change, change within a limit, and unlimited change. I can run round in a circle: it is change, but not getting me anywhere. I can train to run faster and faster - but never so fast that I run 100m in 3 seconds, or a marathon in a minute: the change has necessary limits.

Can we mutate our way there?

Mutations, then, are the only potential source of real improvement into the genome, with other mechanisms later perhaps allowing the changes it brings to actually be expressed. Can they do the job? Alexander of course thinks they can; but, there is no actual mathematics in the chapter or references to it to establish the point. Again that is related to the Achilles heel - no application of information theory. If an organism has been adapted down the years (or rather, its ancestors were selected down the years) for survival, then that makes it a finely-tuned organism. It is a good match for its environment (or strictly, its parents were for theirs). What, then, is the likely effect of a random alteration to its genetic code? What are the statistics? Information theory teaches that random alterations to a

finely-tuned code cannot improve it, with any likelihood that could be considered within the realms of possibility even given billions of years of attempts. The sums simply do not come close to adding up.

We all know intuitively this by experience. Printing errors when running-off essays which we have written do not produce new and brilliant analyses of the topic that the author never intended. Scratches on installer CDs for a computer program do not result in useful new features in the code. Dropping your cheap Chinese mobile in the washing up bowl will not make it behave like a top-of-the-range model. Finely tuned codes, when altered, can never produce something useful, within the limits of reasonable mathematical possibility unless the possible age of the universe is stretched by obscenely large numbers which nobody (of whatever persuasion) has ever suggested. Monkeys on type-writers will not ever produce the works of Shakespeare within anything like the timescale available according to anyone in the debate; it cannot be done.

Dr. Alexander passes over all such questions, because his starting position is that Darwinism is true; it then follows that therefore the mathematics must work out *somehow*. But if your favoured theory results in two plus two equalling seventeen thousand and twenty three, then that fact cannot be changed or side-lined: the laws of mathematics do not work like that. The problem for Darwinism is that it is caught between pincers. If the necessary information is not originally present in some manner, then there must be a certain average number of mutations being produced from one generation to the next. That number has to be enormously high in order to generate, amongst all the randomness, all the useful changes to take us from single-cells to man in the small number of years available for it (a billion is not a big number in the context of the complexity of the human genome). But, if the number is not very very small, then the number of dangerous mutations would mean the organism would have no hope of survival. It is an unsolvable problem. Too few mutations means that not enough of the magically-right ones to generate the new complexity could come about. But if enough good mutations do take place in an organism, then because of the facts regarding tuned information, enough bad mutations will also have happened to be

fatal.

I think that it is revealing that all Alexander's examples in the chapter are of the kind that creationists consider to be trivial. They are all of the "change within limits" kind. There are no genuine examples of true novelty in the sense of new useful capabilities through the addition of new information. There are moths of this colour or that colour, or bacteria resistant to this drug or not resistant to this drug. There are sub-sections of the population that die of malaria and some that do not because of sickle-cell anaemia. But nowhere are there fish that become reptiles, or dinosaurs that become birds. He does a good job of illustrating all the kinds of "evolution" that are not controversial - and writes nothing to illustrate the kinds that are. In a book positively comparing full-blown evolution with creationism, it is a telling omission: after so many years of creationists making this criticism, if there were good answers and examples, we surely not keep being treated to the same examples as above by experts on the subject.

More than genes?

Another issue that Dr. Alexander glosses over, both here and in the rest of the book, is the theological implications of this scheme. Darwinism implies that every human ability is the result of survival advantage. Whatever you possess, coded somehow in your genes, must have survived because, well, it was helpful for survival. It was a help to your ancestors to mate more, and/or have healthier offspring. That is what the filter of natural selection is. This precise observation is often glossed over by all kinds of Darwinists, not just those with a theistic evolutionary position to defend. It is not just that feature X is supposed to be somehow *useful* - it is got to be specifically useful *for surviving*.

Is that belief really true? No – it cannot be, because it is a flat denial of the Bible's doctrine of man, as made in the image of God. The image of God, with all its attendant potentialities, is not simply something that arises through the struggle for limited resources. According to Scripture, it is a special endowment from God, given for us to use to glorify him. We have vastly more resources than

necessary for mere survival, and a child knows this. The ability for art, music, culture - all these things are wonderful gifts. The Darwinist viewpoint, though, is that somehow they had some usefulness in our caveman past and allowed one Og to exceed Ug and so pass on his genes. Darwin himself, in his book *The Descent Of Man*, goes through case after case of human faculties, to try to make plausible some kind of explanation in this region. If you allow that, though, you have fundamentally denied the doctrine of man in the Bible, and the reasons assigned there for his uniqueness. The genius of the chess grandmaster, the budding Mozart infant prodigy, the literary genius of the expert novel writer - these are not features that are inherently capable of rising from the earth, through the struggle for survival : they were handed down from heaven, as a special and unique gift for man.

The "blind watchmaker "

It is a bit of a jolt on page 86, to read Dr. Alexander speak of this unending upwards development through natural selection having taken place "under the sovereignty of God". Cells-to-cellists evolution, as just described, is a blind algorithm. Supposing we could make the sums add up and it were possible, then it would then be inevitable. Given the unending production line of genetic change, and the continual selection of the useful changes, and given the earth environment, it is then inevitable that every ecological niche will be filled. That is what the algorithm does. It works its way inevitably from beginning to end. That is Professor Dawkins' point when he speaks of the "blind watchmaker". It does not need providential involvement - it is an algorithm and at the mathematical level it simply does what it does. If it needed sovereign oversight of its algorithmic workings, then it would be something else. Darwinism is, thus, a deistic scheme: the results are programmed in to the initial conditions. (Indeed, another picture from the world of timepieces if often used to describe Deism: the original clockmaker wound up the clock, and then he went elsewhere, leaving it to follow its pre-programmed course). Note that Darwin himself was a deist - a point that is apparently lost on Dr. Alexander when (elsewhere in the book) he argues that Darwinism has no theological implications. Dr.

Alexander may speak of God's "immanence" and of "divine sovereignty"; but when we try to cash out what this orthodox theological vocabulary actually means when on his lips, we are left with nothing of substance: in practice it means the same as Deism, which denied both ideas, does.

The only other use of Scripture in the chapter is a rather bizarre use of the parable of the sower (Matthew 13) as an example of natural selection.

A hostile world

Another major theological problem here is spotted when you look more closely at what is embedded in the idea of natural selection. It assumes the idea of a hostile environment. For there to be progress (in the evolutionary sense), the less-well-fitted organisms have to die out. Just because one offspring was in some way better able to reproduce is in itself not particularly significant - if his other brothers and sisters can reproduce too, then all of their genes will be passed on, not just his. The reason why his genes survive, in the Darwinian scenario, while theirs do not, is because of necessary *competition*. Resources are scarce; nature is red in tooth and claw; it is a dog-eat-dog world, and only the fit will survive. The world has to be hostile for Darwinian development scenarios to play out. If it is not, then all the genes survive, and there is no significant development. (It was this key insight which led 20th century eugenicists to propose that governments should take deliberate action in order to secure the future development of the human race, because they believed that the environment was becoming insufficiently hostile to ensure continued human progress). Without the hostility, there is just endless shuffling, as a dog gains better genes and then loses them because he did not need them: his neighbour did not need to eat him.

That is a scenario which the budding atheist is completely comfortable with - and it is realising the implications of that that played a part in paving the way for the horrific atheist regimes of the 20th century. (The introduction of competition brought evolution back in a meaningful way in Stalin's Russia and Hitler's Germany - where previously charity and compassion had been allowing the unfit to

survive.) It is not a scenario, though, that can fit with a Biblical view of creation. Even if, like Alexander, you take the line that Genesis is totally theological and a-historical, yet you've got to then deal with the actual theology that is there. At a minimum, the world was a "very good" place, designed for man to live in a blissful paradise, without suffering, pain or death (these coming from sin). In Eden, man was not in a dreadful battle for survival, a fierce competition to get the food and the girl before his brother did. According to God's Word, man lived in wonderful harmony with creation which was fruitful for man's sake - because all was at peace under God's loving care. This is not a question Alexander begins to face until much later in the book - and the aspect that the idea of development through natural selection inherently requires a hostile world is one he never addresses at all. This omission is both significant and telling.

The best inference?

At the end of the chapter, Alexander makes an apposite statement that he either never realises the logical implications of, or never gets round to applying. It is that the business of science is to make an inference to the most plausible explanation. Yes. But how can an explanation be known as the most plausible one unless there is another theory that is shown to be less plausible? There needs to be a comparison made. Throughout the book, Darwinism is simply described and asserted. How, though, would a creationist deal with the issues of this chapter? What does he say about natural selection and genetics? How does his interpretation of the data differ with the evolutionist one? What are his objections, and how would Alexander deal with them? We do not learn Alexander's answers to these questions. Alexander writes as if his aim was to persuade his reader that there is only one game in town. If you think you hear the noise of another one over the other side, he will simply shout louder about his one. It is only persuasive until you start to tune out the rhetorical shouting and be a little more critical. Dr. Alexander is a good describer. He describes the neo-Darwinian theory well. But he does not allow real-life creationists to put their case, and answer their writings; he operates as if they do not exist. To this way of operating, we can only juxtapose the dictum: *"The first to present his case seems*

right, till another comes forward and questions him" - Proverbs 18:17.

Chapter 5: Speciation, fossils and the question of information

Chapter five is the third and final one answering the question "What do we mean by evolution?". After that there is a chapter seeking to answer some objections. At 37 pages, it is the longest chapter in the book.

Speciation

If you've been following this review so far, you'll know by now that I have argued that Dr. Alexander side-steps difficult questions for the Darwinian position through word fallacies. His section on "speciation", extending for several pages, is another relevant example.

The key question as regards Darwinism versus creationism when it comes to speciation is this: do evolutionary mechanisms have limited or unlimited potential? To sharpen it still more, are the processes which are active and observable in the natural world today able to generate the entire "tree of life" from a single common ancestor, or not? The creationist model is that God created several distinct kinds (Hebrew, "baramin"), in which the life-forms had the potential to diversify within certain limits. The Biblical text does not give us much specific information about the limits of these "kinds"; but there are some - for example, trees and birds belong to different kinds (Genesis 1:11-12, 20-21). There is variation, but within limits, and what we end up with is not a single genetic tree of life, but an orchard - several trees in which the descendants express the potential that was latent in the original ancestor individuals.

Dr. Alexander, though, answers a different question, and gives an irrelevant answer which does not touch upon the actual creationist case, whilst, as before, giving the impression that is talking about something relevant to creationism and probably refuting it. To what extent he is conscious that he sidesteps the issues or not, I do not know - he never refers to any creationist publication; beliefs contrary to Darwinism are always presented to the reader in terms of "many people think" or "some Christians believe". To be precise, the late

Henry Morris gets a solitary mention in a later chapter, but that flash appearance is as good as it gets.

The question Dr. Alexander answers is this one: is speciation possible beyond the limits set by today's definition of a biological species? i.e., is it possible for new species to form under the specific definition of "species" in contemporary science? Dr. Alexander introduces this question in terms of the commonly used distinction between "microevolution" and "macroevolution", defining them in terms of variation within a species, or changes above the species level, then going on to define just what "species" means - it is defined in terms of reproductive compatibility. A species is a population where the individuals can interbreed with each other but not other organisms. This is clearly a *related* question to the real issue, but only a smaller part of it. If "macroevolution" as Dr. Alexander has defined it is not possible, then this would imply the creationist position is right; but whilst being a *sufficient* condition, it is not a *necessary* one. In fact, no mainline creationist believes that the limits of the Genesis "kinds" coincide or are even close to being as restricted as the definition of "species" which Dr. Alexander gives. Hence we have the refutation of a straw man, whilst leading the uninformed reader into thinking that he is reading a refutation of something at least similar to creationism.

Having thus set up this uncontroversial non-question, over the next pages Dr. Alexander explains various ways in which speciation can occur in the animal and plant kingdoms, and concludes that the macro/micro-evolution distinction is not as useful as it seems at first glance. Along similar lines, he also discusses other interesting ways in which modern biological findings are raising questions over our idea of what a "species" is. As with other parts of the book, that would all be OK and useful, were there somewhere else in the tome where he actually addresses the real question - he does not.

One point of interest was to see a Bible verse actually thrown into the chapter. What we have seen before is that in practice Dr. Alexander believes that the world of the Bible and the world of science have no real overlap as far as the evolutionary history of the planet goes. In particular, the Bible does not set any real limits on what conclusions science is allowed to give - contrary to an authentic

Christian worldview in which the Bible is the foundation and ultimate arbiter for all true knowledge. Dr. Alexander's verse in this chapter, though, doesn't contradict this position - it is thrown in as an aside. We are told this:

No one actually knows the exact number of species on earth. the number already classified is around 2 million. ... Adam was brought by God in Genesis 2:19-20 to name all the animals, but we have a long way to go in finally fulfilling that command!

This is not a good reading of Genesis 2:20, because the verse actually states that Adam *did* in fact do the task which God charged him with; *"And Adam gave names to all livestock, and to the birds of the air, and to every beast of the field; but for Adam there was not found an helper suitable for him."* It is a past event. Dr. Alexander's interpretation seems to be that this command was part of the "creation mandate" to govern man for all time - part of the ongoing task to explore and harness the wonders of God's creation. Note, though, that Dr. Alexander assumes that Genesis 2:19-20 actually means *species*, as defined in modern biology, in terms of reproductive isolation - hence the task is to catalogue millions of species, not just to give generic names to a much smaller number of larger groupings. This muddle is truly ironic given the stern warnings in previous chapters that we must not read the words of Genesis in terms of modern biology, and the suggestion that that is what creationists, rather than Dr. Alexander, are guilty of doing.

In reading through the examples that Dr. Alexander gives, it is noticeable that in the examples of processes involved in the production of new species, there are no examples of changes which are genuinely productive. They are all neutral or degenerative. That is, it is in terms of some change which prevented reproduction where it had previously been possible, and led to the isolation of a particular subset of creatures. This is obviously inconsistent with the key Darwinian assertion of upward progress. This is related to the key question of information, which Dr. Alexander addresses later in the chapter.

Comparing paradigms

The major argument which Dr. Alexander relies upon as the most solid proof of Darwinism is from genetics. On page 119, he says that the importance of fossils to the case for proving evolution has been relativised in recent years, and that we are now able to reconstruct evolutionary history just from genetics.

In the event, though, the proof offered falls down once more because of the invalidity of the method he uses. Put simply, Dr. Alexander argues that Darwinism can give a coherent explanation of this or that, and so there it is. Again, we look in vain to find Dr. Alexander informing his readers about the concept of competing paradigms, and showing that the Darwinian paradigm can give a more coherent explanation of certain phenomena than a competing one. No - it is just that Darwinism explains this bunch of phenomena, and therefore it must be true.

So, there is a carton of orange juice on my table. You know I visited the supermarket last week, and the theory that the carton came from that trip fits with this piece of data, and therefore you conclude that it is definitely true that that is where it came from. But, it is not - in fact the carton was brought today by a guest who came for tea. Your explanation was sufficient, but actually incorrect. With a fuller view of all the possibilities, you would not have plumped for it so quickly. Dr. Alexander doesn't give us a word to explain how a creationist might explain the phenomena he describes, or to show why his explanation is superior; there is no comparison, simply the naked assertion that as his model gives a coherent explanation, therefore it is proved to be true. As the book goes on it becomes increasingly clear that Dr. Alexander is as much marshalling rhetoric as he is doing actual science. His approach is, unfortunately, consistent with much of the political tactics of atheist anti-creationists. That is to say: do not give opposing views the oxygen of publicity, and perhaps your readers will simply believe your naked assertions about them instead. This is not how responsible argument is meant to work. You are meant to present your opponent's position in its fullest, strongest light, and then show that you can still win the debate.

So, Dr. Alexander brings out various arguments - from what is often called "junk DNA", and genetic similarities found in different species that Darwinism claims are related by common ancestry, and so on. "Junk DNA", however described, is basically an argument from ignorance; Dr. Alexander gives no proof that these bits of DNA have no function, he just argues from the fact that we do not currently know their function. He is good enough to concede that the "junk DNA" label has turned out to be unfortunate as functions are being increasingly found for parts of the genome previously so labelled. This is a "Darwin of the gaps" argument - as our knowledge increases, so the argument from "junk DNA" begins to vanish.

What is much more worthy of notice, though, is the implied theological, and not scientific, argument which underlines both of the arguments mentioned above. The rarely spoken assumption behind them is that "a Creator who made these things in a short time period wouldn't have done it this way". The argument being made is "these DNA similarities between different creatures are too much to be a coincidence - if a Creator had done this without common ancestry he would be tricking us with misleading evidence: I think he see how he could have done things this way, and therefore he didn't."

Seeing that this is a theological argument and not one provable by empirical observation, it is equally capable of theological refutation. So, I will attempt to outline how we might get to one. Genetic similarities can be explained through a common designer as well as being explained by common descent. If the Bible is true, then we expect the world to be explorable/discoverable - this was part of the basis for modern science. We believe that the universe operates by principles that human minds can investigate and describe, because we believe that the designer of the universe also designed human minds and did so with the desire that we should explore and subdue his creation, as the Genesis mandate states. He wanted us to find and to understand. As such, then, we might anticipate that there will be a great deal of similarity and re-use of similar principles and designs in different animals. What kind of headway could we make in exploration if each of the millions of species of animal was put together in a totally different way and required a whole new branch of

science to investigate it?

This is not a detailed argument, but it does show that it is too easy and glib for Dr. Alexander simply to assert that genetic similarity is predicted by Darwinism and so conclude that Darwinism is proved. Genetic similarity is also predicted by some of the key assumptions involved in creationism, which is what Dr. Alexander is trying to disprove. If, though, you never mention or explore the predictions of the system of thought you are trying to disprove, then you cannot be reasonably held to have done so on any level.

Fossils

Dr. Alexander's section on fossils is a bit thin; lots of strong assertions (this is 35 million years old, that happened 1.2 billion years ago), but not much by way of meat in terms of arguments. It is more of a summary of evolutionary claims than arguments for them. This is fair enough; I suppose from the fact of Dr. Alexander's specialism in genetics and biochemistry that he is going to major in those areas and minor in others. I similarly am focussing on matters of theology and logic in this review. Tiktaalik is given the starring role as a great example of a transitional form.

Information

The sections in this chapter on the question of information were the most disappointing to me. Perhaps that is because of my background in mathematics I'm more "on the ball" here than when reading paragraphs about theories of fossilised fish. From whatever angle, though, Dr. Alexander's discussion of these questions is particularly poor.

The question of information does not have to be a painful one for a theistic evolutionist per se. The idea of common ancestry is not essentially incompatible with the ideas of complex, coded information and intentional design. It is a problem, though, for a believer in *Darwinian* evolution, and it is surely Dr. Alexander's thorough-going acceptance of (neo-)Darwinism specifically and not just common descent in general that makes it impossible for him to give these questions good answers. (It is important to understand at this point the

position that Dr. Alexander gives to scientific consensus – this position binds him to accepting Darwinian evolution. This point will come up again later in the book).

The arguments that can be launched from information by a Christian are simple to understand. Information that is complex and finely tuned is a strong indication of a mind. We could say it more strongly; in our recorded experience, we have never known such information to come from anywhere else but a mind. Systems of inter-dependent components working together for a common goal are a signature of intelligence. That is our intuitive experience. The science of information theory looks to translate this intuitive experience into the language of science, and back it up with real research and intellectual rigour. Where this interacts with biology is in the fact that we now know what Darwin did not (because the existence of DNA was completely unknown to Darwin) - that human DNA and the biological systems for interpreting and using it (which are themselves also encoded in DNA) are the most complex and highly specified information systems known in the universe. They vastly exceed anything that human minds have, with all their millions of man-hours of research and labour, managed to produce. As such, they are an overwhelming testimony to a divine mind for its origin. Codes, coupled with systems for decoding and encoding and translating into physical results, are the work of intelligence. DNA is such a system on a scale that is orders of magnitude beyond what man's finest intelligence has concocted. DNA testifies to us of our true origin: in the mind and will of God.

None of that should be painful for a believer in common ancestry per se to accept. It is impossible, though, for a Darwinist to accept it. Darwinism is at heart a mechanism which fundamentally denies teleology, i.e. the concepts of intentional design and purpose. It is an attempt to describe how one animal can give rise to another of a different type without there being a conscious intention on behalf of any agent that such a thing should happen. The external pressures and difficulties of survival alone account for the improvements at each stage - there is no inevitable final goal to be reached. In short, there is no need for a mind that designs and directs: the sheer redness in tooth

and claw of nature brings it about. These contradictions are why many, such as myself, feel that to describe oneself both as a Darwinist and a theist (at least one who believes in divine immanence) is to ultimately state a logical impossibility.

Dr. Alexander starts his discussion on the question of information by admitting that mathematicians, engineers and computer scientists are often puzzled when they listen to biologists' (he means Darwinists') explanations of information. We agree there. Dr. Alexander's explanation for this phenomenon is that it comes from a misguided attempt to force the meaning of "information" from one field into another. This explanation turns out to ultimately function as a pre-warning that, in practice, Dr. Alexander is about to say things that are mathematically incoherent, is not going to talk about information in a meaningful way as defined by information theory, and is going to allow himself a free hand to redefine that area of study as suits his goals. His explanation is just, as mathematicians say, "argument by arm-waving". This really will not do. Information theory is a universal theory; it applies to information as information, wherever it is found. It is independent of the mediums and mechanisms by which the information is stored or translated into some useful end product. To give a simple example, a full-length telephone number has the same information content (perhaps including information about where the person lives, whether it is a mobile or fixed line, etcetera) whether I store it on my mobile phone or memorise it - whether it is silicon, brain cells or paper that are recording the number, whether by 1s and 0s, neuron configurations, or patterns of ink upon papyrus, it makes no difference. The information content is the same. If DNA stores information, then it matters not one jot what other theories concerning DNA are floating around - information theory either applies to DNA, or information theory is itself in error. It cannot be correct when talking about other kinds of storage system, but not DNA. If it does not apply to DNA, then at some point it is simply wrong. If Dr. Alexander has discovered where it is wrong, then he should present his case – rather than claiming, without any justification, that it just does not apply. The *ad hoc* explanation in which he attempts to tell the information theorists to

get off his turf and allow him to write his own theory leaves Dr. Alexander looking silly.

Dr. Alexander seeks to explain some ways by which new information can be generated in a genome, but these further give away his lack of understanding. Dr. Alexander never actually explains how new information arises, except to play with the definitions. He repeats some arguments about alleged Darwinian mechanisms, and then declares in effect "bingo - since we now have new capabilities in the organism that must mean there is more information!" This is missing the point by arguing in a circle. Information theory poses a serious challenge to Darwinian orthodoxy. To simply argue that Darwinism alleges that this happens, and that if it does then this would have to generate new information, and therefore there is no problem, is to shove the problem under the carpet. Rather, the protagonist must show us the mechanisms and what they do to the information content at each stage. Just to tell us the mechanisms again and insist that they are correct and so therefore must generate new information is to conduct a magician's illusion by distracting the audience, rather than advancing the argument.

Dr. Alexander points to gene duplications, and then says that the duplicated gene is under less selective pressure so can accumulate new mutations without danger to the organism. Fine, but what has this to do with an actual *mechanism for the increase of that information*? That is the crucial question, but the one Dr. Alexander doesn't answer. It is all left to randomness: there will be lots of mutations, some will be useless, some will be good, and those good ones must have more information because that is why they are good. Randomness, though, is precisely what information theory tells us does *not* generate a reliable source of information. A tightly specified system is not going to be improved, but ruined, by random alterations. Throw a cup of water over your computer randomly to alter some of its logic circuits to see what I mean. How likely is that procedure to result in a upgrade of your hardware to future technology, compare to the likelihood it will mean you need to go and buy a new computer? The Darwinist insists that what happens in biology is a unique exception to these kinds of laws, but such a significant assertion needs significant

supplies of proof, not mere hand-waving and complaining that other scientists should not be allowed to apply findings of mathematics to the Darwinian field.

Dr. Alexander gives us a somewhat humorous example of his confusion beginning on page 114, when he explains how a gene duplication in mice is thought to have resulted in two genes with slightly different functions - and yet that biologists found that the original gene could be made to cover both functions, only with less room for manoeuvre. So, says Dr. Alexander, the duplication didn't lead to an increase in information in one sense, but did in another - and thus Dr. Alexander seeks to equate information content with survival capacity. This may be missed by the layman coming to the whole area for the first time, but to anyone else, it just reads like a confused man trying to answer a question that he has not yet begun to get to grips with. In a similarly inept way we read on page 117 that sexual reproduction produces new information because the offspring are different to their parents because their genes are combined in new ways - and Dr. Alexander concludes "The process of recombination... is just another way of introducing variation into the genome." This confusion between new information and mere shuffling of existing information is symptomatic of the whole section. Dr. Alexander does not seem to know what he means by information and hence never defines it. He then proceeds to lead the reader on a tour of confusion as one implied definition gives way to another. I hope you will understand my conclusion that this is can only be read as a magnificent but ultimately vacuous display of Darwinian arm-waving.

Chapter 6: Objections to evolution

After the three chapters explaining what is meant by "evolution", Dr. Alexander gives us a chapter in which he answers a few objections. If you could voice seven questions concerning evolution, what would they be? Here are the seven that Dr. Alexander treats, which you can compare with your own list:

- "Evolution is a chance process and this is incompatible with the God if the Bible bringing about his purposeful plan of creation."
- "The theory of evolution is not truly scientific because it does not involve repeatable experiments in the laboratory."
- "Evolution runs counter to the second law of thermodynamics."
- "Perhaps God makes things look old, although in reality they are much younger, in order to test our faith."
- "What use is half an eye?"
- "Surely if evolution were true, God would have simply told us so in his Word so that we do not need to have all this discussion?"
- "Perhaps God made the original kinds by special acts of creation which then underwent rapid evolution to generate the species diversity that we see today."

Why these seven? Dr. Alexander gives us two things here. Firstly, he recognises that the biggest theological concerns expressed usually concern Adam and Eve, death and the Fall, and there are going to be separate chapters on these topics. Under the last objection, this little phrase tells us what to expect then; the rejection of "an idyllic non-violent pre-Fall world, as young earth creationists imagine it to have been". Dr. Alexander certainly doesn't imagine such a thing. But that is in later chapters. The main selection criteria (p131) is that these objections are ones that Dr. Alexander has come across personally as he is given lectures, or that he is himself "read in books critical of evolution."

At this point our hopes are raised that Dr. Alexander is actually going

to interact with something an actual critic of Darwinism has said, or at least give us some references so that we can cross-reference what he is critiquing. But, it is not to be. The nearest we get is in the last objection, when Dr. Alexander mentions the name of Henry Morris and something he is supposed to have believed... but alas, without a reference, not even to the name of a book, much less the page. Having read the whole of Dr. Alexander's book, it seems to me that the most likely explanation for his refusal to even provide the most basic documentation or interaction with anything he says that "the other side" believe is that it is part of his rhetorical strategy. Darwinism is a fiercely controversial issue, but Dr. Alexander's overall aim is to paint it as completely uncontroversial, fixed and settled, and to imply that those who question it are beneath his intellectual contempt as a bona fide scientist. To mention their names or indicate that he is really read their works would be somewhat beneath him, and would spoil the impression that right-thinking people find it distasteful to get involved with such things.

It is a bit ironic, then, given this kind of methodology, to find that Dr. Alexander begins the chapter with a two-page general lecture on the proper scientific method. Because what we are then given in terms of the particular arguments answering particular questions, is anything but scientific. It is really a bit much to pen two pages talking about the proper sifting of evidence and intellectual inquiry with integrity to then have it followed up with some supposed answers to objections that steadfastly refuse to actually interact in any meaningful way with the writings of the best representatives (or indeed any representatives) of real live creationists. The burden of the first two pages is to repeat a talking point we are more used to hearing from the atheists - science is a rational, free inquiry, and anyone can make any point they want as long as the back it up with good research, and then if they do that and if it stands up to scrutiny, it will get published in the journals and be accepted. There is no bias, no philosophical prejudice that stops anyone doing anything - and in fact, if you had any facts that did call into question evolution, the science journals would make you an overnight hero, because everyone loves it when long-cherished shibboleths get challenged and overturned.

This rosy propaganda about the unbiased and objective nature of scientists' work is somewhat ironic coming only so few pages after clear warnings about the dangers of Christians uncritically swallowing an Enlightenment way of looking at the world. The burden of these opening few pages is really to make a catch-all argument: it does not matter what objections you have to evolution, because you do not have the proper credentials, and therefore are not in a position to have something sufficiently worthwhile to say. But this Enlightenment sell-out will not do. Darwinism, as we have already several times, involves two parts of philosophy for every one part of biology. Moreover, theology is still the queen of the sciences which gets to tell even men in white coats with lots of letters after their names what they can and cannot reasonably believe. God's Word claims the authority to test every theory, especially speculative reconstructions of ancient history. Not even the peer-reviewers of *Nature* or *Science* get exempted from that. Here, Alexander indulges in an unworthy attempt (the like of which we expect to come from low-brow atheistic rather than Christian writers), to exempt such a far-reaching theory from its proper scrutiny. Well, so much for the lead-in. What of the posited objections and their answers themselves?

1. "Evolution is a chance process and this is incompatible with the God of the Bible bringing about his purposeful plan of creation."

There are some bits I like about the answer offered here, and some bits I do not. I do like some clarifications about the idea of chance in general. I do not like the way that the issue regarding evolution is side-stepped with yet another word game.

Christians do need to think through their ideas about "chance". I hear phrases like "good luck" and "I was lucky" tripping readily off the lips of believers, and yet I know they do not really believe in the idea of luck. They mean "God be with you" or "I was blessed", or something of the sort. There is no luck, because a sovereign God oversees the casting of the lot, the fallowing of a sparrow to the ground, and so on. If people and events are divinely decreed (which they are, e.g. Proverbs 21:1, Romans 9:1, Isaiah 44:28ff, Daniel 4:34-

35), then that means that God has overseen and guided things at the most minute of levels. Alexander points out that even in the event of fertilisation, it was millions to one that the particular sperm that made you, you should be the one - and yet we confess that it happened exactly according to the will of God. So far, so good.

The problem with Dr. Alexander's answer, though, is that he then avoids sharpening the objection a little to work within this framework. The fundamental problem is that the Darwinian theory leaves no place for the idea of final purpose. Random mutations and natural selection work together at each stage, but without any knowledge of the end goal. There is no inevitability to the rise of man or the world as we know it. For the theistic evolutionist to say, "Ah, but God had that in mind and so guided it in that direction" is a logical contradiction - Darwinism, if guided according to an overall plan, cannot then be Darwinism. Either natural selection selects merely for survival potential, or it selects according to the climax of God's will for man with his immense intelligence and abilities far beyond what is necessary for survival. If the process was divinely superintended, then it was not a Darwinian process at all, because the lack of superintendence is the essence of the theory - the selfish genes just do what is needed for their survival. What the theistic evolutionist is basically left doing is just making the empty assertion that, well, it was a happy event that that turned out to be exactly what was needed anyway to bring God's plan about.

Dr. Alexander's theory could explain how a deistic-type God could have created through a Darwinian process; but the God of deism is not the God of the Bible. The Bible's creation account is of a God who supernaturally intervened: an immediate event, not a multi-age process. That is why Richard Dawkins is willing to concede that a serious case can be made for a God of the type conceived in deism. Some Christian commentators seem to think this indicates a softening of Dawkins' atheism in his old age. Not so. Deism posits a God whose influence is of no practical effect - it makes no difference whether the Deistic God did something, or if nature had inherent powers to work out its own way according to immutable laws; the outcome is the same. No atheist is worried about such a "God". Such as "God" is one

whose existence has no cash value in the real world. That, though, is the kind of God that Dr. Alexander ultimately leaves us with.

As Dr. Alexander develops his answer, it then goes off the rails. We meet again a line of reasoning that he uses rather frequently: to divide and conquer. Make some subtle distinctions, blow in some smoke confusion, and then get out before it clears. Now, do not get me wrong. The making of careful distinctions is the very essence of proper argument and logical inquiry. My problem is that in this section Dr. Alexander does not use this tool, but abuses it. The answer to this objection is a case in point. Dr. Alexander proceeds to clarify that there are three things that we might mean by "chance", so we must be clear. OK. What are those three things? Firstly, events that are predictable in principle if not in practice. Secondly, events such as quantum events which are not predictable even in principle. Thirdly, "metaphysical chance" - events without any ultimate metaphysical cause. This third one, says Dr. Alexander, is the one whose existence, were it real, would concern Christians. But, there is nothing in the Darwinian theory that would imply metaphysical chance, he says, so all is well.

What, though, is actually the difference between the second and third of those meanings? It is not a settled matter amongst physicists that quantum events are actually inherently incomputable. Is Dr. Alexander actually suggesting that not even God can know when an atom will undergo nuclear decay? By saying that some events are not predictable even in principle, does he mean to include God too amongst those unable to predict them? This is now the horns of a dilemma. If he does, then aside from being outside of theistic orthodoxy, this makes this to mean the same as the third - an event of metaphysical chance which is not controlled by any agent or other cause. If, though, God can predict such events, then this merges the meaning into the first: it is in fact an event predictable in principle after all: it is just that our minds are not big enough to do the predicting like God's is.

Dr. Alexander never explains what an event of genuine "metaphysical chance" would look like, or how we would know we had come across one. He simply asserts, *ipse dixit*, that Darwinism

does not include any such events, so there is nothing to be worried about in there. We are told that it does include "meaning two" events, but we are simply told that this has no implications: we are not told why not. Actually, I think if even God cannot predict the effects of radiation on DNA (because they're inherently, according to Dr. Alexander, unpredictable), leading to mutations and evolutionary development, then we do have a serious problem; but Dr. Alexander never considers this. We are simply assured that there are no "meaning three" events, so we should not worry. The assertion, though, is not argued for; it is simply arbitrary.

So, the distinction which Dr. Alexander brings in to answer this objection does not ultimately clarify, it obfuscates. The distinction made is not well-defined, and not explained. We are told all is well, and then we move on.

An objection Dr. Alexander might have put, but didn't, is to point out that evolution is a multi-million year process in which imperfection gradually improves (but never reaches a state of perfection); whereas Biblical creation was an event in immediate response to the Word of God, such that all that was made was "very good", but then fell. Evolution is a slow rise from chaos; Biblical creation is a complete event that is then spoilt by sin. Such, though, is the luxury of the author who chooses his own objections and does not quote from any literature authored by his real-life opponents. Sadly, if your reader is new enough to the subject area, he may not know that he has been mis-sold.

2. "The theory of evolution is not truly scientific because it does not involve repeatable experiments in the laboratory."

This objection seems to be aiming to make the distinction that creationists often make, between "operational" and "origins" science. The former is based upon repeatable observations or at least direct observation, whereas the latter is a degree of magnitude more speculative, being based upon inferences about unique events, and observations made in some indirect fashion. The world only began

once, and we cannot run back the tape; science can only observe the present and try to piece together the bits. "Origins" science by its nature must be much more humble and tentative, and that remains so no matter how much bombast some atheist apologists use in their presentations.

Now, a truly Christian scientist trying to reconstruct the past has a great advantage. He believes that God has spoken many words about the past. These words are infallible and therefore without error, and recorded for us in Scripture. By studying God's Word, we can gain a much better interpretation of God's world. True, the Bible's principle subject is to reveal the glory of Christ and draw a chosen people to salvation in him; but that Christ and that salvation are not timeless, a-historical entities, but have come in flesh and blood. Thus the Bible contains a great deal of history, as God has unfolded his primeval promises until the coming of his Son and caused it all to be recorded so that we might believe. The Christian origins scientist can thus use this infallible word as a framework in which all the valid activity of investigation, speculation and so on can take place.

None of the above, though, features in Dr. Alexander's answer to this objection. His own answer is simply to assert that whilst, yes, scientists investigating the past are building a case, yet they do it very carefully, according to accepted rules of evidence, and thus its conclusions can after all be treated as certain. With no sense of irony, he compares this to the work of the legal system, with its forensic experts, judges, lawyers and court cases. Here I wanted to say "precisely", because even with all that, and even though dealing with events in the very recent past (which in Darwinian time would be considered the present), yet horrendous miscarriages of justice occur and occur continually. This is because man in his fallenness is not as objective, clever or rational as he flatters himself to be, and the nature of original sin is that no matter how many layers of procedure, counter-balances and checks you build in, that is how it will always be apart from the grace of God intervening. Another feature of Dr. Alexander's work, which has been commented on before, is also relevant here. That is the neglect to explain that science works in

terms of *paradigms*, and that in contrary evidence is often explained away or just put on the shelf. In Dr. Alexander's explanation, the whole Darwinian community would drop its theory at the first instant if you produced a single fact that contradicted it. It is hard to credit that a Christian of his intelligence and experience really believes that human beings behave that way.

3. Evolution runs counter to the second law of thermodynamics

Here Dr. Alexander gives a short and not particular relevant answer. That was easy for him to do, because he doesn't state the objection in a strong or accurate form, so there is not much refuting left needing to be done. He does not *answer* the question in terms of an increase in organised complexity. The impression given in the answer is that simply providing a large amount of heat (from the sun, which is gradually winding down) will be enough to account for the "winding up" of the earth. But, naked heat does not bring about organisation, information or complexity. Moreover, this just pushes the question a step back. The solar system as a whole (i.e. including the sun) has, under Dr. Alexander's overall view, been growing in order and complexity. How to account for that? Dr. Alexander's answer shoots down a straw man.

4. Perhaps God makes things look old, although in reality they are much younger, in order to test our faith?

Whereas a good question, from the second law of thermodynamics, got just one page, this specious objection gets three. I think these three pages could be the most tedious and pointless in the book. Dr. Alexander goes to town in patronising and re-educating the simple and naive creationist who might believe such things as this, making God a liar... despite it not being a viewpoint you'll find expressed by any mainstream creationist ministry or speaker. Such is the author's luxury when he grants himself liberty to choose his own objections without reference to the actual literature of the strongest representatives of the opposing position.

There is a real question that could have been answered here. On the day Adam was created, how old would he have appeared, if measured using our technology? And how about Eve? By the Bible's testimony, they were created as adults. Eve was made from Adam's rib and brought to him as a mature woman. The anatomist examining them would have declared them to have been alive for several years... but he would have been wrong, because his underlying assumptions of gradual development instead of instantaneous creation were wrong. The real question here is over the mere assumption of gradualism - that we can wind back the clock on today's world as far as we like, with no dramatic interventions or catastrophic events to worry about. That real question, though, is overlooked in favour of an amusing tale about Philip Gosse and his belly button (Omphalos). Dr. Alexander reminds us that fake histories would make God a liar. The real point is, though, that God has given us his Word so we know how to interpret the history, and so, the question of a "fake" history is ultimately moot. However, as we have seen, Dr. Alexander doesn't, in practice, interpret creation history using God's word. He hands that whole task to Enlightenment-mode science, and then tries to harmonise what he finds in God's word with Darwinism after the event.

5. What use is half an eye?

This bit is more technical. I did not think it was particularly relevant to the overall questions. This was because Dr. Alexander misses the point and spends some pages telling us about already formed systems, though limited ones, rather than telling us what use half a system would actually be. Of course, the real claim being made is that, since the initial appearance of life on earth, only fully formed systems have ever existed, and that they have the capability to develop into each other.

One interesting bit was where he contradicts the approach to Darwinism, chance and providence he takes elsewhere in the book. He tells us that the human optical system is sub-optimal because there is a

blind spot due to the optic nerve having to cross the retina to get to the brain - a defect the octopus does not have. He then remarks, "This provides a good illustration of the various ways in which our organs reflect their own sometimes idiosyncratic evolutionary histories." This idea of defective design due to idiosyncratic history, though, cannot be made compatible with his earlier assertions (e.g. in the answer to the first objection) that Darwinism is not a random process but perfectly superintended by God at every point to bring about the well-formed creation he desired. Either the human eye is a idiosyncratic hodge-podge limited by its own evolutionary history, or is what a perfectly wise designer intended it to be. It is inconsistent to posit mutually inconsistent ideas, according to whether they suit the sub-question at hand.

6. "Surely if evolution were true, God would have told us in his Word so that we do not need to have all this discussion?"

We are given a three-fold answer here; and each of the three parts is highly problematic.

a) The Bible is about spiritual matters such as salvation, not about the natural world. However, as we have discussed, that dichotomy is an unbiblical (indeed, anti-biblical) piece of Enlightenment dualism.

b) God, like a wise parent, does not just give us all we need to know on a plate - he allows us to explore and find the truth. This answer has many false assumptions, such as: that whether creation is a long, upward process full of struggle or death or whether it was a supernatural event perfect at completion which then fell, is a distinction with no theological consequence and so the Bible doesn't need to inform us. A second is that telling us that creation was through a multi-billion year process would somehow be "telling us all we need to know on a plate". Hardly. That one sentence doesn't give you an iota of knowledge about genes, DNA, and so on, or anything approaching it.

c) That if the Bible were to tell us about evolution, it would then be an impractically long book. This objection also comes over as absurd. The Bible could say something to indicate that the universe is billions of years old, or was formed through slow and gradual processes, in just a few words. I just managed it! Many authors of summaries of evolution have managed to summarise the main ages in a similar length to the Genesis account. Surely God is not unable to do what man has done! When we are debating creation versus evolution, we are debating two broad frameworks with considerably flexibility on many biological details which could be accommodated by either system. So, I conclude that this answer is exceptionally weak.

7. "Perhaps God made the original kinds by special acts of creation which then underwent rapid evolution to generate the species diversity that we see today."

The answer to this objection where, uniquely, Dr. Alexander references an actual creationist, albeit a dead one (Henry Morris). He does not, though, give any references to his works or quotes to allow the reader to verify what is said. I think one of Dr. Alexander's aims throughout the book is to imply that doubting Darwinism is somewhat beneath intellectual contempt. If not, I cannot see how to explain his procedure.

Dr. Alexander's answer to this objection is hyperbolic: that the objection amounts to "throwing out the whole of current science". He argues that if you reject speculative evolutionary dating scenarios then, well, those scenarios are based upon irrefutable scientific principles which if you were consistent you should reject everywhere else too. i.e. He argues that the objection is a thin end of the wedge: reject it here, and you should for consistency reject it everywhere, so let's say that that is effectively what you do do!

By this kind of reasoning, one could set Dr. Alexander a maths test, and if he were to get a single question wrong then he should be given 0% on the entire test because maths is, after all, a coherent system - and if you mistakenly get a sum wrong in one place then, well, that

mistake if consistently applied everywhere else would falsify the rest of mathematics too. But this is just a huge, broad generality – it does not get close to the point.

The other part of the answer is that there simply is not enough time for rapid enough speciation to occur. I find this answer also lacking, because the objection itself does not state just *how many* different specimens of each created kind there were, or any figure for how much genetic diversity was present in their original state. It just states that there were several original created kinds, rather than just one common ancestor for the whole family of life. How many species there were within those kinds and how long would then be needed for further diversification to today's levels is not stated in the objection, so the answer that there is "not enough" needs to be argued with some numbers, not just asserted, if Dr. Alexander intends his book to be a meaningful resource, rather than a summary of conclusions that are argued for somewhere else.

Chapter 7: What about Genesis?

This chapter will make the discerning reader want to take a step back. There are even larger issues raised by this chapter and its role within the book than the subject of the book itself. The larger issues point to an ongoing "downgrade" in the world of evangelical theology which is part of the reason why much of the evangelical world is willing to come to an easy compromise with Darwinian thought.

We have now reached chapter 7, and Dr. Alexander has set out what he claims are proven and certain facts about the history of the world, its age, and the manner in which life developed. After settling all those issues, we now come to chapter 7. Here, we ask - what does the word of God have to say about these things? Perhaps sensing that someone reading the book might have an uncomfortable feeling about the orthodoxy of his methodology, Dr. Alexander begins with a page of disclaimers to protest his submission to the Word of God as his final authority. However, he doth protest too much. Authentically evangelical methodology means that the Scriptures come first, and set the parameters of the debate. We do not ask fallen men for their best conclusions from their own investigations first, and then see whether we can harmonise it with Scripture afterwards. That, unfortunately, is just that Dr. Alexander does, despite the protest that he wouldn't dream of doing such a thing. This isn't just a complaint about the order of book chapters. That order reflects the methodology faithfully, and it's the methodology that's the real problem.

Dr. Alexander's general approach to the early chapters of Genesis is to commit the logical fallacy of the false dichotomy. In this fallacy, he sets up an unnecessary opposition (which is never formally stated, but is continually implied) between the historical reality of the Genesis account on one hand, and on the other the theological truths which that history teaches. A first necessity is to ask what kind of literature Genesis is. Most of the ink is, as in a previous chapter, spent on refuting the suggestion that nobody makes, that Genesis is to be treated like a modern scientific treatise. But, in amongst this, we do

get one sentence to discuss the idea of whether Genesis records not modern science but *accurate historical narrative* (whether with or without poetic elements in the presentation). This is that sentence: "It is describing creative events that occurred before anyone was around to describe them, so it cannot be history in any normal use of that term."

That is it. What Dr. Alexander means by "normal use" of the term "history", we are not told. Whether God himself, inspiring Moses, might be an even better historian than the normal human ones who were not around and therefore whether we do not need to worry about their absence, doesn't get any discussion space. No – what appears is that if it happened before any men were here, then even if God himself records it, it just cannot count as "history" in a meaningful way... and there is nothing left worth discussing! This kind of "clever" word-game, by which Dr. Alexander entirely side-steps the central and relevant issues in order to swiftly proceed on to some display of erudition on some other side-issue is what makes this book a deeply frustrating one for anyone looking for an informed critique of young earth creationism.

Another disappointing abuse of logic is the old chestnut that as the sun and moon weren't created until the fourth day, therefore the days cannot be of the 24-hour kind because there was nothing there to mark them. This argument commits a fallacy of conflation, by wrongly assumeing that the *passing of time* and the *marking of the passing of time* are the same thing. But does an infant know that time has passed long before mum or dad tells them what it is or how to count it? If you shut yourself up in a dark room where you can't see the sun (or if you prefer, move to another galaxy), does time stop existing?

I hope that the reader will forgive me if I do not stop to detail the several other such logical howlers in the chapter, historical misrepresentations, and the hand-waving-smoke-blowing-strawman-destroying of possible objections. In my opinion, such things can easily be detected by a critical reader who goes off to any of the principal creationist websites to search for discussion of the common

arguments. I think it is better to focus on the big issue raised by the chapter; namely, that of principles of interpretation and the place of the Word of God in forming our theology and world-view.

Here, I want to say this: it is not enough to say that you abide by the Bible's authority. Dr. Alexander seeks to harmonise Genesis with evolution, but the Bible should not be treated as just one book alongside others; it must rule them all, and that in evident practice and not just in theory and small-print disclaimer. Dr. Alexander makes a continual false dichotomy, urging us to not focus on Genesis' historical details and then to miss their theological import for us. That warning is not without some value, but Dr. Alexander makes the opposite error. He divorces the two, aiming to give us the theological fruits but without the real-world, time-and-space events that actually give rise to them. This is trying to eat your cake without having ever had it to begin with.

Chapter 8: Evolutionary creationism

We're now in the middle of the book, and having done all the spade work Dr. Alexander now summarises his main idea, which he calls "evolutionary creationism", but which is normally called "theistic evolution". i.e., The Darwinian process was (is) God's chosen method for the creation of the world. After this chapter Dr. Alexander will go on to look at some particular areas of interest or difficulty in more detail, in particular how this thesis deals with various theological questions that arise.

Dr. Alexander first of all sets himself the task of clearing the ground by explaining that evolution need not carry any atheistic overtones, and to parade a list of names of those who from Darwin's day downwards (including the man himself) either did not believe evolution had to imply atheism, or who ardently advocated both evolution and Christianity. Concerning the latter, not all the names were familiar to me, but Dr. Alexander was very sloppy in handling two who were. Henry Drummond, despite his involvement in Moody's campaigns, was not (as Dr. Alexander describes him) an evangelical, but an outright down-grader. Dr. Alexander also uncritically quotes Benjamin Warfield's words describing himself as a "Darwinian of the purest water", with no hint that he is aware that Warfield spoke those words at the beginning of his theological career as a 17-year old freshman (though granted, somewhat above the usual grade of such - he had memorised the Westminster Shorter Catechism by the age of 6!), and that in later years he developed a number of criticisms of Darwin and was not unambiguous in his support of evolutionary theory. Certainly, he could never have written a book like Dr. Alexander's.

The former point though is more important - it is granted that Darwinism has been a massively successful theory in terms of gaining adherents including legions ready to proclaim their belief that it can be harmonised with Christianity, evangelicalism, etcetera. Dr. Alexander's basic approach to the question of Darwinism's

implications is a naive dualism. Scientific theories have no inherent ideological implications; all those are later encrustations welded on by philosophers. Scientists and philosophers work in different spheres, and scientists just go where the evidence leads, leaving it to others to do what they will with their findings. It is amazing to me that anyone can believe something so naive in these times in which post-modernism has been so widely considered and discussed among Christians, and I find it hard to credit Dr. Alexander when he writes along those lines. Later on, Dr. Alexander gives some good explanations of how various ideologues used Darwinism to support their various theories (in such fields as economics, Marxism and medicine (eugenics)), but he never gets close to penetrating the heart of why they did so. The closest is when he remarks that some of what happened in the world of eugenics had to do with "the aspirations of nineteenth century educated Victorian gentlemen to create the world in their own image" (p 179). A more incisive insight would have been to observe that all these competitive and individualist theories hung together, *including evolution*, and that Darwin's theory, far from being a neutral insight into scientific reality, was in many respects simply this kind of 19th century educated Victorian gentleman seeking to form a theory of biology that fitted his views on the world.

Dr. Alexander notes that Darwin was a deist (in the part of the chapter where he is arguing that Darwinism doesn't have to imply atheism), and in another part of the chapter gives a short denial that his view of creation is basically deistic, but that is the closest he gets to actually examining the question of *what* form of theism evolution implies - that question has already been side-stepped into irrelevance by the conveniently thesis that scientific theories are ideology-free zones. But even Professor Dawkins is ready to concede the compatibility of Darwinism with theism - *provided that the brand of theism involved is deism*. Darwin's deism is not a coincidence, not a historical accident, and his biological theory was not a neutral production of an unbiased or otherwise non-ideological mind. Darwinism is essentially the theory that the laws of nature (however those are conceived of in terms of their relationship to God) make the rise of more complex life forms from simpler ones inevitable. This is a view well summarised in

a quote from Darwin which Dr. Alexander approvingly gives:

"There is a grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved."

As long as certain rules are followed, we are being told, complex life is inevitable by small and successive stages. That view of "creation" may be compatible with *theism*, but this point is not under dispute and so Dr. Alexander is offering us red herrings again. The real question at the heart of the disagreement between creationists and theistic evolutionists is, what flavour of theism is Darwinism compatible with? Is it compatible with *Biblical* theism? i.e. is it compatible with essentially *Christian* theism? Dr. Alexander defends the legitimacy of believing in both a god and Darwin, and I can't object to this. But what about the *Biblical* God and Darwin? This is a question that Dr. Alexander is ill-equipped to get to grips with because of his starting point. He is handicapped by having insisted *a priori* that the Bible just tells us naked theology, that science tells us about the physical world, and our job as believers is to find a suitable harmony between the two. Dr. Alexander's answer to the charge that theistic evolution is basically deism is to insist that his theory insists on God's *immanence* in all the processes in creation, whereas deism is a theory of an absent God who merely set the rules and started the machine going but then takes a leave of absence. But this difference is entirely theoretical - it has no "cash value" as regards anything that ever happens in the physical world. Perhaps these physical events happen by the inevitable working out of natural laws; perhaps they happen because God is immanent in creation and working things according to a perfect order and harmony - but that is an entirely theological question totally unrelated to science or history. The point is that "evolutionary creationism" is *functionally* the same as deism, whatever it is philosophically - and functional deism is not Christian theism. Alexander never gets to grips with this problem.

Dr. Alexander writes that it is ironic that young earth creationists agree with Dawkins that evolution is inherently atheistic. But, this is not ironic; it is simply a truth. The deistic "God" is, to all practical intents and purposes, a set of mathematical equations, once the initial winding up of the clock has taken place. Alexander then goes on to accuse them of "playing right into Dawkins' hands" by "confusing theology with science" and "setting up a false antithesis". This reflects Dr. Alexander's dualism: that Genesis is theology, Darwinism is science, and in principle there is no reason why the two should ever have a problem. The problem is, though, that Genesis makes historical claims and so does Darwinism. It is then no "confusion" to compare the two and observe that they differ. Rather, it is responsible study of God's revelation. The confusion comes, rather, in an approach which conveniently side-steps the question at each turn.

Side-stepping is what Dr. Alexander indulges in again when he comes to address the issue of "naturalism" and whether it is at heart an anti-Christian theology. As at several other times previously in the book, the question is dealt with by a neat re-definition of the issue that is then rather easy to deal with. Dr. Alexander re-defines "naturalism" to mean "scientific language which does not mention God", and then proceeds to explain the reasons why Christian scientists do not stuff their papers with God-language (because God is everywhere and always present in creation, not just at some parts - we do not want to invoke a false "God of the gaps"). This is rhetorically neat, but intellectually useless. The problem with naturalism has never been that it doesn't include enough God-talk. The problem is the removal of the necessity of a mind. The problem is the philosophical decision to rule the questions of intentionality and design out of court, not on the basis of scientific evidence or necessity, but for ideological reasons. Darwinism, viewed from this angle, is simply the accommodation of biology to the philosophy of naturalism. It is not the absence of "God-speak" that causes Biblical theists issues with it; it is the absence of any necessity for a mind or purpose in the process. That is why Charles Hodge, a predecessor of B B Warfield at Princeton Seminary who Dr. Alexander didn't mention in his survey of responses to

Darwinism, concluded his book "What is Darwinism?" with the conclusion "What is Darwinism? It is atheism."

Chapter 9: Who were Adam and Eve? - The background

As I read Dr. Alexander's book, my main fear ironically is not that it will persuade Christians to embrace Darwinism. What this book will actually do to Christians who really take it to heart is much worse. The worse thing is that it might lead them into a much more far-reaching theological downgrade, through the methods of Bible interpretation that Dr. Alexander uses. As with many "bad books", the badness is not ultimately in the questionable and obviously controversial conclusions (though they are there). It is in the questionable methods of Bible interpretation used to reach them; methods which the author does not tell you are questionable or controversial, but simply presents as if they were quite normal and the kind of thing we should all do without hesitation.

The chapter starts, as a previous one did, with a somewhat limited disclaimer. Dr. Alexander protests that we must start with the biblical text if we are to ask about Adam and Eve, not to start with evolution and then try to retro-fit it. So far, so good, but it will soon become apparent that there is going to be enough wiggle room such that the end result is all the same. The disclaimer is, again, theoretical as far as the results go. Alexander proceeds to state that we should "listen to what the Bible has to say and then see whether there are any interesting resonances with the evolutionary account." Not so. That statement is a classic statement of the "two books" approach Dr. Alexander consistently follows: that the Bible is the book of theological meaning, science (and eventually Darwinism) is the book of scientific truth, and each must be listened to and obeyed. This is not evangelical hermeneutics. The authentic Christian approach to the Bible is to give it an unrivalled place of supreme authority and absolute truth, so that it dictates the parameters which any other supposed sources of truth must adhere to. The Bible is certain and non-negotiable; other potential sources of truths are uncertain, must fit within the parameters of Scripture and be believed with appropriate tentativeness.

To Dr. Alexander, Genesis is not only primarily theological in intent, but exclusively so, and so he tells us that as he reads it he will approach it looking for theological and figurative aspects (page 191). This is putting the cart before the horse. In reality, the fruits of the theological instruction arise from the historical reality of what is described. To change analogy, Dr. Alexander wants to have the fruits of the tree after he has plucked up the roots. That is not evangelical theology; it is classical liberalism. Liberal theologians decided to take the historical narratives of the Bible, strip them of their roots in the real world of time and space, and keep the results for their ethical teaching. The liberals concentrated most of their fire-power on the gospels and particularly the miracles of Jesus in this because for them the supposed mythological status of Genesis was already beyond question. They were at least consistent in treating the gospels in the same way as Genesis. Dr. Alexander's hermeneutic needs to be seen for what it is - exactly the same de-historicising hermeneutic, just accompanied by non-functional disclaimers. Should it be acceptable for evangelicals to do to Genesis, the Bible's foundational book, what we reject and call heretical when we see others doing it to other historical narratives in the Bible?

The rotten fruits of Dr. Alexander's down-grading approach to Scripture become clear as the chapter proceeds. It is a chapter of two parts (and only begins to discuss the question of Adam and Eve - the next chapter continues). The first half looks at what the Bible says; the second half examines the evolutionary account. The first half is full of uncertainty and doubt. The sorts of phrases we will encounter are as follows. This passage is difficult. This portion admits of many interpretations. The commentaries suggest many possibilities here. It is not certain what this means. We cannot base any firm conclusions on this, and so on and so forth. Then, we get to the second half of the chapter to learn what contemporary evolutionary biologists says about man's origins, and it is a totally different rhetorical atmosphere. Here are results about which we can be as certain as about anything. This is an assured and definite truth. There is no real doubt about this to anyone in the field, etcetera and etcetera. Reading this, I felt as if I had

wandered into a gathering of the village atheists. The "religious" source of truth is by nature uncertain, doubtful, speculative... but, here is science, which tells us results which are guaranteed in their infallibility because they are derived from the fail-safe scientific method, praise be to Richard Dawkins *et al*! But if Dr. Alexander is really an evangelical by consistent practice and not just in profession, then which of the two, contemporary science and Scripture, should we keep being told is infallible and certain, and which of the two should he keep emphasising is tentative and unsure?

Why is humanity's descent from the apes so certain? Dr. Alexander is consistent in relying on a single argument that he is outlined earlier in the book, though here he goes into more detail (and the man is certainly very gifted in explaining unfamiliar scientific concepts, provided you at least have some background). It is the argument that the human genome is full of what are basically relics from the past - gene sequences that are no longer active, or have been corrupted in some way. His argument is then theological, not scientific - this *really looks* like common descent, and therefore it must be, because otherwise God would be playing games with us by deceiving us. Dr. Alexander's ultimate proof comes from his prior ideas of what God should or would do, or not do: not from a simple reading of the directly available evidence. As before, though, Dr. Alexander doesn't compare his scenario to the alternative creationist paradigm, but simply asserts that the particular account he is given fits really well and that there is no alternative (we have to take his word for it), therefore it must be true.

Real life creationists, though, (rather than the "some Christians say..." straw-men who inhabit the pages of this book), surely have no problem in accommodating the concept of many inactive genes in the human genome. We believe in the fall - a fall which had a real and very serious effect on humanity at very many levels. Man became subject to all kinds of illnesses, sicknesses and even death. As there is no real separation between the theology and the real-world biology, what that would mean among other things for the genes that we would expect to find we lost abilities in our genomes, which is just what Dr.

Alexander skilfully explains. Dr. Alexander relies heavily on what he says are identical losses of functionality in humans and some of their supposed evolutionary cousins. Again, though, there are other possibilities. These gene sequences may not be as useless as presently thought - future science may discover a function we do not presently know, making Dr. Alexander's argument a Darwin-of-the-gaps one. The fact that these gene sequences have been conserved suggests that they do have a useful, as-yet undiscovered function rather than being relics, even on Darwinian assumptions. Or, the common Designer, having designed man and physically similar beings using common design, may have at the fall made common changes in the genomes. Dr. Alexander's argument that common gene sequences *must* mean common ancestry (as opposed to common design, a thesis he never mentions), is an empty assertion, a philosophical assumption and not a scientific fact.

Dr. Alexander's down-grading approach to Scripture is nowhere illustrated more clearly than in the case of his explanations of what the Genesis account says about Eve. Eve was made out of Adam's side whilst Adam was in a deep sleep (Genesis 2:21). Dr. Alexander explains all of this, goes on to explain the significance of this for the doctrine of marriage... and then goes on further to assert that therefore since the important implication is the doctrine of marriage, we thus should not insist that Eve was actually made out of Adam's side after all. With the skill of the clever rhetorician that he is, he seeks to make this sound as ridiculous as possible: "Now if we take this ... as referring to some early Near Eastern operation during which God both provides the anaesthetic and does the surgical manipulation of a male rib to generate a woman, then we will have missed the point of the text by reading it through modernist spectacles. No, if we go down that route then we are in real danger of abusing the text, which is about the foundations of marriage." Dr. Alexander, though, does not spend any words in investigating the New Testament texts where the writers do, with all seriousness, interpret the details of Adam and Eve as real historical phenomena and not just nice literary teaching aids (e.g. 1 Timothy 2:13 - Eve being formed after Adam, or 2 Corinthians 11:3 - Eve really was deceived by a talking snake!). The irony is that

it is Dr. Alexander's own non-apostolic interpretation which is classic modernism. He reads Genesis 2, scoffs at the idea of a talking snake or a woman being formed out of a sleeping man's rib, and concludes like a good rationalist that it cannot *really* mean that, and therefore we are just intended to extract the theological payload from the passage and leave the vessel that was used to teach that payload in the realms of mythology where it belongs. Similar is his treatment of the name given to Eve, the "mother of all the living" (Genesis 3:20). This disagrees with Darwinian orthodoxy, and hence cannot be literally true, so Dr. Alexander re-interprets it to say that it might mean that she was the mother of the family of faith. Later in the book Dr. Alexander will admit that Aborigines cannot, if Darwinism is true, be descended from Eve, which leaves some interesting theological implications.

Hence it is no surprise to find that Dr. Alexander entirely skips over any discussion of Genesis 5, with its very down-to-earth genealogy, with a long list of dates and names, of Adam down to Noah. It is hard to extract too much theological significance from "And Enos lived ninety years, and begat Cainan", unless in fact *Enos living 90 years and begetting Cainan*, i.e. the literal history, is itself the theological significance. That is how it is, because the Bible writer is deliberately tracing out the historical line which eventually leads to Abraham, David and Jesus the Messiah - the line focussed on in 1 Chronicles 1, Matthew 1 and Luke 3. The real-world actual-historical nature of the text is not an optional extra that we can throw away, because the Saviour we have is a real-world flesh-and-blood one. Genesis finds a fundamental part of its significance in being *his* history. The Bible does not leave the question "who were Adam and Eve?" hanging in the air. It gives us a very full and precise account, complete with detailed genealogies which eventually go right from Adam to Christ. God promised at the fall that there would be a seed of the woman who would conquer the serpent (Genesis 3:15). Jesus is that unique man, and so the Bible is careful to demonstrate very precisely how he fulfilled that promise, giving us his line and the dates going right back to the beginning, so that we might know him for who he is. The ultimate fact in Darwinian manglings of Genesis is that it is not just a

side-story in the Bible that they are playing games with - it is the foundation of the whole lot. Dr. Alexander may laugh at the details given in Genesis (and he does, as quoted above), or ignore them; but we must not copy him.

Chapter 10: Who were Adam and Eve?

Genesis and science in conversation

This chapter continues and concludes the discussion, began in the previous chapter, of the question of how to identify Adam and Eve. As with the previous chapter, the bigger issues are revealed in this chapter by taking a step back. It is amazing to see what Dr. Alexander is certain about, given how uncertain he is about many things in the Bible he is not certain about. Ancient teeth fragments can be relied upon to reveal human evolution in dogmatic detail. Stone tools appeared 2.6 million years ago. We know who lived near Lake Turkana 1.44 million years ago. Presumably we should not make the mistake of saying it was 1.43 or 1.45!

The chapter, then, starts with several highly dogmatic pages about the evolutionary history of man and his various "cousins", the gorillas, gibbons, chimpanzees etcetera. There's some discussion of genetics, the development of human culture and language, before focussing on the "Neolithic" era (10,000 BC onwards), as the one ultimately most relevant to the identification of Adam and Eve. This all winds up to the conclusion, which ought to sound out the big warning bells for anyone whose evangelical instincts have not been thoroughly dulled by the 230-odd previous pages: "It is against this cultural and historical background [reviewer: i.e. the history of humanity according to present Darwinian theory] that one needs to consider the early chapters of Genesis."

Did you get that? According to Dr. Alexander, if you were a naive Bible believer, thinking that God gave us Genesis as a true account of humanity's origins, so that by this divine yardstick we could measure, approve or reject all competing accounts, then you need to stop. Perhaps you imagined that the Word of God gave you a cultural and historical background against which to test theories from other areas of study, such as Darwinism. You are a simpleton! Sadly, for Dr. Alexander, the sure and certain revelation of Darwinism gives you the

truth, and against this background you must read the Word of God. If you cannot spot the theological down-grade by this stage of the book, you are not going to.

There is then a small aside whilst Dr. Alexander considers the question of whether humans are still evolving. I applaud him for including it, as many times in the book he simply skirts around relevant issues. In Dr. Alexander's theology, creation is via gradual processes which are part of the world today as much as they are the past. This does raise as a natural question - so, are human beings still developing upwards, and shall we in future be something else? Did Jesus die for the coming *homo futuris* as well as the present *homo sapiens*? Dr. Alexander poses the question, but his answer is effectively a pot of warm slop. Holding to Darwinian orthodoxy, he does not deny any of the premises, but falls back on giving three reasons why future human evolution (though theoretically possible), is unlikely in practice. What it boils down to is that in the modern world we do not get the isolated populations where natural selection can kill off the weak before they pass on their faulty genes. I think Dr. Alexander's answer needs to be better informed by the realities of present anthropology, because what he says is not true. It is widely reported in the news in recent months at the time of writing (following a kind of contact made with an isolated tribe in the Amazon rainforest) that there are still believed to be around 100 tribes in the world that have no contact with the rest of humanity or with modern life.

This then leaves us with the synthesis of all the material in the preceding 40+ pages on the Adam/Eve question. After all this, just who were they?

Dr. Alexander presents us with five possible "models", different ways in which Christians have answered the question. These range right from saying that Genesis is thoroughly mythological, just a story to teach timeless truths, to the young-earth creationist (YEC) position that Adam and Eve were created immediately out of the ground on the sixth day. You can guess which model Dr. Alexander is going to favour and which he holds in utter contempt by the number of words he gives in describing each: in turn models A, B, C, D and E get 1/3 of a page, 1/2 a page, 3 pages, 1/3 of a page, and 1 sentence. You might

have guessed that Model E is the YEC position (D is old earth / episodic creationism). I have already noted several times that Dr. Alexander repeatedly gives signals that he considers it beneath his contempt to discuss creationism, and there is another here. Dr. Alexander sees all these models as possible within a Biblical framework, which is a revelation in itself about Dr. Alexander's approach to Scripture, though consistent with all we have seen so far. Whether you take an out-and-out liberal position and assign the foundational historical narratives of Scripture to the waste bin of utter myth, or whether you think that when God says he made Adam directly from the earth he really means it, is a matter of comparative indifference, though Dr. Alexander has a preference. After this, models D and E simply get tossed into the waste bin, because they are incompatible with the theory of human evolution, and that, to Dr. Alexander, is all that needs to be said to tell you they must be false.

That preference is model C, which recognises that the rest of Scripture does treat Adam and Eve as real historical individuals (not generic humanity, or "everyman"). Moreover, it recognises that this is going to be "perhaps" somewhere around 6-8,000 years ago - here we get the only fleeting mention that the Bible (e.g. Genesis 5) contains detailed genealogies, a point inexcusably absent when Dr. Alexander is discussing what literary genre the Genesis accounts are. This dating would make them (reading Genesis, as we have been told we must, against the backdrop of the certainties of contemporary Darwinian accounts) Neolithic farmers living somewhere in the east.

This identification does then pose a number of theological problems if you want to keep carrying your membership card for the club of Darwinian orthodoxy, such as:

- Does not that mean that far from being the first two humans, there were actually many thousands of others around at the time?
- And those others will have already developed human language, culture, art and religious rituals, according to contemporary archaeological and anthropological thinking.
- So how can Adam be the father of the human race, and Eve the mother of all the living (Genesis 3:20)? What does this mean for the

doctrine of original sin?

- And this means that Adam had human ancestors (following any earlier on which were grunting ape-like creatures) - so what of the genealogy of Luke, which puts Adam at the head? (Luke 3). How can Paul call Adam the "first man" (1 Corinthians 15:45)?

What we see as Dr. Alexander looks into some (but not all, particularly the interesting one about original sin - see Romans 5:12ff) of these questions is the same picture seen consistently up to this point. His evolutionary orthodoxy holds absolutely firm, whilst the Bible becomes a nose of wax to be moulded as need requires. He grants all these implications (lots of other humans, the human race is not all descended from Adam and Eve, Adam had human ancestors, etcetera), and then goes around to find various theological wheezes to still allow some kind of meaning to be put on the Bible's plain statements. He then proclaims the resulting massacre of the sacred Word (and it is a massacre) to be an elegant harmony of "science" (meaning, Darwinism) and "theology" (meaning, the Bible's history). This is all very grievous.

The basic answer Dr Alexander gives is that Adam was the first man to whom God started to reveal himself in a special way. He was the first man to come to a heightened awareness of God and his greatness, and to be invited into a saving relationship. What about the salvation, Dr. Alexander asks, of those who were before and scattered in other parts of the planet? We do not know, he answers, and should be humble. More pertinent would have been to ask, "saved from what - what does this concept mean in Dr. Alexander's alternative proto-history?" The picture Dr. Alexander gives us for Adam is basically that which actually holds for Abraham: that of a chosen family picked graciously out of a world of ignorance. What "graciously" could mean, in a context where nobody else even has this mysterious awareness of God and hence none at all of his moral laws or commandments, we are never told. The "salvation" Dr. Alexander has in mind seems to be very amenable to contemporary thinking - a kind of "God became my special friend", rather than the deliverance from holy anger against wilful covenant-breakers which is actually the story of Scripture.

This leaves us wondering what the fall could mean. If life had gone on for many millions of years, and intelligent humanity for tens of thousands, with no knowledge of God, and God decides now to enlighten a couple of farmers a little, if they say "no thanks", then what kind of fall is that? To just continue as you were before? How to understand death, the fall and evil within this strange framework are the subjects of the next three chapters. But perhaps I can urge my readers: it really is so much simpler just to believe the Bible than to go down this road.

Chapter 11: Evolution and the Biblical understanding of death

The next few chapters of the book are in my opinion particularly significant, and worth reading especially for any wavering creationist who wonders if he is making too much fuss over the origins issue. In these chapters, Dr. Alexander spells out the theological implications of his "evolutionary creationism" view. Accommodating one's interpretation of the Bible to Darwinism comes at a price, and in these chapters Dr. Alexander spells out just what that price is, with commendable candidness. From an orthodox evangelical point of view, the concessions that have to be made are much too great.

The organisation of the book could have done with a little more work in this bit, because in fact a significant part of the discussion is contained in the next chapter, "Evolution and the Fall". Because "by one man sin entered into the world, and death by sin" (Romans 5:12), as God had promised (Genesis 2:17), you cannot really discuss the Biblical doctrine of death without discussing the fall. Dr. Alexander, though, does appear to think otherwise. As he presents these matters, this chapter is intended to be a "complete" (page 253) summary of the Bible's teaching on death, and the fall is something that we can better understand after (not as part of) getting this "complete" understanding. This is not simply a matter of presentation. Dr. Alexander's doctrine of death and the fall really does depend on this separation.

Dr. Alexander presents death in three parts - physical death, spiritual death, and the "second death". That in itself seems reasonable, until you realise the hermetic sealing existing between the first and second of those (except in the case where God sends physical death as a particular judgment). That is how the fall doesn't need to be discussed in this chapter at all - there is no reference whatsoever to Genesis 2-3 or to Romans 5. It is because, in Dr. Alexander's theological world, these two kinds of death are quite independent.

What, then, of physical death? First it is good to ask what Darwinian orthodoxy would require us to believe here, because if you

have read this far in the book you'll know that that will be precisely what Dr. Alexander will end up finding that the Bible teaches, or at least is "compatible" with. According to the long-ages dating Dr. Alexander adheres to, and the placing of the various evolutionary dates on that scale, anatomically modern, intelligent, cultured humans were around for plenty of time before Adam and Eve, who had human ancestors (though, Dr. Alexander adds, they would not have had any knowledge of God). Physical death is an essential part of the evolutionary engine, including in producing humanity. It cannot be an evil intruder, but has been the normal course of events for the 99.99(etc.)% of history before the Bible's time-line begins. What this means is that you cannot have the orthodox Darwinian scheme *and* believe that death invaded the human race in a terrible way as a result of Adam eating from the forbidden tree.

So it is, then, that we sadly find Dr. Alexander writing such heterodox untruths as "Nowhere in the Old Testament is there the slightest suggestion [sic] that the physical death of either animals or humans, after a reasonable span of years, is anything other than the normal pattern ordained by God for this earth" and "the Old Testament ideal is a long and useful life obeying God's will, followed by death." Dr. Alexander follows a consistent pattern throughout the book. He does not interpret Old Testament texts using the light of New Testament revelation; he instead follows the modernist error of treating them in isolation (though in this case I think even with that treatment you should not go as far wrong as this). Hebrews 2:14-15 states that "Jesus... [came] that through death he might destroy him that had the power of death, that is, the devil; and deliver them who through fear of death were all their lifetime subject to bondage." What does this mean? Jesus destroyed death through his physical death. Death cannot be cut up into neat "physical" and "spiritual" portions in Dr. Alexander's fashion, and then the portions utterly divorced from each other. The apostles' inspired explanations forbid it. Distinguished, yes; but separated and divorced, no. Dr. Alexander writes (page 245, emphases mine) "Although there are hints of the possibility of resurrection in the later books of the Old Testament, there is no developed resurrection teaching within the old covenant".

Jesus though thought differently and severely rebuked the Sadducees, who only believed the first five books of the Bible, for "erring", "not knowing the scriptures, nor the power of God", for not understanding that the fact of the resurrection was clearly stated in the second book of the Bible, in Exodus chapter 3 (Matthew 22:29-32).

Dr. Alexander emphasises the normality of death in the Old Testament, but because this is entirely without any discussion of the Fall - i.e. the event which brought death in - it is a totally out of context discussion. Yes, of course death is normal. But that is because the first father of the human race rebelled against God, and we inherited his sin and punishment (Romans 5:12ff). Given the length at which Paul unfolds that truth, it is inexcusable to overlook it. Dr. Alexander, though, manages to give a "complete" discussion of the Biblical doctrine of death without mentioning the fall, and ends up concluding, as orthodox Darwinism requires, that death is totally natural, and part of God's design for life on this earth. In this context, it then makes no sense (though Dr. Alexander never addresses this tension - is he aware of it?) when he proceeds to the New Testament to talk about liberation from death, and that "Physical death has no place in the fulfilled kingdom of God", quoting the verses about tears being wiped away, etc. (p249). He speaks of physical death being "an enemy to be overcome". We have no idea how this can be, seeing that it was perfectly natural and necessary for our upward progress out of the sludge. Dr. Alexander's answer seems to be that death is such an evil just by contrast with the wonderful kingdom of Jesus – the kingdom is such a glorious thing that it makes death seem dark *by comparison*. Dr. Alexander ends up with the answer that the reason for physical death is that it is necessary for us to inherit the kingdom of God via the resurrection bodies, which could not have been done otherwise - though he then grants that in fact this is not necessary because those who are alive when Jesus returns *will* inherit the kingdom without physical death. So much unnecessary confusion. (As someone with a systematic bent, this leaves me wondering what Dr. Alexander supposes would have happened to Adam if he had passed the test of the tree, and been admitted into life - would God have killed him anyway so that he could then have been resurrected?) What

we have here in Dr. Alexander's theology is not the apostles showing how the Christ event *fulfilled* the Old Testament Scriptures. Rather, they *rewrite* them. Death, which was nice and natural before, suddenly becomes an enemy because of a newly revealed future resurrection which the Old Testament believer would not have known about. Having the New Testament rewrite the Old in this way instead of fulfilling it makes us feel sympathetic for the Jews who rejected Jesus - it seems that they had some grounds to feel correct about him not being the promised Messiah *of Scripture* after all, and to object that he taught different truths to the ones they found in their records!

Dr. Alexander's faithfulness to whatever most contemporary scientists think is most likely concerning the past is considerable and impressive. The price, though, is a corresponding loss of faithfulness in believing what God has actually testified about the past, and a resulting twisting of the Bible in order to bring contradictory things into line. I am grateful to Dr. Alexander for spelling out some of the implications for Christians who seek to fold evolution into their systems of belief. Dr. Alexander is not one for compromising when it comes to doing that, and he shows us exactly what price you're going to have to pay if you're going to be consistent instead of picking and choosing the bits you like. I hope that discerning, believing readers will read this section of the book and respond with a resounding "No thanks".

Chapter 12: Evolution and the fall

This chapter (which really is a continuation of the previous, "Evolution and the Biblical understanding of death"), has really only one claim. That claim is explained from a variety of points of view and applied to different situations, and discussed in relationship to different Biblical texts; but it remains a single claim. The claim is that the fall was an event that had no physical effect upon humanity or the world. It was a "spiritual" event, not a physical one. It made no difference to the phenomena of pain, sickness, suffering or death, all of which existed before and continued afterwards, both for mice and for men.

Thus, if you only have time to read one chapter in order to see how a theistic evolutionary position works out when applied to particular issues, this is a good one. This is the chapter to read if you want to see how far from orthodox evangelical theology you have to depart in order to accommodate Darwinism within one's overall scheme.

Dr. Alexander achieves these conclusions mostly by continuing to interpret Genesis overall as a "theological and figurative" (by which he means, not essentially historical) narrative, and by interpreting other relevant Biblical passages through the false dichotomy of "spiritual death" versus "physical death". This is carried on even when dealing with passages such as 1 Corinthians 15, where the physical resurrection from physical death is stage front and centre - even then, it never seems to really dawn on Dr. Alexander to see that this dualistic separation is fundamentally un- and anti-biblical. The exegesis is also characterised by a repeated doses of the "this passage is difficult, therefore we do not know for certain what it means, therefore it cannot be held to mean the thing I do not want it to mean" interpretative method, known in more polemical parlance as "blowing smoke" or "hand-waving". Does Romans 8 state that the created order itself is in bondage to decay because of man's sin? You may have thought so... but for Dr. Alexander, the most important thing is that this "passage has kept commentators and PhD theology students happily busy for centuries!" so "we cannot be too dogmatic about the

interpretation". (N.B. No such fundamental confusion actually exists in the literature; I checked 31 consecutive books from the shelf at my nearest evangelical library; the books themselves were from a range of authors, orthodox at one end (e.g. Calvin) and straightforwardly heretical at the other (e.g. J A T Robinson). No such confusion existed; whether they agreed and submitted to the text, or whether they thought it was ancient and false mythology, all the authors agreed on the facts of what the text actually says, regarding a physical fall caused by man's sin). And so on and so forth. Same picture as we have seen throughout the book - what Darwinism speculates must be treated as proven scientific truth, whose accuracy is established by the certainty of the scientific method, whereas what the Bible says is difficult and must not be treated with dogmatism, and if we can find a way of reading it that does not contradict the theory of evolution, we should allow that as a possible interpretation (and in practice, the one to go with).

What then is the fall for Dr. Alexander? It is a purely spiritual event. Friendship with God was offered to a select family of Neolithic farmers in the east (whilst, remember, many other humans were living in other parts of the world, including the Australian Aborigines who are not descended from Adam). They rejected it, rebelling against God, losing the life he offered. This makes the fall basically a loss of something that humanity never had. It bumbled along for many tens of thousands of years (according to Dr. Alexander, as explained in the previous chapter) without knowing God, that knowledge was eventually offered to one particular couple, who rejected it. Unless my logic is completely defective, basically means that at "the fall" nothing happened, the very definition of a non-event. All things went on as they were before.

Dr. Alexander's treatment of pain is a massive departure from evangelical orthodoxy. For him, biology is a package deal; you cannot have all the good things in there without the bad things, and it is pain and death that grease the skids of the evolutionary machine and make all our pleasures possible. If you think pain is an evil intruder, you have been reading Milton's "Paradise Lost", instead of the Bible. It is not possible to be a sentient being without pain. The implication of

this is that God is not the master of creation who determined its modes of operation, but is a prisoner to its limited possibilities. Apparently, not even God could have designed a system where humans could experience pleasure without experiencing pain; this is simply logically impossible, like squaring the circle or making two and two come to five. Dr. Alexander then gets himself into something of a pickle when he concedes that the future kingdom of God will be without pain or suffering. Then, it seems that God *could* in fact do such a thing, and that sentient beings can exist without pain. Dr. Alexander either never realises, or simply decides to exercise his author's prerogative to not notice, this glaring contradiction. (Or perhaps the future creation is utterly ethereal and immaterial - angels floating around with harps like those Daily Mail cartoons after all?) Dr. Alexander concludes that the healing ministry of Jesus was not to do with him restoring a fallen creation, but simply pointing the way to a new one. This means that redemption is not, contrary to orthodox Christianity, creation restored and perfected; it is creation replaced. This, the informed reader will hardly need reminding, is not evangelical theology. It is, though, what you get when you insist on taking as non-negotiable the ideas of Darwinism. From that point of view I am glad for Dr. Alexander making clear what the horrifying extent of the theological pay-load is.

Chapter 13: Evolution, natural evil and the theodicy question

In this chapter, Dr. Alexander continues to address the question of how to integrate on the one hand the account of history and the development of life given by Darwinism, and on the other a Biblical theology. This especially concerns questions over the Fall, Adam and Eve, and the existence of suffering and pain (so-called "natural" evil as opposed to "moral" evil). This chapter particularly focuses on the latter set of issues. Dr. Alexander introduces it this way, though the chapter itself actually ranges over a much broader range of territory:

"The question before us is how a good God could choose to bring about all of biological diversity, including us, by such a long and wasteful process which involves so much death and suffering." (p277)

Much of that ranging seemed to this reviewer to not be especially relevant, but to be other material that Dr. Alexander found interesting, wanted to get in the book, and put in this chapter as the best place. Perhaps there are connections that evaded me. Dr. Alexander's basic answer to the question is one that exists in perfect harmony and continuity with the trajectory traced out in the previous few chapters. The Darwinian account of the earth's history is not up for critique or question; the Bible will not be used to examine whether there are any faults in what contemporary secular scientists say about the past. Rather, this will all be taken as certain truth, and what will be done is to search out for a theological justification by which the general themes of the Bible can be harmonised with it.

Such a harmony, as we have already seen in the discussions of the fall, requires that pain and suffering cannot be seen as unnatural intruders into God's "very good" creation, coming because of Adam's sin. No - such an approach irreparably contradicts Darwinian dogma. Dr. Alexander has already explained that humans and such unpleasant experiences had been around for many aeons before Adam was ever born to his father and mother. It is instructive to take a step back and observe how little effort in this book – that is to say, none - Dr.

Alexander takes to actually derive his theodicy from the pages of Scripture. These questions are, for him, not answered by any kind of inductive study of Scripture, but by an exploration of the speculations of various non-evangelical theologians, of whom the most familiar to most readers will be John Hick, the pluralist universalist. This is not unexpected; beginning with an evolutionary framework as the starting point instead of Scripture, it is only really going to be such theologians who are going to have a compatible framework to help you. Is that not rather telling?

The harmony itself, then, amounts to this: biology is a package deal, carbon-based life cannot be created without the accompanying down-sides, and who are we to label the natural evils that we see with such subjective labels as "wasteful" or "evil" when God has seen fit to use them as part of the process which brings about all the good and enjoyable things that we can witness and experience? In Dr. Alexander's solution to "the problem of evil", then, the problem is not so much as solved as defined out of existence, with various exceptional caveats in the particular case of suffering humans. Here are some representative quotes:

"Biology is a package deal. Once we have carbon, phosphorus, oxygen, nitrogen and the other key elements for life ... virtually any plus that we care to mention is going to have an inevitable minus." (p279)

"As noted in previous chapters, life, at least carbon-based life of the kind with which we are familiar [reviewer: i.e. including humanity], is impossible without death." (p279)

"... without genetic variation between us all, we would all be clonal, looking identical. But it is that same genetic variation which affects our susceptibility to certain diseases, and which causes genetics diseases or cancers - necessary costs of living in a carbon-based world." (p280)

"It is a world in which moral and spiritual growth is made possible - more like a Boot Camp than a Holiday Camp. No pain, no gain."

Dr. Alexander's answer, then, is that the "problem", if it is one, is essential. It is like $2+2=4$, or requiring that squares have right angles. God himself could not do it another way. If you want life in anything like the present form, then this is the only way to have it. Throughout the chapter, the answer is consistent - it is not because of sin. Human wickedness plays no real part in the evil of this world - do not say, "fallen world", because the fall is to do with unseen, inner, spiritual reality - relationship with God - not to do with the dust and dirt of everyday life.

Dr. Alexander's dualism becomes Gnostic when he relates this to the new heavens and the new earth, i.e. the age to come. That will, he allows, be one free of such pain and suffering, a different order entirely. As remarked before, what this means is that salvation is not to be conceived of in terms of an originally good created order which was ruined through sin then being redeemed and glorified through the work of Christ. Rather, in Alexander's scheme, Christ liberates us from an order that was originally and essentially unpleasant, delivering us into something better. We are freed from the prison of the pains of this life, into a better and ultimately disconnected order. Salvation is not creation restored, but creation replaced. This leaves us wondering (Dr. Alexander never even approaches this question) why Christ had to bring this new creation about in such a flesh-and-blood way. He came as a "carbon-based life-form" and suffered in the flesh. He underwent physical death, in order to bring in the new creation (2 Corinthians 5:17-21). But why did he do this? Why was physical incarnation, physical suffering and physical death needed, when the physical suffering and natural evil has nothing real to do with sin, the fall and the spiritual world, or even in the case of physical pain is actually something necessary and good?

Ultimately, this chapter has no real relationship to a Bible-based theology. It scrapes around from what this or that Princeton University scholar had to say that can be made to fit into an evolutionary worldview. At best it has some helpful thoughts that could be developed in a Scriptural way. At worst, it undercuts the Bible's own

historical narrative and removes the foundation of the gospel, leading to a replacing evangelical religion with the ancient and disastrous Gnostic heresy.

Chapter 14: “Intelligent Design” and creation's order

The chapters looking at how to harmonise Darwinism with a biblical theology are now over. For me they were the most interesting and revealing part of the book, and the only ones where consistently Dr. Alexander makes a serious attempt to answer some difficult questions instead of neatly side-stepping them with word games. What remains is more patchy; some left overs that did not fit elsewhere.

The purpose of this 19-page chapter is to have some discussion of the "Intelligent Design" movement, associated with such names as Philip Johnson, Michael Behe and William Dembski. I got the feeling in reading it that Dr. Alexander felt obliged to include something about it, but was a bit tired (or perhaps just contemptuous) by this stage, and the chapter is a bit of a damp squib because it neither goes here nor there, but remains content with some rather general arguments and statements. This is with the exception of some more detailed discussion of the bacterial flagellum. It is all, as I say, a bit of a damp squib, because packed into these 19 pages Dr. Alexander wants to survey the history of the movement, its personalities, its claims, and then comprehensively refute them such that he can conclude that the whole thing is a waste of time. That is a book-length project in itself. I have no problem with brief discussions of these things that skim the surface in the concept itself, but in these days of avalanches of free articles available from the Internet, you need to do a bit more than the kind of surface-level chatty repeating of talking points that this chapter is mostly made up of. It is rather disappointing that so many of those talking points seem to have been cribbed from "village atheist" websites. We surely should expect better, particularly from someone with Dr. Alexander's credentials and who spends a few pages opining on how proper scientific research is done. We even get a celebrity appearance of the Pennsylvania school board court case and "Judge Jones, a practising Lutheran and Republican appointed by President Bush", the claim that ID does not fall within the definition of science (though Dr. Alexander concedes that it is in principle

falsifiable) and such self-delusory claims as the one (made earlier in the book in the context of creationists) that editors of science journals would be falling over themselves if anyone had any legitimate criticisms of Darwinism and would gladly make any scientist who had them an overnight star!

I was hoping that Dr. Alexander might take a step back and answer a certain key question, which he never does. Let us grant for the sake of argument that the present ID movement is not close to what he wants to see. Fine. But, is it, in principle, a legitimate scientific endeavour to investigate the distinctive signatures of intelligent agency and self-determining minds? And if so, is it legitimate to apply whatever the outcomes of such research are to the study of nature - which, after all, Dr. Alexander agrees is the product through whatever mechanism of the mind of God? These are the key questions which expose the philosophical bias inherent in contemporary origins science, with its presuppositional exclusion of any idea of intelligent agency. That is what ID proponents mean when they criticise reigning "materialist" paradigms, but Dr. Alexander never discusses this (an earlier part of the book discussed the idea of "naturalism", but in the straw-man form of "the absence of God language" rather than in terms of the presuppositional exclusion of the idea of intelligent agency). The nearest Dr. Alexander gets to answering the question of the legitimacy of "design detection" is when he addresses the point that such detection is common-place in other scientific fields - e.g. forensics, cryptography, archaeology and SETI (the search for extra-terrestrial intelligence). If we scan radio waves from outer space looking for patterns which we would conclude indicate intelligent life, why cannot we scan the genome to see if its patterns indicate intelligence? Dr. Alexander's very weak answer is that "these are all examples where we already know that purposive human behaviours, or purposeful actions by potential little green men, are involved, so we are not surprised at finding evidence for such behaviour". What did he just say? We *know* that certain radio signals would be purposeful actions by *potential* little green men? This is the most egregious and obvious begging the question. But, to take a step back... actually I, and every other Christian, already *know* that life is the product of a supernatural

intelligence. Dr. Alexander conceded that in the first sentence of chapter one. He seems to have changed his mind now, though, put on his white coat and become the epitome of the Enlightenment scientist, who goes into his lab believing nothing except what he sees down the microscope. Does he *know* that DNA is ultimately the work of an intelligent agent or does he not? Or does he only know it when it suits his argument?

Leaving aside this brief and weak argument, what we do get in detail is an argument that the bacterial flagellum does not constitute an irreducibly complex system, though Dr. Alexander only actually examines one small aspect of this question, and concludes that time will bring solutions to the missing parts of his argument. The major argument made against the possibility of irreducible complexity is a circular one. Dr. Alexander argues that (and this is another "village atheist" talking point), as time goes on, science is able to provide answers to things we did not know, filling in the gaps, and if ID relies on identifying irreducibly complex systems in biology, then as science continues to provide these answers then the gaps will inevitably shrink, and any "designer of the gaps" who was relying on the empty spaces will soon vanish. That is a circular argument, because it assumes in advance that ID is already known to be false, that irreducibly complex systems do not in fact exist and that the small, gradual steps of Darwinism will be able to explain everything. What, though, if in fact they cannot? What if Darwinism is not true, and IC systems do exist? In that case, increasing scientific knowledge will increase the "gaps" that exist between Darwinian explanations and reality as we know it, and the evidence for the designer becomes larger. Darwin himself knew nothing of DNA and the methods of inheritance. He knew nothing about the origin of life - and what we have discovered since his time has progressively shown the overwhelming improbability of a non-intelligent cause for life. Darwin imagined a little warm "pond"; now we know that the conditions for life are so many and so complicated that Darwin was effectively indulging in day-dreaming. The gap between his speculation and reality has opened right up. Dr. Alexander, though, simply rehashes a low-grade Internet atheist circular argument which

assumes the final outcome of what he is arguing in advance. As I say, it's hard not to conclude that Dr. Alexander felt that he had to write something on this topic, but didn't do his homework.

Chapter 15: Evolution - intelligent and designed?

This is the penultimate chapter (with the final one addressing the question of the origin of life on which so far nothing has been said). It follows on from the previous chapter which critiqued the "Intelligent Design" movement, making some further criticisms on a philosophical level before going on to ask what we can say positively about design in nature.

After school, I studied mathematics at university. Whether that was a symptom or a cause, I think I have ended up with something of a nose for a system. I like to see the big picture. On that level, I have appreciated Dr. Alexander's book: he is a consistent man. Yes, there are arguments here and arguments there which contradict each other. And I have made it abundantly clear that I do not think that his overall system is close to being consistent with a Bible-based understanding of the world's creation or history. But, on the "big picture" level, his system is consistent with itself. His pieces over here hang together with his pieces over there. His overall view of God's method of creation, the principles for interpreting Scripture and relating it to science, the identity of Adam, the Fall, the relationship between sin and the physical world, the natural and supernatural, all follow the same lines throughout the book. That is a good thing, because if someone changes their line every chapter then there is no real possibility of rational consideration or debate.

It is that consistency throughout the book up until now that defines the disappointment of this particular chapter. That is because here it rather goes to pot. There is nothing much to dislike about the Biblical exegesis in this chapter, because apart from a few fragments thrown in like raisins in the cake, there is not really any. What there is is a collection of (in my assessment) *ad hoc* arguments thrown together with little regard to whether they agree with each other or the rest of Dr. Alexander's thesis. In this aspect it continues and magnifies the trend I remarked from the previous chapter; he seems just to have

rather lazily joined together a number of second-hand talking points, and it is disappointing because the rest of the book is much more considered. I will make a few comments about a couple of those *ad hoc* arguments - readers can analyse the rest for themselves. Then, I want to go on to looking more broadly at the "big picture" of this chapter.

Rent-an-argument

So it is that Dr. Alexander, having for the book so far criticised creationists because they seek to mix the Bible with science when he believes there is a much greater separation between those domains than they do, now criticises ID theorists for not being explicitly Christian enough in their writings. After telling us on page after page that Scripture does not give us scientific information and we must trust the scientific process for anything in that realm, on page 317 we now read, "So I find it worrying from a Christian perspective that ID proponents are so insistent that they do not look to Scripture for their core beliefs, but instead to a form of natural theology". (Note that this statement is in itself nonsense, because Dr. Alexander has chosen to treat ID theorists' statements about *their scientific methods and conclusions* as if they were the whole of their belief system).

Again, for the book so far, Dr. Alexander has insisted in the soundness of the scientific method and that it is to the peer-reviewed consensus that we should look for truth about earth history, not Scripture (which has a theological, not a historical/scientific account). Now, though, when Dr. Alexander wants to argue that in fact evolution can perhaps be seen as an objectively directed, purposeful process, he starts talking about "recent" scientific writings which suggest this or that, though they are a minority, and which might point the way to understanding Darwinism as non-random after all, despite the consensus. He speaks of it being "interesting" to see "challenges" to that consensus, and so on. This is having your cake and eating it. Either you get to patronise dissenters from the mainstream, or you can be one of them... but not both.

Naturalism

Dr. Alexander makes a real hash of discussing the question of naturalism. His criticism is that when seeking to identify particular instances of design in nature, ID theorists concede that other things do not exhibit specific design and can be described in terms of "naturalistic" processes - and thus, he says, ID theorists give the idea of a universe in which God is only immanent in a limited number of places, rather than being present in everything everywhere. This misses the point entirely. The point is that of mind and intentionality. Suppose I deliberately place stones around my garden in certain locations, though those locations were not chosen based on any rational principle. Suppose also that there are other stones which were "just there" already from whatever had happened in the garden over the years. The resulting scattering would look much the same. A mind was involved in one case, but not in the other - but there is no way of detecting the presence of the mind. Suppose, on the other hand, that I placed some more stones to spell out the words "Darwin erred". I think if you entered my garden and saw that, you would conclude that a mind (whether one whose workings you sympathised with or not!) had been at work. A mind had been at work in two of those three cases - but in one, it was specifically detectable because of certain patterns in its activity. That is what is going on in ID. ID theorists are not addressing the question, "are these other things also from a mind?", and neither are they conceding that they are not. They are conducting a limited enterprise - seeking to recognise certain and limited signatures of minds, in nature. That is a simple enough distinction to understand. Dr. Alexander, though, spends the relevant parts of this chapter involved in what is in my opinion cheap-shot polemics, misunderstanding things at every turn and then building criticisms on those misunderstandings.

Arguments against ID

Dr. Alexander argues again that ID is an argument from ignorance, saying that Dembski's explanatory filter (does it describe law-like behaviour? If not, could its assembly be explained by a chance

evolutionary process? If not, then the remaining alternative is design) is a "design of the gaps" argument, and that future knowledge may fill in those gaps in terms of one of the first two explanation, and that if the first two explanations do not work we should say that we are simply ignorant and need more work. But this is simply "stacking the decks". It is perfectly reasonable to consider a design thesis rather than ruling it out of court in advance. There is no reason from science itself why Darwinian explanations should get the priority against competing paradigms; only from anti-Christian philosophy and theology. A consistently Christian world-view and theory of investigation can never privilege non-design explanations in this way. The same point applies again when Dr. Alexander goes on to argue that to introduce the language of design into science is a category error. This argument is also far too broad, and contradicts the concession given in the previous chapter that cryptography, forensics and SETI are legitimate scientific endeavours to identify design. Why the dogmatic reflex that refuses to apply the same logic to biology?

Dr. Alexander's arguments to consider evolution itself as "consistent with" (not demonstrating or implying - Dr. Alexander concedes this cannot be done) intelligent agency are astonishingly weak and far too subtle for any "man in the street". He argues that there seems to be some kind of fine-tuning of the system that made the rise of intelligent life in all of its diversity not a mere chance accident contingent upon several unrepeatable events, but inevitable - comparing it to the anthropic principle in physics. Biology has directionality - simple to complex - and biological convergence is consistent with viewing life as practically certain, not contingent. But we cannot be totally decisive about this, Dr. Alexander concedes, because this is still an uncertain area with work needing to be done, and we only have one universe to examine so cannot make overly sweeping conclusions. I am left asking the question... is that it? In terms of the "man on the street", though, Dr. Alexander does refer us to Psalm 19 and Romans 1:18ff to insist that God's activity is everywhere obvious to everyone. Granted that this does indeed mean that it is not just evident to those with biology PhDs who can digest all of Michael Behe's writings - DNA is not the final arbiter of design in the universe. But Dr. Alexander never

answers in what this obviousness does consists, and what the relationship is between it and his specialist field of biology is. When Dr. Alexander writes that in four decades of research he has never found any antagonism to his Christian faith, he puts it down to contemporary Darwinian thinking not being remotely hostile to authentic Christianity. Having read this book, I would put it down to his apologetic he uses being so lacking in solid substance that it is simply not going to present much of a challenge to a rational interlocutor.

Is evolution designed?

Dr. Alexander's positive apologetic for a "designed evolution" never gets near the focal point of the Darwin/Christianity conflict. Granted, Dr. Alexander does not believe that conflict exists, but in writing a polemical book against creationism he ought to at least show he knows what those on the other side of the theological divide are saying. The point about Darwinism is that it excludes intelligent agency. Darwinism asserts that a law-like process carrying on *according to its own internal principles* is sufficient to account for the end results, with no external guidance or mind-input being necessary. It is an *unintelligent* process. Dr. Alexander's apologetic implicitly concedes this whole point - the design and evidence of intelligence comes in the system itself, not anything you can see as part of it or from within it - only by getting outside it and overviewing the whole and comparing it with other (non-existent, entirely theoretical) systems.

Where is this going?

I do not believe that Christian apologists are intended to "prove" the existence of God by analysing DNA, etcetera. I do believe these things can have some supporting value. I do not think it is fatal for evangelism that Dr. Alexander gives away the farm here, because I am not of the school that thinks that the heart of evangelism is about intellectual analysis of scientific data. The root problem for the unconverted is moral. It is, though, a problem that through this book

Dr. Alexander is teaching Christians to effectively divorce the mind of God from the phenomena of creation. Dr. Alexander argues that this is not so - he holds that God is immanent everywhere. That immanence, though, has no cash value; you cannot distinguish it from the giant impersonal machine of deism. Christianity that is a bolt-on extra to the real world *is* a disaster, and that is where I ultimately think Dr. Alexander's apologetic, when looked at in "big picture" terms, is taking us. Christians need to learn to see God everywhere, not just by faith in a theoretical immanence, but in the real world of flesh and blood. By that I do not mean that we say "it must be God!" every time we do not understand something. Far from it - when we do understand it, then we will understand something more that has come from God, but not just in terms of an undetectable immanence, but rather in terms of a wonderful, deliberate and wise design.

Chapter 16: The origin of life

In this, the last chapter, Dr. Alexander returns after the digressions of the previous chapter or two to being consistent. It is another topic that didn't fit in somewhere else, but which we would expect to be in a book addressing the question of Darwinism, so here it is. How did life begin? Dr. Alexander's position thus far has been that Scripture does not teach that creation was accomplished through supernatural interventions, because it does not use the specific vocabulary of miracles in the creation accounts. This superficial conclusion was, as we saw, based on a word fallacy - Dr. Alexander arbitrarily defines the vocabulary used of *redemptive* signs (especially at the Exodus and in the ministry of Jesus prefiguring the true Exodus) to be the only words allowed to signal any kind of supernatural intervention, and finding these (redemptive) words to be absent from the creation account, concludes that we must expect the mechanisms of creation to have been in terms of ordinary processes still active in the world today. Which was exactly what Darwinism required us to believe.

When I say that Dr. Alexander returns to consistency in this chapter, what I mean is that he does not contradict the above assertions which were made when considering how life developed now that he comes to consider how life began. We are not to look for the supernatural, miracles, or any unique processes not still operative in the world today. In a word (mine, not his, because as we have seen he makes another hash of this one), the origin of life must have been naturalistic. (Dr. Alexander does not actually discuss this in the chapter - it is all assumed rather than argued that we must look for such a process and that God did not speak life directly into being). What evidence is there, then, that given the processes, reactions and laws operative in the world today, that life can begin from non-life? That it cannot seems so far to be as certain a scientific conclusion as any - as yet, countless man hours spent on the problem have only opened up more and more distance in our knowledge of what needs to be and what actually is. What does Dr. Alexander have to say about this?

Before answering that question, it is worth noticing that Dr. Alexander's consistency can only apply to the select issues he chooses to focus on. Going further back, we might ask - how did something come out of nothing? How did light come out of darkness (2 Corinthians 4:6)? What of the origin of the material world, time and space? At this point I am presuming Dr. Alexander would have to concede that in fact creation *did* involve supernatural events, despite the absence of the words that Dr. Alexander requires to be present in the creation account before he would believe it. (Surely he is not going to argue that there are processes operating on nothing that can bring about something? Processes which in the absence of time and space can bring about time and space?) And if he did concede that, then he would have given the basis of his whole position away. It would be much easier just to accept the plain sense of the Genesis account: God created immediately via a powerful, life-giving Word that brings something out of nothing; not via secondary mechanisms.

The chapter starts with three pages of special pleading. In them, Dr. Alexander privileges naturalistic theories of life's origin by complaining that the identification of self-replicating DNA as designed, requiring a mind, or not able to develop in small, gradual steps is to give up on proper research and just throw our hands up in the air and say "we cannot understand it, it is designed". As ever, Dr. Alexander simply asserts that this is what ID theorists or creationists do, without any examples or references, continuing the pattern we have seen throughout the book of not informing his readers as to what non-Darwinists actually assert or argue. In reality, the identification of DNA as being designed logically leads to *more* research into its workings, not less - because whereas Darwinists are ready to write off parts of the genome whose function is not yet identified as "junk", from a creationist point of view (a super-intelligent designer designed it) this is much less likely (though non-functional or faulty parts can be accommodated into the creationist view taking into account the fall). Believing that God created the first genomes out of nothing by speaking does, yes, end the question to seek for step-by-step developmental models. But it does open up other massive areas of investigation. When we realise a previously unencountered computer

virus is deliberately designed rather than being the product of a silicon explosion, the investigators do not then say "no point studying it then!". Rather, they study it all the harder to see exactly what and how it has been designed to do its work. But Dr. Alexander, instead of reasonably discussing what that would mean, plays polemics and falsely portrays the creationist and ID positions as ending all research. Ultimately it is dishonest, because throughout the book Dr. Alexander adopts a tone of authority, as an expert who has surveyed the scene and is faithfully reporting on it to the non-expert who has not been there.

The substance of the chapter is really suitable for a specialist, as Dr. Alexander discusses various biochemical theories concerning how to bridge various of the gaps. A non-expert reader is not going to get much from this part of the book; the only clues as to the bigger picture are a couple of times when he says that any realistic over-arching theories concerning the origin of life are 50 or 100 years away. I wondered really what the point of the technical discussions were; anyone reading who was expert enough to assess them would also be expert enough to spot the straw-men and misrepresentations of ID and creationist positions and so not be very impressed overall; anyone not expert enough will just skip this part. Whatever the aim, the unfortunate result is to blind the layman with science so that he comes away with the thought "well, I did not understand that, but it seems like this guy understands the origin of life so it is probably not that great a problem". Dr. Alexander ends by repeating the accusation that if you assert that the origin of life was not naturalistic (which Dr. Alexander, by absurdly misunderstanding again what is meant by "naturalistic" asserts is a "sinister" and "pagan" theory), then you are an obscurantist. Rather, it just means you are not wasting all those fine brains and man hours on blind alleys - it is not as if the biology of life had no areas left needing lots of detailed research! There is plenty to do with studying *how God's creation works now* - it is no obscurantism to not waste time on useless speculation about how life could originate in a certain fashion when the word of God tells us plainly that it originated in another.

Thus ends the book's body - just a 2 page postscript remains.

The Postscript

Two and a half pages end the book - the first bit with a summary of all that is gone before, the second with the forward-looking statement summing up where to go from here. Dr. Alexander has got a good, systematic mind and ties the book up in a straightforward way consistent with what has gone before.

The first half, then, repeats what's been argued for. Science is essentially an objective, value and presupposition-free zone; ideologies are bolted on by others. Science looks at the historical reality of what God did; the Bible gives us the theological interpretation. Evolution is compatible with believing in a God of intentions and purposes for the world. (In my review of the preceding chapter, to save space, I passed over commenting on the very weak form of sovereignty Dr. Alexander argues for in evolution, explicitly disavowing the concept of a total control in favour of a general directional influence). Dr. Alexander argues that we can hold to both Darwinism and all the historical Christian doctrines of sin, the fall and redemption. Arguing that is water under the bridge now. I think Dr. Alexander makes it clear as he argues those things that he holds those doctrines in a severely modified form that does not cohere with historical evangelical orthodoxy, and at times is grotesquely dualistic in some areas, even approaching a new Gnosticism (e.g. in his handling of the interaction of science and the Bible, the connection between theological and physical facts, and the relationship between the present creation and the new creation to come).

In the final part, Dr. Alexander takes the gloves off. The moderate language of the earlier book (though it always seemed to me to be with a heavy dose of condescension) gives way to something quite different. At the beginning of the book, Dr. Alexander told us that these were matters of comparative indifference, that Christians must differ on them amicably, and that there is no excuse for any kind of harsh language or anathematising of any others because of different views on Darwinism. Now, quite differently, he tells us that Christians who reject Darwinism are "embarrassing and bring the gospel into

disrepute", are (via a quote from Augustine on a different matter) "dangerous... talking nonsense... embarrassing...", create intellectual barriers that prevent scientists from taking the gospel seriously, have caused very high-profile (but unnamed) scientists to give up their profession of faith, and to cap it all are following the theology condemned in the book of Galatians!

This then leads into a most cringe-worthy example of double standards, where Dr. Alexander, after writing a 353 page long book on the question of Darwinism, launches a stinging diatribe against Christians who waste time discussing Darwinism when the world has so many other problems to spend time on. Christians who reject evolution, he says, are "divisive" and hypocritical, talking about creation but not being the ones who spend time caring for it. They invest time in magazines about creation and fail to put money into helping the poor, tackling HIV, or funding orphanages.

I wish I could say I have never read this kind of thing before. I have probably done it myself; it is a striking example of the blindness of fallen man that someone who has just spent such a large amount of time on disagreeing with other Christians over the question of evolution can then launch such a vitriolic attack on anyone who else who dares to do the same. But I think it is clear enough what he means. He means, it is an evil waste of time and resources to address this matter *unless you agree with me*. This argumentation, though, when we state it quite so bluntly, is silly and unworthy. It is also a false dichotomy. The creation God has made is very big - immense. God commanded us to subdue the earth - to have dominion over it (Genesis 1:28). Our hopes of doing that were ruined by sin, but restored and indeed made certain in Christ (Hebrews 2:6-9). Man is commanded to explore, harness and glorify God in every aspect of creation - physical, spiritual, intellectual, etc. Other than the gross generalisation in the above criticism, it is a clear fallacy to criticise Christians for spending time discussing and critiquing Darwinism and its effects on a Biblical world-view as if God commanded us to spend all our time building orphanages. That is a modern Western sentimentality that fails to get to grips with the vastness of the task that God set us in the creation mandate. It is a silly and cheap criticism

easily turned back on the one issuing it. Why is Dr. Alexander living in the luxury of 21st century Cambridge, in the (metaphorical) ivory towers of the Faraday Institute, when he could come out here and join me in Africa? There are slums with hundreds of thousands of people round here I can point him to. Why is he wasting time behind his desk penning insults against creationists when he could be down on the ground, caring for orphans and widows? I presume he has a good reason - and I can think of many excellent ones for this kind of thing. The point is, though, that these are cheap shots whoever is making them and whoever they are made against, whether they like Darwinism or not.

The note we end on has two more points. First, Dr. Alexander criticises creationists for not being enthusiastic enough about combatting global warming. It has occurred to me over the last year or two that anti-creationist critics, whether Christian or atheistic, are necessarily committed to being fully convinced of disastrous man-made global warming theory. Once you take the position, as they do, that the mainstream position has to be the correct one (because of the supposedly unbiased and virtually infallible nature of the scientific process), and that if Darwin deniers cannot get published in mainstream journals then that must in itself prove they are wrong, then you have no option but to unquestioningly accept it all. It is the consensus position, and peer-review guarantees its truth. The parting shot is a final cheap one that follows on from this criticism - creationists are like the man who buried his talent in the ground instead of being good stewards of creation, for which Dr. Alexander references Matthew 25:14-30. He does not go on to explain whether, as it actually states in Matthew 25:30, he means to say that creationists are going to be cast "into outer darkness, where there is weeping and gnashing of teeth".

Appendix: Synopsis of the theology of "Creation or evolution - do we have to choose?"

I was asked to give some kind of descriptive overview of Dr. Alexander's theistic-evolutionary theology, how it deals with the various issues, etc. Here is what he says on the major points, in some kind of order, without comment:

- The book of Genesis in particular and the Bible in general is a theological, not a scientific narrative. This means in practice that we are not to read it as a necessarily historical account or a chronological one in its description of the acts of Creation in Genesis 1-2. To read details of those chapters as if they were historical is to treat the Bible as a science text book.
- The mechanisms of creation are not to be thought of as supernatural/miraculous. This is because the key vocabulary of miracles is not used in the Genesis account or otherwise when reference is made to creation. Dr. Alexander applies this specifically to the development of life and implicitly to the origin of life, but does not discuss the origin of space/time/matter. God's overall sovereignty over the (Darwinian) creative process is not in terms of engineering a pre-determined outcome, but in terms of a general directionality and overall purpose; though the facts imposed by God through the periodic table and other laws of his operation themselves likely are sufficient to guarantee the emergence of life as we know it now.
- The universe is about 15 billion years old, and the earth about 4.6. Basically all dates are as claimed by the scientific consensus. Man (who was around a long time before the Adam of Genesis) has only been present in the universe for the last minute of evolutionary time, if we think of time as a 24-hour day. There is no reason why in principle there cannot be alien life, and if there is it will probably be very similar to life on earth.

- Adam was most likely (though we must not be excessively dogmatic) a historical individual. The chronologies (which otherwise are not mentioned - I would have liked to ask what Dr. Alexander makes of the large ages in Genesis 5, because these contradict the scientific consensus which Dr. Alexander elsewhere always accepts as true) indicate he would have lived about 6000-8000 years ago.
- This means he would have been a Neolithic farmer, most likely somewhere east of Palestine.
- Human physiology, language, culture, etc., were all well developed by this time. Adam would have had human parents. But they were not made "in the image of God"; Adam was the first "homo divinus". The image of God means that there was the possibility of friendship/relationship with God.
- Moreover, Adam's human ancestors were themselves descended from ape-like hominids, which in turn were from other life forms, all the way back to the original single-cell organisms. There are no separate "kinds" - no boundaries which evolution has not crossed, but a single biological tree of life.
- We are not to think of man as bipartite (body/soul); this is not what Genesis 2:7 is telling us; we should think of him as a whole.
- Adam was only "theologically" speaking, not literally, made from the dust. Eve likewise was not actually made from Adam's rib, but was descended from her own parents in the ordinary way - to say otherwise is to read Genesis as if it were a science book. There was no talking snake. There were many other humans around at the time, which is proved by Cain's fear of someone else killing him. Not all humans in the world today are descended from the Biblical Adam and Eve; e.g. the Australian Aborigines.
- Physical death was God's intention from the beginning, treated as perfectly normal throughout the Old Testament, which never hints there is anything unnatural about it. Adam and his ancestors were all subject to death and the Fall had no impact here.
- Likewise, pain, suffering, disease and so forth were all also

original features of the creation, for men and animals of all kinds. They are endemic to carbon-based life - biology is a package deal and you cannot be a sentient being without these things. Similarly, the fall did not bring in any creation-wide principle of decay or corruption into the created order - it continued as it had ever been.

- The fall was a spiritual, not a physical event. It did not lead to any kind of decay or degradation in the physical world (such as pain, suffering or disease).
- So, what was lost at the fall was an offer of spiritual life as God revealed himself to Adam and Eve but they rejected him. Salvation is conceived of primarily in terms of friendship with God, as Christ offers us again the life that Adam and Eve rejected. The death which Adam and Eve brought in was a spiritual one, which means ignorance of God.
- How we inherit Adam's sin and the connection between his sin and ours is never discussed.
- The new creation to be brought in in future by Christ (which will lack pain and suffering) is not a restoration and glorification of an original state that was spoilt through sin, but is the beginning in of a new order of a thoroughly different kind. The resurrection from the dead is only dimly hinted at in the later parts of the Old Testament and those before had no expectation of it. Jesus' healing ministry does not point to him as the redeemer of something lost, but purely points in a future direction to the kingdom to come.

The thing to be appreciated is how the above all hangs together as a coherent whole. You cannot really reject one part and keep another without introducing some contradiction in the system. There is a consistent and very sharp science/theology, physical/spiritual, old creation/new creation dichotomy running through it all, that makes sure that Darwinism is treated as true as an account of history, and the Bible is treated as true as an account of theological interpretation, and the two must generally be kept quite far apart.

I think I have made it clear enough throughout the review that by explaining Dr. Alexander's system, I am seeking to expose how far from evangelical orthodoxy a theistic evolutionary position ends up being when you try to hold to it consistently.

Extra: Dr. Denis Alexander in the Evangelical Times, reviewed

(This is quite a lengthy review, and the short version is that here you'll mostly find more of the same, though Dr. Alexander does introduce some new points (e.g. mentions of the Genesis flood) not found in his book).

January 2009's "Evangelical Times" (<http://www.evangelicaltimes.org>) carried a letter from Dr. Alexander whose book I have reviewed at length. He was replying to the review carried in the same newspaper by Professor Andy McIntosh, a prominent creationist and scientist at Leeds University. Professor McIntosh's review, a few months earlier had pulled no punches. He stated, correctly in my opinion, that Dr. Alexander was "seriously in error", that his book was a demonstration of "how sophisticated we evangelicals have become in justifying our unbelief" and that the spreading of the philosophy promoted by Dr. Alexander really represents "the downgrade controversy of the 21st century".

Unsurprisingly, Dr. Alexander's letter didn't totally agree. An analysis of Dr. Alexander's letter follows, with my comments in italics, with the hope that it will shed some more light on the issues for my readers.

Do we have to choose?

Dear Sir,

Given the level of angst in Andy McIntosh's article in October's ET ('The Downgrade Controversy of the 21st Century') critiquing my book "Creation or Evolution - do we have to choose? (Monarch, 2008)", the reader might be forgiven for thinking that the theological gulf between us is rather wide.

Yes!

But this is not the case.

We shall see...

McIntosh and I both believe in the full plenary inspiration of the whole of Scripture as the Word of God; in a literal Adam and Eve; a historical Fall leading to separation from God of all humankind; and our deliverance from both spiritual and physical death through the death and resurrection of Christ.

This letter, then, is aiming to downplay the differences between Dr. Alexander's attempt at a Christian Darwinism, and Professor McIntosh's (in my opinion, Biblical) creation theology. Along those lines, Dr. Alexander then lists a number of doctrines which he says the two of them both agree on.

In fact as I read this, the appropriateness of Professor McIntosh's invocation of the "downgrade" metaphor was impressed upon me. One of the striking features of the decline from evangelical orthodoxy in the late 19th century, and one that allowed it to escape from under the radar of many sincere evangelicals (or often those who should have known better but had no stomach for a fight) until the rot was well and truly endemic, was the use of orthodox terminology by downgraders. The liberals believed in the divinity of Christ and the divine inspiration of the Word of God... it is just that by "divinity" they didn't mean "deity" as Christians had historically done, and by "inspiration" they didn't mean "plenary inspiration", that word having now to be added for clarity's sake.

By referring to this, what I mean is that Dr. Alexander is failing to be straightforward. By this late stage in doctrinal debate in Christendom, we surely all ought to know that the mere heaping up of phrases to identify doctrines that we can all tick the box for, does not mean much. To make his Darwinian teaching acceptable to evangelicals he needs to minimise the difference between it and the historical faith, but I do not think he is being accurate in doing so. That is:

- *Dr. Alexander and Professor McIntosh both believe in a "literal Adam and Eve"... but the Professor's Adam is the first human being, specially created from the dust on the sixth day of the world's*

existence, the historical father of all humanity, whose sin brought physical suffering and death into the world, and from whose rib Eve the mother of all the living was created. Dr. Alexander's is a Neolithic farmer who appeared at one second to midnight on the evolutionary clock, the descendent of thousands of years of prior humans who had lived and died with art, culture and religion, and ultimately the offspring of ape-like creatures, fish and ultimately bacteria. He did not bring in physical suffering or death, and is not the father of many people alive today (such as the Australian Aboriginals). Dr. Alexander does also explain in his book that he sees his "literal" Adam and Eve as only a possibility, and also allows that a rank liberal approach, where the whole thing is just a metaphor not referring to any particular couple or set of events is also possible within the Biblical text... but, I presume because it is his aim in this letter to say things that a more conservative evangelical readership in ET will find palatable, he does not mention that here.

- Whereas they both believe in the plenary inspiration of Scripture, Dr. Alexander also brings to the Bible the prior doctrine and hard distinction (as he will explain later in the letter), that the Bible is a "theological" and not a "scientific" book, and that therefore it simply does not speak of creation as a historical matter. That is, anything it has to say along those lines is screened out in advance by the hermeneutical grid he brings to the text. It is all inspired - but there are also presuppositions that will disallow it from giving us a deliberate history of the world's formation. Dr. Alexander believes that science is a second book, whose results in research into the past, can reach an equivalent level of truth with Scripture such that Scripture is not allowed to contradict it. Professor McIntosh, on the other hand, comes with the classical Christian presuppositional approach - that is, that Scripture is the ultimate and unrivalled source of knowledge, that must be consulted first and gets to set boundaries on all other fields, ruling out certain theories (such as Darwinism) in advance. The Bible is not an equal source of knowledge with Science, but science's lord.
- Dr. Alexander's "historical" fall is "historical" in the sense that

it corresponds to an event in space-time. But to compare this to Professor McIntosh's fall, which agrees with that of historic orthodoxy, is to compare chalk with cheese. Dr. Alexander believes that the physical world, with its thorns and sweat coming from the brows of the sons of Adam, was that way before, during and after Adam's sin. He believes that pain, suffering and death is essential to a physical world of this sort with carbon-based life - "biology is a package deal". The fall was, according to him, purely in the spiritual realm: a relationship with God was offered and rejected. Professor McIntosh, on the other hand, holds that death came into the world because Adam sinned (Romans 5), and the whole creation came into bondage (Romans 8) and now dwells under a curse, suffering, disease and pain not being part of God's original "very good" creation. It is not intellectual integrity to seek to paper over the gaping chasm between these conceptions with the word "historical"

- Again, when Dr. Alexander says he believes in "deliverance from physical ... death" through the death of Jesus, he means something quite different to both the Professor and historic Christian thought. In his system, death is not (as we have already remarked), an unwelcome intruder, a curse placed by God upon rebels. He explains at length in his book that it was normal, part of reality, embraced by those who came before Christ with little or no realisation that something else would one day come until the apostles revealed that fact. Christ delivers us from physical death, not because that was part of the curse which he has redeemed us from by himself being cursed, but simply because the future creation and future kingdom are something of a different order, something better. Dr. Alexander's doctrine of salvation is essentially Gnostic - creation is not redeemed, restored and glorified, but replaced with a different order entirely, an event which in the final analysis makes Christ's physical death theologically incomprehensible; we will come to that later in the letter. The Professor, on the other hand, holds and teaches that physical death is an integral part of the curse (man being made body and soul, and so bearing the curse in both), and Christ had of

necessity to come in the flesh and to suffer and die in it, to redeem us from that curse and eventually to purify the whole cosmos in the future re-creation.

- *What we have here, then, is that Dr. Alexander has piled together a few short doctrinal labels which both he and Professor McIntosh could accept, whilst giving radically different content to them. The reality is not that they are very close together in their thinking about creation, fall and redemption - the reality is that Professor McIntosh's assertion that he has read in "Creation or Evolution" a new downgrading theology is on the right lines. As with the downgrade theology, though, the purveyors of new truths are not honest or courageous enough to come out openly and say so - instead, they cash in upon the value of the true currency, hoping to pass off their own coins and notes by trading upon its strength. Why does Dr. Alexander not simply come out and state clearly that historic Christian thought about the nature of the Bible, the fall and the redemption accomplished by Christ has contained major errors which can now be corrected by bringing our thinking into line with modern science? The hunting out of convenient words which paper over these differences is a parlour game for intellectuals of that bent, but not, as the 19th century downgrade controversy shows us, something that yields good spiritual fruit.*

Points Of Difference

Where we differ is that McIntosh believes in a worldwide flood, whereas I believe in a local flood (the Old Testament often refers to the 'whole earth' or to the 'whole world' as relating to the local extended area; e.g. 1 Kings 10:24; Jeremiah 51:41; Lamentations 2:15; Ezekiel 34:6; Habakkuk 1:6).

Interestingly, Dr. Alexander nowhere in his book actually addresses the Biblical case for a world-wide flood; there are simply a few scientific ones scattered statements here and there. There is no systematic consideration of the question anywhere. This is part and parcel of his general failure to engage actual creationist arguments (there being exactly zero references or footnotes to any contemporary creationist author or publication in his book), whilst he maintains a

superior aloofness. This sentence, in this letter, is the first time I recall coming across Dr. Alexander making a Biblical argument against a global flood (the ones in the book I recall were based on reconstructions of history, e.g. based on what it is supposed we can deduce from chalk deposits).

It is a shame that we only have one sentence of argument from Dr. Alexander on this subject, but this rather trite dismissal misses the following points:

-
- All the verses that he quotes above come from the Old Testament after the crucial chapters of Genesis 1-11 - the "universal" chapters. From Genesis 12 onwards, the focus switches to Abraham and God's covenant with him, and thus, as it is worked out, to the twelve tribes and ultimately even more narrowly to the line of Judah and David. God's universal dealings cease (not that he ceases to be at work elsewhere in the world in a total way, of course - neither in providence generally, or even in redemption specifically, e.g. the book of Jonah, or Ruth), and the focus switches to his special plan for Israel. The nations in general are left to darkness - darkness that is only dispelled when at long last, thousands of years later, the Christ comes and commands his gospel to be spread throughout the nations. Dr. Alexander quotes from these chapters, but not from Genesis 1-11, the "universal" chapters. In other words, he ignores the context. In Genesis 1-11, we learn about the origins of the whole world; the first man and woman, the first temptation and the first sin and judgment, the first murder, the development of the godly and ungodly lines, the universal judgment of the flood, the origin of the nations around the world at Babel, the beginning of languages, and so on. Here, the context is on the beginnings of the nations, and talk of "the whole earth" in such a context cannot be exegeted by arbitrary appeals to passages in another situ.
- The account of the flood in Genesis 6-8 does not simply use an expression such as "the whole earth" once, but piles them up. There is repetition, there is emphasis and there is variation. In short, there are a range of techniques employed to make clear what the author's intention is to teach us. Dr. Alexander passes by all these literary

clues which are unsuitable to his purpose.

- *The last of the citations that Dr. Alexander gives, from Habakkuk 1:6, is not an example of what he is looking for - "the Chaldeans... shall march through the breadth (merchab) of the land (erets)". Here in context, "erets" is clearly rightly translated as "land" and is a straight reference to the promised land of Canaan and its invasion by the Babylonians, not to an indefinite extended (but localised) area. I do not know what translation Dr. Alexander was relying on for this one.*

- *There is no reason to insist that Jeremiah 51:41 or Lamentations 2:15 are localised. It was quite literally true that Jerusalem was the joy of the whole earth. It was an essential truth of the Israelite faith that their God was the universal creator, and had chosen only Israel and only Jerusalem above all the nations and cities of the entire created world. This was not a localised or relative truth. Indeed, that is one of the points of Genesis 1-11 - to remind Israel that its God was not a localised deity, but the universal Lord. I wonder what Dr. Alexander actually means by alleging that these statements were intended to be understood only in a localised sense as if Jerusalem was only special in a restricted eastern context... letting my imagination run riot, is he actually saying that somewhere else, on another continent perhaps, there was another people and nation that God had chosen too? That would suggest that Joseph Smith really was on to something ! (I jest).*

- *Ezekiel 34:6 is clearly a poetic and indefinite reference, not directly to any particular local territory at all: "My sheep wandered through all the mountains, and upon every high hill: yea, my flock was scattered upon all the face of the earth." The prophet does not intend to identify particular mountains and specific hills any more than he believes that God's people were literally sheep. In the historical sense, possibly this is a reference to the exiles of the northern kingdom some time before and more lately the south in Babylon. That is the ultimate referent of Ezekiel's words, but the poetic metaphor is meant to be understood through this lens, not literally read as if it were not poetic at all. This is not a proper parallel to a historical narrative such as Genesis 6-8.*

•Dr. Alexander doesn't anywhere consider the point that the Hebrew *erets* covers a wide semantic range, and can be translated world, earth or land, depending on the context. Hence it can refer to the whole globe as in Genesis 1:1 ("In the beginning, God created the heaven and the *erets*" - we presume Dr. Alexander doesn't merely hold that to be teaching that God only made the Middle East...), or at another extreme simply to a specific country (e.g. Genesis 41:55, "... all the *erets* of Egypt was famished..." - here in fact a metonym is used to put the territory for the people). Context must decide, otherwise you fall into a semantic fallacy, using cases of one illegitimately to determine the meaning of others that appear in quite different settings. I noted in my extended review that Dr. Alexander relies heavily on quite a number of semantic fallacies throughout his book. It is one thing to note that the word in the dictionary can mean one thing, but then to use that as evidence that it does mean that in a specific context is simply bad exegesis.

•1 Kings 10:24 is also a metonym. Obviously the "earth" did not seek out King Solomon; there were no clods of soil or piles of rock forming an orderly queue to come and find him. The meaning is that the inhabitants of the earth did - where they heard of him. In that sense, it is both a local and universal reference; wherever his fame went, people were sent to search him out. In what way, though, this is supposed to be parallel to the usage of the term in Genesis 6-8 is lost on me. Such things need longer to explain than in just a letter in the ET... which is why it is a shame that Dr. Alexander ducked these issues in his book, whilst finding multiple pages still to discuss in depth such irrelevancies as Gosse's *Omphalos*.

•Thus, it is clear that Dr. Alexander here has indulged in "proof-texting" - he has grabbed some similar words out of context, without regard to whether or not they are legitimate parallels, and used them to support a pre-existing doctrine. He has not derived his doctrine from these texts, but rather roped them in to support the existing construct. Proof-texting is right and necessary when done properly. This is not that.

•But, having said all of that, I can still concede that the Bible can, in some contexts, use the language in this kind of way, speaking of the

"whole earth" when it means less than the entire totality of the globe. I would argue, as I have hinted above, that in such cases there are actual contextual clues, whether in the immediate or the wider context. For example, the wider context of the writings dealing with Paul's ministry means that we know he didn't actually preach the gospel to every living being under heaven - for one thing, Romans 15 shows that he still had plans to visit Spain. Here, the reference seems to me to be another "universal-local"; Paul preached the gospel fully and widely throughout the regions of Asia Minor, such that it was a known and public thing in every place he went. But what is the context of Genesis 1-11, where the flood account appears? It needs a strong argument for Dr. Alexander's view, because the default presumption simply from that context, even before you come to details of the account, is strongly in favour of a global flood. Hence Dr. Alexander's neglect of this question is a major weakness in his case; I noted elsewhere in my review that he has quite a penchant for side-stepping hard and necessary questions in favour of his own chosen issues.

•When we actually look at the details, we find that the Noahic flood had such features as:

- requiring a gigantic boat to evade it that took 120 years in construction (do you not think Noah could have moved out of the east with a journey of slightly less than that amount of time if he merely needed to evade a regional downpour?)*
- it killed even the birds and other creatures, which could likewise have easily migrated to avoid a local flood, and required them to be on the boat to be saved. When the flood ended, a bird was released, but could not find anywhere to land and returned.*
- The flood waters rose and prevailed for 150 days, the whole time that Noah had to remain upon the ark being a whole year, and covering even the tops of the highest mountains. We presume that Dr. Alexander knows that water flows downhill. How can all the mountains be covered in any particular area of the east for such a vast period of time without the flood extending globally or at least across the entire continent, as opposed to Dr. Alexander's mere*

regional flood? Dr. Alexander's theory would require some kind of enormous basin to contain the flood in a localised part of the east only - but we know that he rejects all such ideas that require any modification to orthodox mainstream scientific thinking.

- Moreover, God promised never to send such a flood ever again. There have been many immense and catastrophic local and regional floods since. On Dr. Alexander's account, God broke his promise. But when we presuppose the truth of the Bible as the ultimate arbiter of truth, and use it to reconstruct history instead of using a foreign history reconstructed from something else to interpret the Bible, a different picture emerges. This promise means that the Noachic flood must have been immensely greater than any subsequent flood, and so Dr. Alexander's belief must be wrong. Again, he never addresses this argument in his book. The implication of God's post-flood promise is that the flood at least dramatically interfered with the seasons (if they are assumed to have been operating before, which I am not commenting on either way here). That is not possible though for a local flood; or if the meaning is simply that the localised flood disrupted the seasons locally, then this again leads to the unthinkable conclusion that God's promise was broken.

- Again, Dr. Alexander never addresses the "table of nations" in Genesis 10 or the Babel account in Genesis 11. According to his theory, multiple languages existed long before Adam let alone Noah, and so did the nations. What significance do these chapters actually play in his scheme? It is all very well to promote a general theory that "Genesis is theological, not scientific", but if you want to sustain that argument, then in a 350-page book that concludes that creationism is dangerous and embarrassing you ought to actually find some space to address these historical narratives. Genesis 1-11 records that the nations, such as Egypt (Mizraim), descended from people who came out of the ark. Dr. Alexander's Darwinian dating requires him to believe that Egypt was flourishing independently long before the flood, and does not permit him to believe that the nations all descend from people who were in a localised flood in the east. The bottom line is that

ultimately you cannot hold both Darwinian and Scriptural orthodoxy, and Dr. Alexander jettisons the latter in favour of the former by treating the Bible in Enlightenment style as purely "private values", "theological truths" for believers, rather than a true and historical revelation from God about the origins of our race.

Dr. Alexander, then, lists the "local / worldwide" difference as a minor point of disagreement, and his position as Scripturally justified. This is a point he never addresses in his book, though, and one as we have seen above, of far more wide-ranging significance, if dealt with consistently, than he allows.

Mainstream Science

Dr. A writes:

We also differ in that I accept current mainstream science, not uncritically, but all truth is God's truth - whereas McIntosh rejects huge swathes of contemporary science, including that which establishes beyond any reasonable doubt the great age of the earth (about 4.6 billion years old) and our own common descent.

It is of course a truism that Professor McIntosh, as a creationist, is out of step with what is acceptable thinking in the mainstream scientific community as regards origins. Dr. Alexander, however, goes further than this and borrows an argument that previously I had only seen in use by the "village atheist" crowd. That is, that the Darwinian theory and theories about the age of the earth somehow represent "huge swathes of contemporary science". This is pure rhetoric, and false rhetorical at that. I type this on a laptop computer, with its intricate maze of transistors, liquid crystals, magnetic disks and so on, connected to a mobile phone which beams its packets to the nearest mobile mast... which beams it on, eventually via the satellites that connect Kenya to the rest of the world, along various fibre-optic pipes, and through all the chain of equipment until eventually it arrives in your room. I may not be a professional biologist, I can say without fear: Darwinism has nothing to do with any of this. And that is the story throughout. Even in biology,

Darwinism as Darwinism has proved to be a theory of no practical use - the so-called now rejected "science" of eugenics being its main contribution to history. Descent with modification is a fact with practical implications; but Darwinian speculation about the supposed unlimited potential of that modification over periods of millions of years in the past has proved remarkably unfruitful for a theory that is alleged to be true. Neither does speculation about the age of the earth have any practical value in any of the scientific advances that we enjoy in day to day life. Medicines we take to cure illnesses, the vast reams of technology especially in communication, the blessings of modern transport, and so on... interesting stories about how the Earth supposedly cooled down over a period of billions of years have nothing to do with any of this.

That is why I have only previously heard this argument from Internet atheists before... as someone who did a Masters degree in a scientific discipline (mathematics, including modules in genetics and relativity) and spent large amounts of time with other scientists discussing our studies, I know that assertions that Darwinism or theories about the age of the cosmos are basically irrelevant to real, here-and-now operational science and rarely either come up for discussion or are assumed as implicit in any practical matter. Dr. Alexander has over-reached himself. If you want to stake out an influential position in the long run, you need to appeal to the knowledgeable and critical readers, and false rhetoric of this kind will turn them off.

Only Possible Explanation?

Concerning common descent, Dr. Alexander does not, in his book, seem to assert that this is one of the things backed by "huge swathes" of evidence. There, he seemed to be relying ultimately upon a single argument that was ultimately theological. He argues that similar gene sequences in humans and other ape-like creatures are so similar, including in claimed genetic mistakes and unused genetic material, that unless its origin was common descent, God would in effect be deceiving us. I think that argument is rather weak when Dr. Alexander asserts it as the only possible explanation. For one thing, it is a genuine evolution-of-the-gaps argument; genetic material that is

presently thought to be the result of copying mistakes or unused may later be discovered to have some function that our present knowledge had not equipped us to identify. At that point, Dr. Alexander's argument would vanish. The argument as a whole, though, is weak because in his book Dr. Alexander never compares it to any other alternative (as part of his general strategy of not representing creationist arguments, I think because he wants to give the air of them being beneath his level). There are other alternatives. Man and other creatures may have a similar genetic toolbox because they have the same designer. Moreover, on the Biblical assumption that that Designer wishes man to investigate and harness the powers of the world that he made, it would be even less surprising. If God wants us to investigate and harmonise creation, it would be massively harder if every living entity was constructed along fundamentally different principles. The fact that they are constructed on a shared set of principles is a testimony both to his wisdom and to his desire that we should to some extent investigate, understand and harness what he has done. Moreover, the Bible teaches that the creation physically fell, because God cursed it when man sinned. That had some impact or other on actual biology, though it is not the Bible's purpose to explain things on that level. If we are looking at things on that level, though, why should it be unreasonable to believe that God should have brought about similar defects in DNA in similarly-constructed creatures? What is the theological reason why God must have, as Dr. Alexander is insisting, made such genetic changes at the Fall in arbitrary or random ways? Whether the lines on which I am speculating here are correct or not is not important - the point is that Dr. Alexander's assertion that there is no possible explanation either existing or even possible for what he sees in DNA except man's common descent from other ape-like creatures is simply bluff.

There is another aspect of Dr. Alexander's argument here that can be played back against him. In his book, Dr. Alexander attempts to argue that information theory should not be applied to biology, and even that biology should be allowed to have its own definitions of information - and that attempts to apply information theory represent misunderstandings by engineers and computer scientists. This is an

exceptionally weak argument which itself represents a misunderstanding of and rejection of mainstream science. Information theory is universally applicable, and there is no justification for someone to put their hand up and say "you cannot apply that here!" Information is a universal fundamental, and whether the encoding takes place on paper, on computer disk, or in DNA, it must apply everywhere or not at all. The point is that the application of information theory to biology and DNA leads to the necessary conclusion that DNA is an encoding by an intelligent agent, a conclusion which fundamentally contradicts Darwinism.

All Truth Is God's Truth?

The larger point, though, which Dr. Alexander never discusses in his book but simply assumes, as also in this letter, is his overall approach to Scripture, revelation and authority. You need to note here exactly what ideas are being packed into the slogan "all truth is God's truth". In itself, it is unobjectionable. But if you tease out the strands of what Dr. Alexander means by it, as hinted here and shown more fully in his book, it is simply not Christian.

Dr. Alexander's doctrine of authority, science and Scripture is basically a baptised Enlightenment-mode of thought. Scripture is theological, science is historical, and the twain shall scarcely meet. When Science speaks about matters in its own domain, it speaks with authority. It is effectively a second book of revelation, complementary (not competing) with the written one, and each has its own domain. In particular, Scripture cannot speak to correct science, because Scripture's domain is different: value-laden interpretations of the world and the physical facts that science unearths. And to Dr. Alexander, science speaks with authority when the peer-reviewers, applying the objective and unbiased process of impartial scrutiny, accept a theory into the mainstream consensus. Predictably, Dr. Alexander never addresses the obvious historical objection to this last idea - all the junk science that has at one time or another been mainstream, such as eugenics which we mentioned above. What you will not find anywhere in Dr. Alexander's book is an explanation that Genesis also speaks directly to historical matters, and that when it does so it speaks with unrivalled authority, such that any conclusions

of contemporary scientists, no matter how numerous and how authoritative the journals they publish it in, must bow before it. That is because Dr. Alexander doesn't believe that idea - rather, in his book, he explains that Darwinian theory is the background that we must read Scripture against if we wish to harmonise it with contemporary science.

So, "all truth is God's truth" is in itself, one of God's truths. But on Dr. Alexander's lips, what it means is that the consensus of contemporary science ought to be treated by us as if it were revealed from heaven, and hence we ought to talk down to fellow-believers in the manner in which Dr. Alexander does here. It is interesting, though, to note that this letter continues the theme in the book: that the truth is established mainly by science. This is not a Biblical argument that Dr. Alexander's making: it is simply that mainstream science says so.

On scientific questions McIntosh cites only authors who are not published in peer-reviewed scientific literature, whose views are rejected by the scientific community, not because the scientists are 'anti-God' but because the views lack good evidence. Readers interested in the age of the earth may download a free Faraday Paper (No. 8) from www.faraday-institute.org, Faraday Papers Folder) by Prof. Bob White FRS, an evangelical believer who is Professor of Geophysics at Cambridge University.

Here Dr. Alexander repeats his point to underscore it. So there is no excuse for not identifying the lines on which his thought runs: mainstream science is itself an all-but infallible authority, and there is no need to launch any actual Biblical response to Professor McIntosh's Biblical argument - the fact that contemporary journals do not accept it as the consensus is sufficient repudiation. Dr. Alexander here makes a pure appeal to authority – “those in the seats of power in the mainstream scientific community say so, so you’d better toe the line or I’ll patronise you, even should you yourself be a Professor!” Dr. Alexander has so folded this idea of science's basic infallibility into his axioms of thought that he does not think this should need explaining, even to readers of so conservative evangelical a

newspaper as the ET... when this can happen then truly the Enlightenment is still going strong. In this letter, as in the book, Dr. Alexander does little to nothing to hint that he is aware of the idea that scientific research is done within paradigms, and is not simply a straight-forward simple fact-based procedure. Mainstream scientific journals reject ideas that Professor McIntosh promotes foundationally because they reject the Biblical paradigm that the research is conducted within. "Evidence" is not a simple up and down matter - it must be interpreted. A presuppositional Christian, such as the Professor, asserts that, especially when dealing with a matter such as origins, our paradigm must be explicitly Christian. That is anathema to the secularist thinking that dominates the academy, and so hence the chasm between it and Christian orthodoxy. Dr. Alexander, though, here promotes pure Dawkins-style Scientism - the idea that science is simply a paradigm-free, unbiased inquiry into neutral facts and proceeds simply based upon evidence.

I did download and digest the paper that Dr. Alexander refers us to. Its thought is the same as Dr. Alexander's. There is no discussion of the relationship between Scripture and other supposed authorities, or a comparison of their relative fallibilities, or a Christian view of authority, etcetera. No - It is asserted that science proves this and that, that therefore the earth is very old... and now let's hunt for a way to interpret God's word (which is after all a theological text, not one that deals with real-world facts of history) that agrees with this assured result of modern man's cleverness. Science first - then we will see what we can do with the Bible. That is exactly the wrong way round, as far as evangelical religion is concerned. As with Dr. Alexander's own writings, there are also a few arguments and bits of rhetoric borrowed from the atheists - Christians who disagree are termed "fundamentalists", and creationism is falsely said to be a late 20th Century American import (in fact the oldest anti-evolution society (now known as the Biblical Creation Society) is British... and the two most well known creationist organisations today, Answers in Genesis and Creation Ministries International, both of which Dr. Alexander avoids any mention of in his book, originated in Australia).

Misrepresentation?

McIntosh claims that I maintain certain positions in my book which in reality I definitely reject, which also make me wonder whether he has actually read the book!

I remarked a few times during my extended review that Dr. Alexander often seems unpleasantly interested in giving off an air of intellectual superiority, signalling that creationism is beneath his level, as much as he is interested in actually interacting with brethren who honestly disagree with him. This was evidenced mainly in the fact that in 353 pages he references precisely one creationist... who is now dead. Current creationists, their books, journals or other writings: zilch.

*Given that Professor McIntosh's contains statements that only make sense if the whole book has been read (for example: "The author makes no reference to those who have written on the biblical arguments concerning this matter, such as Douglas Kelly in his book *Creation and Change*" and specific references such as " his bald statement on p.242" or "contrary to Alexander's assertions on pp. 138-139" or "He even suggests (p.275)"), this sentence from Dr. Alexander comes across as being empty polemic - a cheap shot. More basically, the review begins with the words "I have just finished reading Denis Alexander's new book" which makes the purveyor of such cheap shots look rather silly. But passing on, what actually are these positions?*

For example, he suggests that I 'read' evolution into Scripture, whereas I spend a whole chapter explaining why biblical texts need to be understood according to the literary style they represent, not as if they were scientific texts. Scientific literature as we know it today, with its highly specialised language, did not exist when the Bible was written, so to seek to press the language into that literary genre is an abuse of Scripture. Of course evolution is not taught in the Bible, any more than relativity, thermodynamics or quantum mechanics.

Here, Dr. Alexander simply talks past his reviewer. Nowhere does Professor McIntosh's review state the idea that Dr. Alexander refutes

here: i.e. that he "reads evolution into Scripture" in the sense that he says that Scripture actually explicitly teaches evolution as if it were scientific literature, using specialised language like textbooks on thermodynamics. That is a straw man; there is not a word in the Professor's review that approaches suggesting that the Bible teaches matters like relativity or quantum mechanics. The false dichotomy that Dr. Alexander makes in reading Genesis between "science" and "theology" or between science and history, is the one that the Professor actually took him to task for - to simply repeat it in the answer will only give more ammunition should the Professor wish to charge him with not having properly read his review. It smacks of a "canned response". That Dr. Alexander actually does read evolution into Scripture, in the sense that the Professor meant, is stated baldly on page 232, where after reviewing the present mainstream scientific (Darwinian) thinking on the history of man, he then goes on to begin considering the Scriptural data by stating:

"It is against this cultural and historical background that one needs to consider the early chapters of Genesis."

The idea that one should - indeed, must - begin with fallen man's fallible speculations about history, and then read God's inspired account against that background, is precisely what "reading evolution into Scripture" means. It seems to me that Dr. Alexander knows he is guilty here, and simply answers a different point instead because he suspects that the ET's readers are too conservative to follow him if he spells out his full position candidly.

Aborigines

McIntosh also claims that my book suggests that some humans may still languish outside the God-called community of humanity, whereas I make precisely the opposite point (p.238) - that God graciously bestowed his image upon the whole of humankind with Adam as the federal head

On this point I think there are faults on all sides. Having read through Dr. Alexander's book more than once myself, and having read other reviewers, I think Dr. Alexander himself is responsible for

a lack of clarity - or rather, a confused concept that inevitably has generated confusion in the reviewers as they try to piece the bits together. It seems that, pulling everything together, Dr. Alexander teaches that: a) As required by contemporary scientific orthodoxy, human beings had existed in basically their present form for many tens of thousands of years. b) But Adam and Eve were most likely Neolithic farmers in the east, around 6-8,000 years ago. These two points have logical implications which Dr. Alexander unflinchingly follows: i) Adam and Eve were not the first humans, but were descended from a long line. ii) Likewise, not all humans are descended from Adam and Eve; in particular, Australian Aboriginals were in Australia for long before they were around and there is no reason to think any interbreeding could have occurred given the histories, time-scales and distances involved. Thus iii) God's image is some kind of super-addition to essential humanity - i.e. something that humanity had existed for a long time without before it was conferred first on Adam. This leads on to the next teaching point, c) that God, at the time that he bestowed his image on Adam, also "graciously" (Dr. Alexander uses this word, though not in a proper sense, as Biblically grace implies the existence of demerit, i.e. sin) conferred it upon the rest of humanity around the world too.

What is this image? Dr. Alexander doesn't give a full answer, but says that there are two important aspects for his purposes (p192-3) - the delegation of authority and the potential for relationship with God. So, when God made Adam (or rather, when he was born to his parents or had grown to an appropriate age afterwards), God extended a benefit to the whole of humanity as well as to him. Dr. Alexander then goes on to ask what the Fall would have meant for those, such as the Aboriginals (p275) who were not part of Adam and Eve's family - and concludes that we can have no real idea. It is this that Professor McIntosh understands as suggesting "that some Australian Aborigines may still languish outside the God-called community of humanity because they are not descendents of Adam and Eve". I presume that the logic here is that as they were perhaps (Dr. Alexander's suggestion) not affected in any practical way by the Fall, by logical consequence, neither are they subjects of the

redemption from that Fall achieved by Christ - the Professor does not make it explicit. If they are not part of the fallen creation, then presumably they are not part of the redeemed. I am not sure I would have imputed this line of thinking to Dr. Alexander though; elsewhere his teaching implies that he doesn't really see Christ's work in terms of leading to a redeeming of creation so much as in terms of replacing of it (here the Professor has imputed more orthodoxy to Dr. Alexander than he should have done!). What exactly Dr. Alexander does mean by this speculation and how it is systematised in his thinking is not clear, because he doesn't really clarify it - he does, as he states in this rebuttal, teach that the divine image, whatever its exact content, was extended to Aborigines; thus, by implication, giving them the capacity for relationship with God. Hence on the precise point itself, I agree with him that the Professor has missed an element of his thought and drawn a conclusion that he does not hold.

Why did Jesus die?

McIntosh asks, 'Why did Jesus die physically if the wages of sin is not physical death?'

This is a question which also arose strongly in my own review. It is a natural consequence of Dr. Alexander's altered doctrine of the Fall, which he makes an invisible, spiritual event. He denies that it had any impact on the workings of the physical creation, a denial that he has to make because Darwinian orthodoxy will not allow that the creation suddenly came into bondage to decay only a few thousand years ago. According to Darwinism and hence according to Alexander, all those things that Christians have historically identified as being part of the deleterious results of Adam's sin (thorns, pain, suffering, death, etc.) are original parts of the cosmos, not later intruders. Hence the question arises; if the Fall was not a physical event, why is redemption (the incarnation, Jesus' sufferings, death and resurrection) so physical? Has Alexander's Darwinism not made the essence of the gospel incoherent?

The answer is in Hebrews 9:11-28, and the fact that Jesus died to save us from eternal separation with God, the 'second death' (Matthew 1:28; Revelation 2:11).

Again (and as commonly done in the book as well as in this letter), Alexander simply ducks the question and answers a different one of his own devising. The question is highlighting the physical nature of Jesus' death; Alexander instead merely states why Jesus had to do something to save us. The answer may well be in Hebrews 9... but what is that answer, Dr. Alexander? How does it relate to the question you were being asked? Just how and why did Jesus experience physical death in order to liberate us from a fate that you see only in terms of the non-physical?

Paul in Romans (6:21-23 and other chapters) is speaking of spiritual death. As Jesus explained to Nicodemus in response to his question (John 3:4), rebirth is spiritual, not physical (v. 5).

Here in his letter, as in his book, Dr. Alexander introduces the strong dichotomy which he relies upon to evade the fundamental problem with his teaching: that between "physical" and "spiritual" death. He merely insists that this idea is what is being spoken of by this or that Bible passage. The point is, though, not whether you can super-impose this idea upon passages of Scripture as Dr. Alexander does... but whether it actually reads out of any passages themselves. Romans 6:21-23 reads:

What fruit did you have then in those things of which you are now ashamed? For the end of those things is death. But now being free from sin, and having become servants unto God, you have your fruit unto holiness, and the end everlasting life. For the wages of sin is death, but the gift of God is eternal life through Christ Jesus our Lord.

Where do these verses teach Dr. Alexander's particular distinctive doctrine, namely that the Fall was a non-physical event, and that physical and spiritual death must be sharply distinguished? Of course, they do not. Dr. Alexander is guilty of reading a text through his own pre-supposed hermeneutical grid. His doctrine does not read out of the text - it has to be read in.

The idea that Jesus, in John chapter 3, was teaching or even implying to Nicodemus that the fall was an event without physical consequences is exegetically baseless. The idea is not on the remote

horizon of the exchange. Here, Dr. Alexander has plucked a verse wildly out of context to suit his purpose. Nicodemus thought of redemption in earthly and political terms - Israel being liberated from the Romans, and a new kingdom like David's being established. He needed to see that the true enemies of God's people were spiritual "sin, Satan and death" "not military. He needed to see that he was in bondage to sin and that this was a more ultimate reality than Israel's political subjugation. He stumbled at Jesus teaching of the need for inward renewal and cleansing. I do not personally think that his question about being born again from his mother's womb was intended by him to be taken literally - it was simply a way of expressing his surprise at Jesus' teaching and pushing him to clarify what he meant. Alexander, though, rips this all out of context and makes Jesus teach not merely that we need inward and spiritual renewal by the Holy Spirit, but into a denial that man dies because Adam sinned! The fact that his doctrine can only be supported by ripping passages out of context in this way, and not by direct appeal to any texts where the subject is being addressed directly shows us the lack of Biblical support for the idea.

Gnostic resurrection

Dr. Alexander then proceeds to state his neo-Gnostic view of the resurrection and the future state:

We have to physically die to fulfil God's purposes, for 'flesh and blood cannot inherit the kingdom of God, nor does the perishable inherit the imperishable' (1 Corinthians 15:50).

In this verse, Paul gives one of the subsidiary reasons why our resurrection bodies must differ in some ways (whilst still having continuity - see earlier in the chapter) with our present bodies. The state of glory is of an order which we can hardly yet imagine. To enter it, we must be changed. This change, though, does not actually necessitate death; Paul makes that explicit by saying (emphasis mine): "We shall not all die, but we shall all be changed" (verse 51). Those who are still alive when the Lord returns shall not go through death, but shall be changed without it into a fitting state for glory. Hence there is no necessity for death for us to enter that state,

contrary to what Dr. Alexander says. I label Dr. Alexander's view "neo-Gnostic" because his denial of a physical Fall leads him to effectively deny that Christ's physical death is related to our physical redemption which culminates in physical resurrection and transformation. He rather views this present mode of existence as being a classic Gnostic prison, and Jesus liberates us from it - he doesn't so much redeem and glorify a Fallen world as take us out of it into something else of a totally different nature.

Dr. Alexander's view makes no sense of the whole thrust and purpose of 1 Corinthians 15. There must, contrary to the deniers at Corinth, be a resurrection because without it Jesus' victory over sin would be incomplete. The first Adam through his sin caused us all to die (Romans 5:12-14); to reverse that, Jesus himself died and rose, and must raise us too. His physical resurrection is the great announcement, realisation and proof that the consequences of Adam's rebellion have been overcome. His physical resurrection is such a proof precisely because Adam's rebellion brought in physical death. Cut that vital link in Biblical theology, and you are left floundering around to explain all of this. Dr. Alexander never answers the pertinent questions raised by McIntosh's review. Why did Jesus physically die? Why did his punishment include physical sufferings if physical sufferings are not in fact in this world as a consequence of sin? Why would he endure such a penalty if it never was part of the penalty God imposed? Just why did Jesus endure a physical death to save us from a spiritual separation? He does not answer them because ultimately the truncated doctrine of redemption which his Darwinism leads him to cannot do so.

When arguments fail, there's Polemic

Young earth creationism causes serious pastoral problems.

This mere assertion is not directly contained in Dr. Alexander's book, or expanded on here, so we can only speculate about what these pastoral problems are. I suppose, based upon the general tenor of his book that Dr. Alexander would say that creationism pits science against faith and forces believers to choose between two truths. Whatever the precise line of argument, though, it is moot. If

creationism is true, then teaching it may indeed cause problems (especially with such as Dr. Alexander teaching so dogmatically that it is false) but it is our duty to believe and proclaim whatever God has made known. If it is false, then to say that spreading it causes problems is telling us nothing new. As Dr. Alexander has never taught creationism, we can only speculate as to what experience he has that underlies this assertion.

There are atheists in the scientific community (some very high profile) who used to be practising Christians in their teenage years, but who were turned away from the faith because their church pitted science against faith.

Dr. Alexander states this in his book too. Who are these atheists? Where is the documentation where we can follow these assertions up? Either way, though, this statement again adds nothing to the argument. If there are atheists who were turned away by creationism and creationism is true, then they were turned away by the truth. Are we supposed to preach lies in the hope that it will persuade people to make professions of faith? If on the other hand creationism is false, then this argument is redundant - we all agree that in that case it should not be preached. This is more polemics, intended simply to intimidate creationists to pipe down on the basis of undocumented authoritative-sounding assertions, rather than on the basis of argument.

Since Dr. Alexander's played this card, though, let us see if he is willing to take on a wager. Suppose that we can count up the number of atheists who turned away from a profession of faith because their church taught them that they had to accept creationism as true, and who will freely confess that, after it is been explained to them that Darwinism and the Bible are fully compatible, they will gladly return to Christianity. Suppose on the other hand that we count up the number of atheists who will not accept Christianity because they find that theism actually really is incompatible with Darwinism, and therefore they judge Christianity false because they think Darwinism is true. Which category is going to have more people? Dr. Alexander may be able to do the mental gymnastics to persuade himself that the

Bible and Darwinism do not contradict each other a hundred times. I would be pretty confident on the other hand, though, that he is in a slim minority. It is well said: a simple man can persuade himself only of some things; but an educated man can persuade himself of anything.

Preaching the gospel is made much harder when it becomes associated with beliefs, such as a young earth, which most people find ridiculous.

This is the same empty argument. If creationism is true, then this is something Dr. Alexander will just have to put up with - unless he believes that we should actually trim and prune our beliefs according to what our present society deems acceptable.

Do people really find the idea of a "young" earth ridiculous? The earth in fact can only be as young or old as it is. It can only be termed "young" in relationship to something else. In this case, it is supposed to be "young" in relation to the telephone-number figures circulated by such as Dr. Alexander. I seriously doubt that more than the tiniest fraction of people have ever looked into the arguments for or against the age of the earth, or considered how to evaluate the two competing paradigms. (Dr. Alexander himself never approaches the matter in terms of paradigms - it is simply infallible, objective science says so). They simply accept it on authority because people like Dr. Alexander say so; just as they accepted eugenics, geocentrism and other mistaken science in previous generations. This argument is ultimately a naked appeal to authority.

Still friends

I would urge Christians to hold science and faith together as the friends they have traditionally been, not force them apart for biblically unnecessary reasons.

As the letter comes to a close, Dr. Alexander is piling up the polemic. Of course, no creationist actually believes that science and faith are not friends. They simply dispute whether Darwinism and faith are friends, or whether Darwinism and science are. Whilst in his book he falsely, without providing any references, teaches us that

creationists claim that Genesis is written in the genre of a modern scientific journal, the reality is that it is Dr. Alexander who is forcing a dichotomy where none exists by forcing us to either choose what he terms "science", or to read the book of Genesis as self-conscious, accurate history. Dr. Alexander's reading forces us to accept it only as "theology"; an interpretation of events, but not actually recording events in a historical way. Dr. Alexander forces us to choose between evangelical Bible interpretation, or having people like him pour thinly-veiled contempt down on us and accuse us of all manner of sins, pastoral problems, spoiling evangelism, spoiling the relationship between science and faith, etcetera. Still, that is the way it is - and we all have to choose our lot.

The end!

About the author

I hoped you benefitted from the review. You can find more about me and more of my writings at my homepage: <https://david.dw-perspective.org.uk>