

Reading the Bible in the Context of the Ecological Threats of Our Time

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When I was invited to speak to the ETS on the care of creation, I had to think, among all the ways of addressing this subject that could be taken, how it would be most useful to do so in the present context. I would have loved to devote the lecture entirely to the sort of exegesis of Scripture that I do in my book *Bible and Ecology*, which aimed especially to show people how much of the Bible beyond the usual favourite few texts is relevant to the relationship of humans to the non-human creation. But I saw that the first lecture was to be by the spokesman for a campaigning organization that is dedicated to opposing what most Christian environmentalists advocate, and so I realised, somewhat reluctantly, that I would have to engage in controversy. I hope I can do this in a way that will actually further our understanding of the way we should be faithful to Scripture in our contemporary context.

I have looked quite carefully at the Cornwall Alliance's documents – such as its Stewardship Agenda – and it seems to me that, governing its approach, are at least two, perhaps three, key ideological convictions. I want to begin by making some comments on these. The first is what I call a Baconian interpretation of Gen 1:28, by which I mean an understanding of the human dominion whose genealogy goes back to Francis Bacon in early 17th-century England. If historical theology were not defined as narrowly as it usually is Francis Bacon would have a significant place in it, not because he wrote the works of Shakespeare (as some people claim he did) but because he really created the vision that inspired the great scientific-technological project that has in large part made the modern world, and, in doing so, he gave it an exegetical-theological basis in a reading of Gen 1:28. Bacon was the first person to read the dominion given to humans at creation as a task for the progressive exploitation of the resources of creation for the improvement of human life. Previously people had taken it to authorize the ordinary ways in which they already made use of the non-human creation: farming, hunting, fishing, building, and so forth. They didn't see it as a project they were commanded to pursue. But Bacon, in the context of the new sense of human power over creation that came with the Renaissance, understood the subduing and ruling of the earth to be a goal for which science and technology were the means. In fact, he understood science and technology to be the means by which humans could recover the power over creation that they had before the fall. Whereas the role of religion in human life was to remedy the effects of the fall in the spiritual and moral sphere, the task of science and technology was to restore the human dominion. He envisaged it as the labour of dedicated scientists over many generations.

Bacon's vision was a lofty humanitarian ideal: scientists were to work for the good of humanity. But his view of the value of the natural world was purely

utilitarian: it was made by God as a resource from which humans could fashion things of much more benefit of human life. It was given in order to be re-made by human ingenuity. Bacon did not speak of the care of creation and certainly could not have done. His language about the dominion is aggressive. The human task is to conquer nature and force her under torture to work for human benefit. Actually the language of conquering nature runs right through the western tradition of science and technology. Only in the twentieth century was it filtered out of common scientific discourse. The Cornwall Alliance uses softer language about unlocking the potential in creation. But it stands, I think, squarely in the Baconian tradition, with its humanitarian vision of exploiting the resources of the earth to the full and using such advanced scientific methods as genetic engineering (which Bacon, remarkably, foresaw) to transform nature for the sake of the flourishing of human life. To this it *adds* some very un-Baconian talk about the care of creation and preserving the environment.

The question I want to ask is whether, in the light of the later results of the Baconian project, it is really sufficient to add the care of creation to it. (I should perhaps make it clear that when I say the Baconian project or the modern scientific-technological project I do not mean science and technology as such, but the particular ways in which they have been developed and deployed in the modern period in the west, driven by the Baconian vision of exploiting and transforming nature for human benefit.) Now what has happened in at least the last half-century is that it has become very widely apparent that the Baconian project, as well as delivering undoubted benefits, has also been seriously destructive in ways that were either unheeded or unanticipated in its heyday. The burgeoning ecological consciousness of our time is closely connected with that realization. If we take that seriously we cannot leave the Baconian project unreconstructed and just add to it a little bit of conservation. We have to reassess the project itself, certainly not denying its real benefits, but frankly recognizing its intrinsic limitations and weaknesses. And that means that the energy industry, for example, cannot just carry on business as usual, with a modicum of environmental window-dressing.

Let's put this in exegetical and theological terms: if the Genesis dominion actually *means*, not the Baconian exploitation of nature as raw material for human use, but responsible care for creation – and documents of the Cornwall Alliance actually say that that is what it means – then that requires a serious rethinking of the Baconian tradition. It really shouldn't come as any surprise to Christians that the modern scientific-technological project has been destructive as well as beneficial. What major movement or process in human history has been straightforwardly beneficial? We're always getting things wrong, not only because we are sinful, but also because, with the best of intentions, we are fallible. I see no reason why God's providence should have made the Baconian project, uniquely among human enterprises, a force for unadulterated good. The same goes for the more recent, but in some ways parallel project of economic globalization, which I have the impression also belongs to the interpretation of Gen 1:28 as the Cornwall Alliance reads it. I leave that aside because I have limited time. I will return to the exegetical issue when I give you a reading of Gen 1 later.

The second controlling ideological conviction I detect in the documents of the Cornwall Alliance concerns freedom. The Cornwall Alliance combines a basically Baconian reading of Gen 1:28 with a classically modern American understanding of freedom. Actually I seem to come across the words liberty and freedom a good deal more often in the Cornwall Alliance's documents than I do stewardship or care of creation. It's pretty clear that what the Cornwall Alliance most opposes is regulation, because regulation is regarded as self-evidently a contradiction of freedom. I think there are important issues here about the meaning of freedom, which I've written about at length in the past. At this point, let me just offer you the example of traffic regulations. If we abolished traffic regulations so that we could drive on whichever side of the road we chose and could ignore pedestrian crossings, then in one sense you might say we would be more free, but in a more important sense we would be less free. The regulations give us the freedom to travel on the roads in reasonable safety. No word is more potent in the modern world (I guess especially in the USA) than freedom, but for that reason it is co-opted to all sorts of causes and we need to be really careful about rallying to banners that may use the word in ways that are not really rooted in the biblical and Christian understanding of what it is to be truly human.

What I am inclined to identify as a third controlling ideological conviction I detect in the documents of the Cornwall Alliance is something that appears more in what is not said than in what is said. What comes across to me is a conviction that the American way of life and standard of living are sacrosanct and the United States innocent of serious damage to the environment. The only real cause for concern, ecologically speaking, apparently lies in the developing world, where the poor damage their environment because of their primitive agricultural methods and lack of plentiful cheap energy. That problem can be solved by exporting the American way of life to them. Well, I'm not especially familiar with the state of the environment in the USA, but I can't help asking: What about the Gulf of Mexico oil disaster of 2010? What about mountaintop removal mining in the Appalachians? These are egregious examples of environmental destruction and degradation caused precisely by America's insatiable demand for cheap energy.

When the authors of the Cornwall Alliance documents declare that there is no need for Americans to make any changes to their lifestyles I am sure they are well aware of often quoted statistics such as that the USA accounts for less than 5% of global population but 33% of global consumption, including I believe about a quarter of global energy consumption. No doubt they would say that this is not an environmental problem because concerns such as global warming and loss of biodiversity are misplaced. No doubt they would say that they would like the rest of the world to attain the same levels of consumption, and that the usual concern that the earth's resources could not support anything like that level of consumption by the whole of the world's population is also misplaced, because there is no such limit to the world's resources.

But even leaving those issues aside for the moment, is the (by any historical standards) extraordinarily high level of consumption of resources in all the

affluent nations (I include western Europe, of course) really a matter for such complacency? Has it nothing to do with the epidemic of obesity? Following a summer of drought and very poor harvests in the US, is it not a matter of concern that Americans throw away 200,000 tons of edible food every day, even if we don't make any connexions with chronic food shortages elsewhere in the world? When affluent Americans with comfortably large houses rent storage facilities to store all the possessions they haven't room for at home (an increasingly common phenomenon, I'm told), is that really what we want developing nations to aspire to? 'Life does not consist in the abundance of possessions' – didn't someone once say?

When I consider the western, so-called developed nations it seems to me that we are societies addicted to excess. If we care about human freedom, then we should be very concerned about this enslavement to the compulsions to acquire more and more and to consume more and more. It is, of course, enslavement to the commercial forces that promote such addiction. We are caught in the vicious spiral of an economic system that works by manufacturing needs we never thought we had and making us want things we all know on reflection do not make us any happier. What we have lost is any notion of sufficiency. Addicted to always-more-and-more, we no longer know what it would be to have ENOUGH. That is why we are devastating the earth. I shall come back to it.

Now let me turn to exegesis, and what I would like to do is read Genesis 1 with you with the aim of hearing afresh what this text has to say to us in the context of the serious ecological crises I believe we face today. The other things I want to say about those crises will emerge in the course of this reading of Genesis 1. It's a wonderfully rich text and I still notice things in it I haven't seen before. One thing that is crucial is that we attend carefully to the whole of the text, not focusing prematurely on the verses about the human dominion.

One feature of the narrative I'm sure you'll remember is that at each stage of creation, we are told, 'God saw that it was good.' God looks at what he has created and sees that it is good. In other words, he's delighted with it. He appreciates its value. Finally, at the end of the sixth day, 'God saw everything he had made, and, indeed, it was very good.' The completed whole is more than the sum of the parts; and so the whole is *very* good. But every part of creation is *good*. God doesn't have to wait until he has created everything before he can delight in every creature he has made so far. The narrative is telling us: Every part of God's creation has value in itself for God. It isn't just made for us humans who finally appear at the end of the sixth day. Most certainly its value is not just as raw material for us to remodel into something better. God delights in every part of his creation just as it comes freshly into being, so to speak.

If you're anything like me you can get so used to analysing a key text of scripture like this that you forget to read it as a narrative progression. But if we do read it sequentially and we come again and again to that refrain, 'God saw that it was good,' it seems to me that what the narrative is doing is inviting us to share in God's delight in his creation. Whenever it says, 'God saw that it was good,' we are being prompted to agree. Knowing the created world as we do, we can enter into

God's appreciation of it. So when we get to the creation of humans on the sixth day and we read God's command to us to have dominion over the creatures, we already know that what God is entrusting to our care is something of priceless value. It is the world we have begun to delight in as God does. We can only exercise dominion – which I take to be caring responsibility for other creatures, modelled on God's own care for all creatures – if we have learned to appreciate the creatures, to love them with at least some small reflection of the love with which their creator loves them. This is something Francis Bacon certainly missed in the text. That other Francis, the one from Assisi, understood it much better.

Now if we look a little more closely at the text we find that one of the things God delights in must be, because it is such a prominent feature of the account, the sheer, abundant variety of the creatures. Another of the recurring phrases in the narrative is 'of every kind' or 'according to their kind.' We hear of fruit trees of every kind, seed-bearing plants of every kind, sea creatures of every kind, birds of every kind, wild animals of every kind, domestic animals of every kind, creeping things (i.e. reptiles and insects) of every kind. In all, that phrase occurs ten times. This is an account of creation that celebrates biodiversity. It paints a picture of a world teeming with many, many different forms of life.

Should we care about the loss of biodiversity? The Cornwall Alliance classifies it as one of those unreal concerns that shouldn't trouble us, though I cannot discern whether they think that's because it isn't happening or because it doesn't matter. It is most certainly happening. It is happening because in all sorts of ways humans are destroying the habitats of other creatures. That's something we've been doing to some extent throughout history, but like all these things the scale of modern human domination of the planet means that we are now doing it to an incomparable extent. A segment of a tropical forest, eradicated to make way for cash crops or beef ranches, may contain thousands of species unique to that area, many of which have not even been identified by scientists before they are lost. Some people may say: Species are always going extinct naturally. It's a regular feature of nature. Yes, but again the scale is incomparable. Scientists talk about the background rate of extinction – which is the normal rate at which species go extinct outside abnormal periods of mass extinction. The background rate is one species per million per year. The current rate is estimated to be several hundred, maybe a thousand species per million per year. The current rate is then hundreds of times the normal rate. This is mass extinction, a gross impoverishment of the created riches of God's world, and humans are responsible. So far this has little to do with climate change, though climate change will accelerate the rate of extinction, no doubt considerably. Most of the mass extinction that is happening now is due to human destruction of habitat and ecosystems. This is uncontroversial fact. So, when God told us, at the end of the sixth day, to multiply and fill the earth, did he mean us to do so at the expense of all that abundant diversity of species he had so lovingly created and delighted in on the preceding days of creation? Did he mean us to impoverish all that rich diversity of created life? According to the Cornwall Alliance, God commissioned us to 'enhance the beauty and fertility of the earth' and to 'add to the earth's abundance'. Mass extinction of species seems to me a very odd way of doing that.

Here's another interesting detail of the Genesis 1 account. On the sixth day, after the famous v 28, God continues to speak to the just created humans. He says, "See, I have given you every plant yielding seed that is upon the face of all the earth, and every tree with seed in its fruit; you shall have them for food. **And** to every beast of the earth, and to every bird of the air, and to everything that creeps on the earth, everything that has the breath of life, I have given every green plant for food." Why does God tell humans that last bit – that he has given the same vegetation that is to be our food also to all the land animals and birds to be their food? Obviously because humans need to know that those resources that sustain life are for all creatures to share. Humans are not to fill the earth and subdue it to the extent of leaving no room and no sustenance for the other creatures who share the earth with us. So the human right to make use of the earth, to live from it, is far from unlimited. We must respect the rights of other creatures. A rather similar concern appears a little later in Genesis when God makes a covenant after the Flood. Uniquely among biblical covenants, this covenant is not only with humans but also with 'every living creature that is with you, the birds, the domestic animals, and every animal of the earth that is with you.' It's a covenant about the survival of the earth, which all the living creatures of earth have a stake in.

On the fifth day of creation God creates the sea creatures and the birds. He creates, we are told, 'the great sea monsters and every living creature that moves, of every kind, with which the waters swarm' – notice again that stress on all the teeming diversity of aquatic creatures – and he says to them, 'Be fruitful and multiply and fill the waters in the seas.' Humans are not the only creatures told to be fruitful and multiply and fill. The sea creatures, of course, have fulfilled that command very well. They multiply abundantly, and the oceans have been brimming with life for as long as we know anything about it. Only in the last few decades have they become increasingly depleted, mainly through over-fishing. People in the past frequently over-fished their local areas, but the problem was always local and temporary, and, fish being naturally very fertile, fish stocks have always recovered. What has changed in the last half-century has been the huge increase in the demand for fish by a growing human population, crucially combined with the much more efficient industrial methods of fishing. Together these have resulted in seriously depleted fish stocks that in many parts of the ocean look unlikely to recover. The Northwest Atlantic cod fishery is a well-known example. From the 1960s onwards already dwindling stocks were more and more thoroughly exploited, leading to virtual collapse in the 1990s. Even though the Canadian government closed the cod fishery in 1992, recovery has been minimal. It's an instructive case of the way the sort of over-exploitation of the earth's resources that has happened on a smaller scale throughout history has been raised to a new level of acute seriousness by modern technology – by the Baconian project. When poverty-stricken African villagers damage their environment they are doing so only in the age-old ways, with regrettable but limited results. It's only industrial fishing technologies developed by the affluent West that can desertify the oceans.

'Desertify' is no exaggeration. Modern trawlers not only catch very quickly and efficiently the fish they want; they also catch huge quantities of sea creatures they don't want, which are simply discarded dead. In other contexts we would call this vandalism – reckless destruction of things of great value. In large areas of the ocean around northern Britain the trawlers have dredged the sea beds, leaving them virtual underwater deserts. Notice what this amounts to in terms of our reading of Genesis 1. When humans in the modern industrialized world overfish so efficiently and destructively we are directly obstructing and frustrating the creative intention of God that the sea creatures, in all their teeming diversity, should fill the oceans. We are undoing the creative work of God and we are doing so by transgressing our creaturely limits. I have used this example because overfishing is a case where it is fairly easy to be sure of the important facts and to understand what is happening. Of course, it is an example of a much larger phenomenon – the overuse of the earth's resources in a way that is unsustainable and destructive of God's creation. And it is largely we in the over-consuming affluent West who are responsible for it, though over-population is certainly another factor. One problem I think with the Cornwall Alliance's perspective on these things is that it has just not caught up with the vast scale of human exploitation of the creation and damage to the creation to which the Baconian project has led. We cannot apply the same judgments to it now that our forebears in faith might more reasonably have done in the nineteenth century. We have got to the point surely at which the vocation of dominion now urgently calls for us to exercise restraint.

What I hope I may have shown you is that we should not allow vv 26-28 of Genesis 1 to eclipse the rest of the chapter, as I think the Baconian reading of Gen 1:28 did. Gen 1:26-29 places human beings within the context of the whole of God's creation and to understand what is said about *us* we must attend in detail to what is said about the rest of creation. What is particularly clear is that we are creatures with a place within creation and therefore obliged to respect the limits of that creaturely context. Creation in the divine image does not lift us above creation. It does not make us demigods transcendent over creation, but creatures who reflect the divine image precisely in a creaturely way, that is, in a finite way, as finite creatures within a finite creation. As distinguished from the unlimited powers and responsibilities of the infinite God, finitude means having limits. It is true that we are less limited than many other living creatures, more adaptable to different environments (though ants are also pretty good at that), enormously resourceful and inventive of novelty. That is why so often in the modern period, beginning with the Renaissance humanists, humans have been tempted to assume something like the creative freedom of God to remake the world in whatever way seems most advantageous to us. But we cannot escape finitude and attempts to do so prove self-defeating. Being in the image of God, we are, indeed, given a special role of dominion over fellow-creatures, but this too is a special role within creation and it is exercised over precisely fellow-creatures, those with whom we share the earth, those whom the Genesis narrative calls on us to value as God does.

The speech of God to the first humans in Gen 1:28 has two quite distinct parts. The first is: 'Be fruitful and multiply and fill the earth and subdue it.' Most of this

is not unique to humans: other living creatures have previously been told to be fruitful and to multiply and to fill. What is unique is the subduing of the earth, which I take it refers primarily to agriculture. In order to fill the earth, humans have needed to make the earth produce more food for them than it does of its own accord, so to speak. This is the human version of the right of all creatures to use their environment in order to live and to flourish. What is different is that humans are able to use the earth in ways that have enabled us to expand beyond the restricted habitats of many living creatures. But, as we have seen, the context in Gen 1:28, including the continuation of God's speech to humans in vv 29-30, make it abundantly clear that the filling and subduing have limits. To transgress these limits is to abuse God's creation. This principle of limits is embodied in an exemplary way for us in the Old Testament laws governing Israel's agricultural practice: the weekly Sabbath and the sabbatical year.

Notice that Genesis does not connect that first part of God's commands (the multiplying, filling and subduing) to the divine image. It is the human version of the right of all living creatures to live from their environment. It is the second part that is connected with our creation in the image of God: 'Have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth.' I do not need to labour the point that the dominion is a role of caring responsibility, since this is now generally agreed (and actually stated by the Cornwall Alliance). What Francis Bacon's interpretation did was to assimilate the dominion over living creatures to the subduing of the earth, so that the whole of Gen 1:28 became a command to exploit the resources of the earth for human benefit. That had the effect, not only of leaving the whole matter of the care of creation out of account, but also of connecting the exploiting of the resources of creation with the divine image, which Genesis does not do.

So notice why it is that, as I said early on the lecture, we cannot just, as the Cornwall Alliance does, add the care of creation to the Baconian project. The Baconian project, which did not see the care of creation in Gen 1:28 at all, misunderstood the main point of the passage. It took the exploiting of the resources of the earth for human benefit to be the main point, whereas that is just the subduing of the earth, the human version of all creatures' right to live from their environment. The main point is the dominion, the responsible care of creation. It is for that role that we were made in the image of God. If we take that seriously, it can no longer be business as usual for the Baconian project. The care of creation requires us to reassess radically the ways the Baconian project has been accustomed to exploiting the earth's resources.

I need to say something about humans enhancing or improving nature. Beavers build dams, canals and lodges – a quite remarkable engineering feat that improves their environment from the badger's point of view because it adapts nature to their use. Humans have vastly greater powers – through science, technology and the arts – to make all kinds of things out of nature that nature does not itself make: wonderful things like Gothic cathedrals and horrendous things like nuclear bombs. Unlike other species, human beings are endlessly creative of novelty in this respect. Undoubtedly, leaving aside our destructive creations, human science, technology and art *add value* to creation, enormous

value. But adding is not the same as replacing or even improving. I love gardens (in the English sense of flower gardens, as well as vegetable gardens and parks), but I also love wild nature. In the seventeenth century English people thought their formal gardens were an improvement on the chaos of wild nature, but most of us no longer think that. Gardens make from nature something different from wild nature. They have a special value of their own. But it is simply a different value from that of wild nature, not an improvement on wild nature. We don't want gardens to replace wild nature. We want wild nature to be preserved and to have gardens too. That kind of adding without destroying seems to me very coherent with Genesis 1, where the whole world is already emphatically of value to God before humans arrive in it. If we readers of Genesis 1 are invited to share God's evaluation of all his creations, then we must understand our human creativity as the God-given ability to add without devaluing, to add without replacing or destroying the priceless creation God has entrusted to our care.

Human creativity, then, is endlessly productive of novelty, but it is to be exercised within the limits of a given creation. Its finest products celebrate rather than attempt to transgress those limits. The recognition of creaturely limits may be what it is most vital for us to rediscover at the present moment. It relates to the nature of freedom (which is never without limits). It relates to what I said earlier about our culture of excess that has left us with no notion of enough. It relates to the over-exploitation of the earth's resources. It relates to all three of the big environmental issues that the Cornwall Alliance advises us we need not concern ourselves with: climate change, overpopulation and the loss of biodiversity.

Essentially what happened in the twentieth century and gave rise to the ecological consciousness of our time is that the Baconian project ran up against the limits of finite (not to say fallible) creatures in a finite world, and in ways that were finally impossible not to notice. It became clear that the Baconian project had destroyed far too much of what was good in the attempt to improve it. It had ended up dangerously depleting the resources it had become so very efficient at exploiting. It had ended up feeding our addiction to excess rather than meeting real human needs and worthy aspirations. It ended up over-reaching itself, like the sorcerer's apprentice, unleashing destructive consequences it had not foreseen.

Of course, it is still doing all those things. But lest you think I am indulging in some kind of anti-human reduction of human distinctiveness and achievement, let me stress that there is, of course, plenty of science and technology, plenty of resourceful invention and technological creativity, that is fully aware of the failures of the Baconian project and is concerned instead with enabling and enhancing human life in what we now call sustainable ways, and what I call living within creaturely limits. We do not need to mine coal by removing mountaintops. We do not need to burn fossil fuels for much longer. We do not need to waste energy and food on the colossal scale we now do. We do not need all the consumer goods a corrupt economic system has deluded us into wanting. God has made humans resourceful enough to find much better ways of living and

flourishing, ways that creatively combine our use of creation with the kind of respecting of limits that the care of creation now so urgently requires of us.