

Preached by Dr Andrew Gosler TSSF, University Research Lecturer in Ornithology and Conservation, on science and faith, Evolution Sunday 15 February 2015 in Magdalen College Chapel, Oxford.

Deut 5:12-15; Mark 2:23-3:6

What picture do you have of Jesus when you hear the story of him out in the cornfield with his disciples on the Sabbath casually stripping and eating the grain, and thereby disobeying local religious customs? Do you see him as blasphemous, a rebel, or as a man in tune with nature; indeed, so in tune with nature's rhythm, that he can discern God's purpose? This is a man after all, who could say that God cares even for the fall of a sparrow, or that considering the lilies of the field could recall Solomon, and say that even he, the wisest of all men, in all his glory was not arrayed as one of these. And do you see in Jesus's simple statement that the Sabbath was made for man, not man for the Sabbath, that he is distinguishing between a gift of the Creator God of love who is the very ground of all being, and a culturally-constructed God who makes demands – Keep off the grass, rather than delight in the harvest? Jesus is the model human being, the *New Adam*, the *Last Adam*, he is God inspired *Natural Man*.

Going further, through Jesus's divinity he is the man who so discerns the purpose and wisdom of God in Creation, and so understands where we've come from that he can love all, even those who plot against him, and ultimately on the Cross say "*Father forgive them, for they know not what they do*". When I say he knows where we've come from, I don't only mean from Jericho, Nazareth or Rome, but our humble origins, our emergence as chordates, as vertebrates, our crawl out onto land as amphibians, our historic transformation into mammals, primates and hominids. If you know *this* history, you know what we've endured throughout time as a lineage, and you can forgive, deeply and absolutely, because it is a history that you have felt within your being, laughed and wept with.

So where do we go today to find people with a sense of atunement to God through nature? Personally I sensed such a presence when I was introduced to Chief Megaron of the Kayapo people of Amazonia, and in answer to my question "what do birds mean to you?" he replied "Oh, when the birds are gone, we are lost". But I sense it also in the journals of Charles Darwin. In 1832, he visited the Atlantic forest of Brazil. It was his first time in rainforest, and he was moved to write "It is not possible to give an adequate idea of the higher feelings of wonder, admiration, and devotion which fill and elevate the mind".

This awareness has been most tangible for me as an evolutionary ecologist when I have sensed purpose in nature. I believe this is true for other biologists, but that some feel personally conflicted by it. Their conflict comes from the fact that Evolutionary Biology has for many years operated within a cultural paradigm that denies the existence of purpose, of teleology, in nature. This is because it has argued that biological variation arises as random mutations, errors, in the germline, and that although selection has operated on phenotypes produced by those randomly varying genotypes, ultimately the emergence of any lifeform, human or otherwise has involved a random walk, elegant to our eyes perhaps, but a random walk nonetheless. Park that thought for the moment.

It is, nonetheless, impossible to avoid the teleological in this science. Darwin was acutely aware of this. After all, it was adaptation that he was trying, scientifically, to explain and the notion of an adaptation is profoundly teleological. We recognise that an eye is *for* seeing, a hand is *for* grasping, a wing is *for* flying, and a pancreas is *for* doing, well whatever a pancreas is for. The point is that we sense teleology everywhere in nature, and in fact to deny its existence is to deny the existence of adaptation, *as such*. But the teleological goes beyond the adaptations of particular organisms. The great Oxford ecologist Charles Elton, who

coined the term *niche* defined it as the ecological *role* that an organism played in its ecosystem. This is a profoundly teleological insight, since this is purpose existing beyond the individual organism. Because of its teleological implications, some ecologists argue that the niche is a purely human construct and that it has no reality in nature. Yet field ecologists know very well that they simply can't study ecology without Elton's niche concept. The cultural atheism in ecology that has led some to deny the existence of the niche has also led to a view that there is no such thing as a balance of nature, because such a thing would deny the randomness demanded by their culturally-constructed view of evolution. Yet we see balance everywhere in nature: from the physiological homeostasis that maintains the internal environments of organisms; through the population homeostasis of density dependent regulation that maintains populations around their carrying capacities; to the global homeostasis of Gaia, which has maintained the atmospheric composition of the Earth at around 21% Oxygen 79% Nitrogen for billions of years, and maintains atmospheric temperature near to an optimum for life by a finely-tuned balance of CO₂ and plant productivity through the mechanism of photosynthesis. Here is teleology writ very large indeed, and it underwrites our understanding of climate science.

So what is the scientific ground of this pervasive atheism and why is it widely believed that science, and especially evolutionary biology, has undermined the ground for faith, and especially Biblically-based faith? There are basically three reasons. The first seems to be a rather fruitless argument over the nature of time: instantaneous creation versus a prolonged evolutionary unrolling over billions of years. This ultimately rests on the nature of one's engagement with scripture: of a literal reading versus any deeper exegesis. I believe that only the latter is consistent with the Hebrew tradition of understanding Genesis as a richly allegorical text, and that this is necessary if we are to take the Bible seriously. So for example, we might understand that the symbolism of the six days of Creation means it took time, that God laid the foundations for life in stages, and that we were the new kids on the block. We were not the first creation, but the last. The second foundation for this atheism is the issue of teleology that I have already considered, but remember that the denial of teleology stems from the assumption of randomness in mutation and so also in evolution. Nowhere are this belief and its consequences so vehemently promulgated than through the work of Richard Dawkins, starting with the *Selfish Gene* in 1976. The *scientific* demolition of this book and the whole edifice that rests upon it, has effectively come about through the work of Oxford Physiologist Professor Denis Noble in *The Music of Life*, and Chicago Professor of Microbiology James Shapiro in *Evolution: a view from the 21st Century*. They describe a tsunami-change in perception running through molecular biology. This includes what has been termed the epigenetic revolution, which is revealing increasingly that genetic changes in the germline are not random errors, but genetic modifications engineered by the cell for its own survival.

OK, but can we come closer to truth through reading Genesis? After all, if Christ is the *New Adam*, we need to be able to take *the first Adam* seriously before we can take seriously the *New Adam*. What's more, we want to heal this apparent conflict between the two great truths of our lives: of Christ and our evolution. So let's do this through an evolutionary exegesis of Genesis. Some important basics: if the six days of Creation are symbolic, then how long it actually took is irrelevant to faith. Furthermore, the name Adam, which means *of the Earth*, sometimes takes a plural noun form in the Hebrew, and this has been taken to mean that Adam represents *all* humanity as well as the first human. And so the symbolism of Adam's rib as a part of humanity means that Eve represents the female part of humanity.

Perhaps the most significant part of human evolution to explain, and the most difficult, has been the rapid increase in brain size, and presumably intelligence, that is represented by cranial capacity in the hominid fossil record. By 1.5 million years ago, our ancestors were

more or less human from the neck down, but above the neck we weren't so different from other apes. Then, over just the next 1.5 million years or so, brain size increased about three-fold. It was so rapid that explanations based on natural selection are unconvincing. So in his 2001 book *The Mating Mind*, Evolutionary Psychologist Geoffrey Miller argues that it was not through natural selection, but sexual selection, that this increase in brain size and intelligence occurred, and anatomically modern humans appeared on the face of the Earth. In other words, it came about through the mating preference of female hominids for intelligent male hominids, for a GSOH: a Good Sense of Humour.

So what do we have here? Through sexual temptation, the female part of humanity, gives to humanity something to do with wisdom, knowledge, intelligence “...*For God knows that when you eat from it your eyes will be opened, and you will be like God, knowing good and evil.*” And what is the consequence for Eve, for the female part of humanity? “*I will surely multiply your pain in childbearing; in pain you shall bring forth children.*” And why is childbirth more painful for humans than for other primates? Well it is because that large cranium has to be delivered. So Eve's *punishment* now emerges not as an arbitrary retribution, a hissy-fit, on God's part, but an inevitable consequence of the evolutionary 'decision' that was exercised through our descent. I believe that through this we gain a valuable new understanding of God's justice, which is manifested as the inevitable consequences of our actions.

This exegesis reveals an inevitability in the fall of Man, since without it we should not be fully human. This inevitability is symbolised through the serpent as sexual temptation, for who created sexual temptation, the serpent in the garden? It was there because it was necessary for us to become fully human. The inevitability is revealed also by Christ's necessity being written into the very fabric of the universe, as revealed by the opening of John's Gospel. But all this comes with a risk and at a cost for both God and Adam. The risk is a loss of humility, and the emergence of an absolute and triumphalist belief in the ability of humanity to shape our own destiny independent of, i.e. disconnected from, the Creator ground of existence. This is a fantasy, because ultimately we rely totally on the ecological connectivity and biodiversity of this beautiful blue pearl in space, the Earth, whose future is in our hands. So we dismiss the needs of other species at our peril. But the loss of human humility has now led to the greatest loss of connection and empathy with nature that our species has ever known. In post-industrial societies, human disconnection from nature has arisen in parallel with the rise of urbanization and a growing sense of disconnection from God, which is reflected now in a widespread cultural atheism. Thinking back to the Christ of the cornfield, we might reflect on how far we have fallen from an ability to discern God's wisdom in nature. But *He* knows intimately every detail, every truth, of our story from the *Big Bang* to the *Banking Crisis*. There is one God, one truth, and as *real* science is an honest, self-correcting, search for that truth, it must inevitably lead us home to God. And so we can come to understand that Science is a continuation of Christ's Great Commission by other means. Amen.