



## Reflections for My Student-Aged Self

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*Genesis 1: 24–31 Romans 8: 18–25*

“Dearly beloved, we are gathered here together ...”, familiar enough words (or so I hope) as we stand, kneel and sing (or in my case emit a low growl). Chapels, football matches, even – grim thought – marathons are so familiar that we easily lose sight of how exceptionally social we humans are. No wonder, the exceptions, not least those of autism, are so heart-breaking. And in some ways worse still is when it is imposed by fiat as we saw with the inhumanity of lockdowns. But when it comes to social organization we are hardly alone. Go to the ant as the writer of *Proverbs* reminds, or consider those master craftsmen, the termites. Much nearer home chimpanzees, dogs and dolphins form troops, packs and pods, often highly co-ordinated.

Cambridge is spoken of being most famous as a seat of learning, I hope without irony. So too animals must learn, and usually quickly, lest Tennyson’s ravining tooth and claw ends in a Darwinian thump. Seats of learning imply tutorials, instruction and demonstration and with any luck a charismatic lecturer. But no animal stands as a teacher, no animal ever sits as a pupil. At first sight this may seem very odd, but actually it fits into a wider pattern. Consider the following anecdote. As just mentioned many animals are highly social. After periods of separation, not surprisingly, they behave like humans in the Arrival Hall: shared scenes of joy and jubilation. But unlike us no animal will ever think to stand in the Departure Hall, calling out, “farewell and God-speed”. Animals have a past and a sort of memory, but to them the future is non-existent. Unable ever to imagine counterfactuals – suppose that, as the historian Carlos Eire provocatively suggested, Pontius Pilate had turned to the prisoner Jesus and pronounced loudly, “You are free”? and then more quietly, “and the very best of luck.” – so too no animal will ever tell a story. Correspondingly the inability of any animal to teach is simply because the minds of their companions are opaque. As the animal behaviourist Juliane Kaminski aptly observed ‘Chimpanzees know what others know, but not what they believe’. No teaching, no Farewell Discourse, no beliefs (let alone dogma) and as a consequence no religion. We are alone, but not lonely.

What a peculiar opening to a sermon! In this series I invite you to meet a scraggy, bearded, wine-imbibing student determined to become a palaeontologist. Things went well. Let me present my credentials. I am not an expert, but *the* expert, on fossil worms. In those halcyon days it could win you a research fellowship next door. Some things at least have changed. No beard, but a fondness for wine reinforced by gin and tonics of a staggering strength. Did I have a plan of where my career ought to go? None at all, but perhaps listening to an equivalent of Socrates’ daimon. Thus, I had a reliance on intuition rather than the endless plotting and other banal manoeuvres of a more dreary academic career. In retrospect,

more than fifty years on, my sense that there is indeed a deeper pattern makes perfect sense. Life is full of surprises, except of course in hindsight.

Be that as it may, even as a Title A Fellow in St John's successes in my scientific career came thick and fast. At a rather tender age I stood in the rooms of the former German embassy – extensively remodelled by the odious Albert Speer shortly before the Second World War – with amongst others Greg Winter to become a Fellow of a fairly well-known Society. These days, however, I wonder if once high expectations are hedged by ever deeper misgivings – theirs, not mine. In any event the reason for this subsequent elevation was because of my PhD, beard still intact and under the benign supervision of Harry Whittington, I had the immense good fortune to study an iconic fossil deposit, the Burgess Shale. A half billion years old, it is celebrated for its astonishing preservation, animals complete with soft-parts such as guts and even nervous tissue. More notably the diversity of species I studied seemed to be so enormous that my conclusions fell into line with the general thesis of Darwinian indeterminacy, that is the open-endedness of evolution. In brief, there are no particular, let alone fore-ordained, evolutionary destinations. Humans are as much an evolutionary fluke as tulips or tapeworms.

Then something rather unfortunate happened – I changed my mind. I became increasingly interested in what is known as evolutionary convergence; a classic example being the uncanny similarities between our eyes and those of an octopus. Both built on a camera-design, but of independent origins. The ubiquity of such convergences – from enzymes to sensory organs and on to social systems – suggested that far from being open-ended, certain outcomes have a high probability, perhaps an inevitability, of evolving. Something like a human, for example. And if that is true for planet Earth, when why not across those myriads of worlds strewn across not only our Milky Way but indeed as far as the James Webb telescope can peer?

An underlying predictability to evolution? Dear, oh dear, this was not going to go down well. Even more so if one sees the theologians raising cautious eye-brows and beginning to stir in their pulpits. Might we wish to consider the possibility of unfallen worlds, free of sin – think of C.S. Lewis' achingly beautiful *Perelandra* or James Blish's haunting book *A case of conscience*? And what of those other worlds where the convergent snake had tempted the convergent Eve? Alarmingly must we conjure up multiple Incarnations? Beard long gone, was not Conway Morris beginning to lose his grip?

Then matters took another turn. For the worse should you subscribe to the group-think of the many vehicles of political and public mischief, not least that body labelled beyond all irony as SAGE, or for the better if you value curiosity and independence. To begin with if, as evolutionary convergence strongly suggests, intelligent aliens are very much on the cards, then as the physicist Enrico Fermi asked 'Where are they?' Orthodoxy insists we cannot be alone, but suppose we actually are? One priceless planet worth God's ransom, and the rest cosmic wall-paper? Again, theologians might wish to take note. Nearer home, in my mind (or perhaps that of my daimon) a second heresy began to stir. Evolution happens and unequivocally we are in direct continuity with the great apes, ever more remotely other vertebrates and beyond all points to the origin of life. To be sure much of what defines the human form has evolved independently. But not everything. As my opening remarks indicated, in between ourselves and all other animals – chimpanzees, crows, whatever you choose – there is an immense cognitive gulf. All are part of Creation, but as our first reading indicated we have, in the parlance of the RSV, been granted dominion, or if you prefer other translations so you will read of 'masters', 'command' and 'rule'. No beating round the bush here.

So animals never say farewell, neither do they teach nor can they put themselves into the metaphorical shoes of another. Mynah birds may mimic, but no animal will ever be an actor. Whence came all these differences? A bigger brain or perhaps some genetic tweaking? Possible but hardly convincing. The problem is what Thomas Suddendorf labels 'The Gap' is in practice unbridgeable. Not that there have been innumerable attempts to bridge this gulf and insist along with Darwin that the differences that separate us from animals are ones of degree not kind. But in reality the study of animal cognition is deeply problematic. Not only is the research heavily biased in favour of human-like propensities in animals, but again and again apparently knock-down demonstrations of animal cognitive prowess vanish as the experimenter digs deeper into what is really going on.

Do you recall Aesop's fable of the thirsty crow, dropping stones into a jug to raise the water to an accessible level? Now repeat the experiment in the laboratory. Test-tubes containing water are to hand. Maddeningly out of reach floats a morsel of food, and nearby a convenient pile of rubble. Off we go! Sure enough the crow replays Aesop and thus seems to stand in the very shadow of Archimedes. But allow the experimenter to engage in some low cunning, such as concealed connections between some of the apparently separate water-filled tubes. Eventually the crow will cotton-on as to what is happening, but what is obvious is that the crow has no understanding of cause-and-effect; it has no grasp of elementary physics and can never join the metaphorical dots. Nor will this bird or any other species ever engage with the abstract, be it in the form of even elementary arithmetic or thinking in analogies or categories. To a mouse stilton, brie and Stinking Bishop are just cheese, and to their peril Burmese, Manx and bog-standard mogs are just cats.

The worlds of animals are sufficient unto the day but from our perspective their orbits are hopelessly circumscribed. And just as the future is beyond their comprehension, so too is death. Faced with a dying companion and then in due course the corpse, the behaviour of an ape will show that something has gone very badly wrong. But that is as far as it goes. For an animal the possibility that there might be worlds beyond the Harbour Bar is literally unconceivable.

And nowhere is this gulf more apparent than in language. Ludwig Wittgenstein famously suggested that if a lion was to speak, we would not understand him. On the contrary if a lion spoke it would no longer be a lion. Lions may roar, their smaller equivalents purr, and their various kin chatter, hoot, trumpet, bellow and squeak, but none ever speak. Nor could they, because language is not just strings of words glued by syntax but is deeply cognitive. Moreover it evolves. Not just in lineages of linguistic descent or such matters as vowel shifts, but in much more profound ways. As Owen Barfield has demonstrated to the first approximation through time language evolves. It becomes more precise and mundane, but at the expense of the mythopoeic. The implications are momentous. Science and the technical flourished but as a result the world became disenchanting.

But despite its present-day claims to hegemony the state of science is hardly healthy. Consider the ludicrous over-reaction to covid and recall how our comically inept rulers were only 'following the science'. If that means twisted data, staggeringly inept computer models, and near-total suppression of debate, I'll join another club, thank you. But this is only one part of a much wider malaise. All around us we see that language itself is being corrupted by forces that do not wish us well. And it is once again in the book of Genesis, this time in chapter 11, that our predicament is laid clear in what C.S. Lewis termed 'That Hideous Strength', that is the malign shadow cast by the Tower of Babel. Too often read as a piece of simple folk-lore to explain the multiplicity of languages, in reality this story depicts an assault on heaven. Apocryphal sources, notably the Book of Jasher, add essential details, not least the archers who standing on the top of the Tower of Babel let loose their arrows

which falling back were seen to be covered in blood, of angels, perhaps even of God. In legend the construction of the Tower was ordered by Nimrod, but the assault itself was of course doomed. More importantly the consequences of the fall of the Tower of Babel were not dialects and languages, but a chaos of meaningless babble and incoherence. Vividly told for modern-day readers by C.S. Lewis in the chaotic denouement at Belbury and the long over-due demise of the repellent Lord Feverstone, so the theme is taken up earlier in Dante's *Inferno* with the imprisonment of Nimrod with the other giants in the lowest circle, and by Shakespeare in the mad and vicious world of *Lear*.

So perhaps you see an unconventional journey: from bearded palaeontologist to amateur metaphysician. Yet I see a common thread of unrelenting curiosity and a disinclination to bow to the current day orthodoxies, not least those now engulfing our once free universities. But I am not pessimistic. Some things are hardly change. Recurrent through the Bible we read of blunders, missed opportunities, un-heeded warnings, and villainy, but also an insistent and persistent hope, however dark the circumstances. Jesus came as a man and won the admiration of a reluctant Pilate. How that story ended, or rather didn't, is I hope sufficiently familiar to you. And it is in Acts, Hebrews and most insistently in the Epistles of Paul that we are told to keep courage and not bow to malign forces. Hence my choice of the all too famous passage from Romans. Now it is all of creation that groans but before too long all will be redeemed. Paul's words promise us a new Creation and perhaps then the animals will also speak. And then the Word will be apparent to all.