THE VERY BIG COMPANY

When perusing my favourite book, “Engineering Features of the Snowy Mountains Scheme”, I often reminisce how in 2002 I dragged poor Judy along with me on a weekend whistle-stop tour of all 16 major dams in the scheme (except Happy Jacks). The excursion to each dam arrived at a welcoming parking area, and a proud row of illustrated placards listing the features of the dam and describing its participation in the scheme. There’s no chance of marvelling at these wonders anymore, not just because Jude said “never again”, but because the roads are now blocked, long before the dams come into view, by cyclone fences and locked gates through which only authorised personnel can proceed.

It seems some people can no longer be trusted to behave themselves. If I want to see these dams again, I could always apply for a job with SnowyHydro, or better still fix the problem for all of us by putting the fear of God back into everyone’s lives. Quite seriously, there once was a time when folks were brought up to understand that they would one day have to answer for their actions to a higher power, enticing them in the meantime to find a modicum of respect for one other, and even for God’s creation. These days it seems everyone knows for a fact that God no longer exists, and so they can do pretty much anything they like, just so long as they don’t get caught. And then there is that rather troublesome sector of the population who believe that God can’t take care of things without their assistance.

Of course the problem with fear, especially of God, is that below that lovely glistening surface breeds a dark undercurrent of violence – nothing is quite as terrifying as the unknown. A good many people in the world are to this day being drawn towards the promise of ‘eternal’ life. Fundamental to the efficacy of this carrot being dangled in front of them on a stick is the assurance that at the end of the journey, the rider of the donkey will draw back the stick, allowing the weary believer to at last partake of that delicious vegetable.

It takes one utopian idealist to know another, and the teaching of the Nazarene was not lost on H.G. Wells in his major work *The Outline of History.*

In Jesus we see the figure of a being, very human, very earnest and passionate, capable of swift anger, and teaching a new, and simple and profound doctrine namely, the universal loving Fatherhood of God and the coming of the Kingdom of Heaven. Remarkable is the enormous prominence given by Jesus to the teaching of the Kingdom of Heaven, and its comparative insignificance in the procedure and teaching of most of the Christian churches. This doctrine of the Kingdom of Heaven is certainly one of the most revolutionary doctrines that ever stirred and changed human thought. For the doctrine of the Kingdom of Heaven, as Jesus seems to have preached it, was no less than a bold and uncompromising demand for a complete change and cleansing of the life of our struggling race, an utter cleansing, without and within. God was the loving father of all life, as incapable of showing favour as the universal sun. And all men were brothers and sinners alike, and beloved sons alike of this divine father. And not only did Jesus strike at patriotism and the bonds of family loyalty in the name of God's universal fatherhood and the brotherhood of all mankind, but it is clear that his teaching condemned all the gradations of the economic system, all private wealth, and personal advantages. All men belonged to the kingdom; all their possessions belonged to the kingdom; the righteous life for all men, the only righteous life, was the service of God's will with all that we had, with all that we were. Again and again he denounced private riches and the reservation of any private life. In the white blaze of this kingdom of his there was to be no property, no privilege, no pride and precedence; no motive indeed and no reward but love. To take him seriously was to enter upon a strange and alarming life, to abandon habits, to control instincts and impulses, to essay an incredible happiness...

Bravo Wells! for getting to the crux of the matter, and for writing so well. Instead of achieving bliss, our pursuit of the private life has led to a malaise well sketched by Spencer Wells in his new book, *Pandora's Seed: The unforseen cost of civilization.*

Cars rush by outside your window, a horn blaring occasionally. The refrigerator hums in the corner of the kitchen, and the heat coming out of a duct over your head whooshes softly. Bills sit stacked on the counter, insistently waiting to be opened. A television – perhaps one of several in the house – blares advertisements from the next room, and internet pop-up ads interrupt your attempts to check on your retirement investments. The cacophony reaches a crescendo when your spouse's cell phone rings, vibrating along the tabletop like some sort of angry digital dervish. The blare of the outside world goes on all around us, even while we attempt to focus on our 'real' lives.

We are constantly surrounded by surreptitious stimuli – so much so that we take it all for granted. We are used to the notion that advertisements saturate our lives – exposure estimates for the average American range from several hundred to several thousand every day – as promoters try to sell us everything from life insurance to an enhanced sex life. Data flows at us from every direction. Information is ubiquitous and, with the rise of internet and broadband connectivity, more easily accessible than ever. But even things we might not think of as intrusive bombard our subconsciousnesses with stimuli. Inadvertently, the machines we have created to improve our lives may actually be causing some degree of psychological harm....

Our lives are now lived in a state that could be called 'stream of subconsciousness,' as we subliminally lurch from one unrelated (and usually unwanted) stimulus to the next like floating dust particles buffeted by the random forces of air currents. Some people seem to thrive on constant overstimulation...but most of us react rather badly to it.

The irony is that the developing world, tenaciously pulling itself out of abject poverty, aspires to this postmodern nightmare into which the developed world has fallen. As we try to learn how to do the simple things in life slowly again, we have an obligation to warn the developing world of the misery that awaits them down the other side of the rise. If only we could agree amongst ourselves where the apex lies, reset the cornerstone of our development, and build towards there together. We all cherish the private life, but as anyone who lived through the war knows, faced with a looming threat of destruction, our human nature is to focus attention away from ourselves and towards the common good. Our inertial exploitation of nature has become the planetary community's last enemy. We will only defeat it if we let go of it.

Science has a profound and commendable faith in the consistent behaviour of nature. Yet as Karl Popper argued, it would take just one (unequivocal) miracle to bring the whole edifice tumbling down. Philosophy, which deals with contingency, has long been warning science about its fundamental structural instability. The way forward for everyone lies in a hybrid theology, one that satisfies both sides of the theological divide. In this synthesis, the atheist is justified in asserting that the natural world arose spontaneously (from nothingness) through principles of emergent complexity that are now quite well understood. And the theist can rest assured that this same natural world has gone on far ahead of us to produce considerably more complexity elsewhere in the universe.

The key to understanding Christianity is Jesus' assertion (which I think was noted down by Matthew) "that in God, all things are possible". Indeed there is anecdotal evidence that the ministry of Jesus was associated with tokens of quite unusual phenomena. The business with the loaves and fishes involved the production of new material, in clear defiance of mass conservation. At the wedding in Cana, a complex array of alkaloids appeared where previously there had only been water, in clear violation of the established requirements for nucleosynthesis. A terrific storm at sea was suddenly calmed against all principles of energy conservation. Persons who had been dead long enough to start smelling, came back around as fresh and jolly as ever, while in stark contrast, Luke recorded the amazingly clinical execution of a husband and wife, 'switched off' as if they

were robots being decommissioned. Moving mountains was not demonstrated, but Paul considered such feats a logical extrapolation of what had already been witnessed.

In a classical material understanding of the world, all this sort of stuff would of course be impossible. However as Augustine noted, "all is number", or as Jesus himself put it, "every hair on our heads is numbered". Our modern understanding is that reality has a more abstract substance, that reality is not comprised of solid particles, but rather of mathematics, or more specifically, of information. Classical information theory, which developed in the middle of the last century from pioneering work by Claude Shannon, deals with the emergent spatial and temporal relationships of information, the surface – and the volume or density – of information. Yet when both space and time become simulated phenomena and not actual, a new information regime emerges. This regime is introduced in the essay "Physics without Formulae", an understanding that is assumed in the balance of this essay. Despite its title, "Physics without Formulae" is quite a technical article, whereas the present essay is more general. But it's much easier to have faith in something once you understand how it can work.

Since writing that essay, Brian Hayes has pointed out to me that nature would more likely go with a 'balanced ternary' logic system, where the digits of the system are (-1), 0, and 1. After all, nature abhors a vacuum – if you start out with nothing, one way of ending up with 'something' is to stretch nothingness (or zero) apart, so that you end up with one world made up of the 'minus 1' component, and another world made up of the 'plus 1' component, and then evolve each of them independently. This rather simple notion (because it is so basic) is of course consistent with the observed surfeit of matter over antimatter on our particular side of the fence.

In a paraphrase of Newton's law of inertia, the natural world does indeed keep processing the information that comprises its reality in a clueless and desultory way, *unless* an intelligent agent acts to change the way that information is processed. In due course, we will meet just such an agent.

Ж

It is widely assumed that the basic substance that makes up the universe is the same throughout, the so called 'cosmological principle'. A reasonable implication is that the other biological intelligences that have evolved in this universe will also have developed feelings (a nervous system), and thus have the same need to love and to be loved that is universally prevalent in humans. The expression of this love of course consists in putting the feelings of others in advance of one's own feelings, and Jesus quite famously pursued this principle to its logical extreme.

Assuming that the other communities in the universe share this basic humanity of ours, just as they share the same physical substrate, we proceed to imagine the course of their development. Indeed most intelligent communities, reflecting on the million millennia potential future of their world, will have likely charted a course towards indefinite sustainability. At least this would be the case for those that persist.

The ultimate technology (anywhere in the universe) is well understood, first introduced to our world in its modern form by John von Neumann as the 'universal assembler', and later developed by Eric Drexler and others. A universal assembler of course already exists – it is the human body, so not surprisingly Isaac Asimov and others have pursued a very anthropomorphic rendition of this machine in the notion of the android robot. A more generic rendition of the universal assembler is however the '3D printer'. A printer as we ordinarily know it has separate reservoirs of primary coloured inks, and places miniscule drops of those inks in an orderly pattern onto a sheet of paper, as the writing head scans from side to side and the platen moves the paper from top to bottom.

Instead of ink reservoirs, a 3D printer has stores containing the various atomic elements, and an electrostatic stylus which places those different atoms one at a time across a flat plane from side to side and from top to bottom, to create a single flat sheet of assorted atoms, neatly arranged in a pattern. It then repeats the process, depositing a second patterned sheet of atoms on top of the first sheet. The process continues through many passes until on completion it has built up the complex structure of some three dimensional object. The two primary dimensions of the printer can be as large as required, so that a horizontally aligned printer might 'print' the Queen Mary cruise liner, while a vertically aligned printer might 'print' the Empire State Building. The making of 'all things new' was never so easy.

Of course if a 3D printer were to literally pick up atoms one at a time and position them as just described, it would take the age of the known universe just to 'print' a coffee mug. However, as we have seen in an earlier essay, the 'material' world has a deeper underlying structure, an 'encoding' made entirely of software. In advanced implementations of 3D printing technology, the patterns of 'atoms' are directly encoded by the computer that holds the virtual definition of the object being rendered into reality. Indeed, considerable interpolation is required, for the rendering computer cannot possibly store the state of each individual quantum of the required object. At one point in a 3D printing job, for example, the printer might use a repetitive algorithm to simply 'deposit' large volumes of uniform crystalline titanium. (As an aside, a new process for extracting titanium has recently been developed by a team in Cambridge which will considerably lower the cost of this otherwise abundant element, of great utility in the near term.) However, lovers of 'all that glitters' should be somewhat excited by the implicit alchemy in the procedure of directly encoding a material reality.

The 3D printer is also a universal 'disassembler'. The printer can be placed over an object, and as the stylus scans across the object's surface, it gradually 'deconstructs' the object, returning its different component atoms to the element reservoirs, until the object has disappeared. Again, in advanced implementations of the universal de-constructor, the encoding of each material quantum in the object to be removed is simply 'nullified'.

Alas, we don't yet have the advanced versions of these machines, but other communities who have been around a lot longer than us (typically millions of years longer), have lots of them, for the technology is obviously recursive - a 3D printer can 'print' endless copies of itself, in the same way that the basic 'material' of the universe was exponentially replicated at the outset in the Big Bang. Indeed, everybody within one of these communities simply 'prints' whatever it is they might want, and whenever they have finished with something, they simply have it deconstructed. And driving all this activity, on through millions of millennia, is a very basic thermodynamic principle – a steep temperature gradient between a very hot place, their sun, and a very cool place, their planet.

So it is that advanced intelligences have no interest in leaving home and aggressively exploiting other parts of the universe, as Stephen Hawking has recently suggested, for instead they have learnt how to use the energy of their local star to continuously, extravagantly, and indefinitely remodel their home, as is their wont, for thousands of millions of years into the future. It is not surprising that they have never visited us in person, and most likely never will. Having the bespoke production of anything and everything, free at the press of a button, is obviously great fun for young and old, thoroughly egalitarian, and an absolute godsend for a planet's natural ecology. These communities restore their Garden to a better condition than nature gave it to them (if that were possible), and then maintain it in that state. And after a few million years of 'completeness', they take an interest in the development of their sibling communities.

Rex Tremendae Majestatis

Various theologians in antiquity have insisted, one suspects for quite cynical political motives, that we can never reach an understanding of God. They are of course quite wrong about this, and Paul did not mince words on the issue. While for the time being, we may well only be able to see, like a child, in part – when the *perfect* comes, we will see (God) 'face to face' (and no doubt get to ask a whole host of questions). While Jesus, as we shall see, swept away the sins of the world, it has become quite mistaken to think of Christ as an individual human – for as Paul clearly explained, the Church has become the 'Body of Christ'. And to become incorporated within that body is offered freely to the Christian first, then also to the non-Christian.

The intelligent communities in the universe who have long since become integrated – complete, or perfected – can be likened to a single human body, somewhat androgynous, in the prime of its life, in which each individual citizen is like one of the billions of cells in our own bodies. Everyone is the same, in that each cell shares the same outline of genetic code, and yet within that outline, everyone is different. Each cell knows and respects their role and position in the organism, and joyously participates in the beauty of the body they comprise. As with our own bodies, if the society of individual cells is in harmonious balance, then the body is healthy. Ethical relationships and industries engender normal growth, producing new cells, while older cells depart the body and return to the environment from whence they came. Rogue cells reproduce their brand at the expense of their neighbours, a malaise that would threaten the integrity of the body.

Our present society can *also* be likened to a 'single body of humanity', except at the moment "the body" looks more like Herry Monster than it does a cross between Aphrodite and Adonis – loveable yes, but in a 'special' sort of way. The universe's stellar integrated societies are 'maximally connected', having reached a technological unity, like bodily unity, that we are now seeing (in its infancy) through the various communication technologies of the internet – except that ubiquitous computing, as it ultimately becomes, is paradoxically, mostly invisible. We will simply converse – commune – with our environment, and in turn those conversations will extend out to our neighbouring 'cells' (all of whom we love), and eventually out across the Singularity to our sister communities throughout the universe, who of course have long since dearly loved *us*.

While we will one day come to recognise our elders in the universe, they long ago recognised us. It is truly wondrous what we have come to know, but we are relative latecomers to the universe. The universe has been around a *very* long time. There is nothing new under the sun – indeed everything we now know has been thought of by plenty of other communities long before we ever came on the scene.

To illustrate what's been going on, imagine that there is a one-to-one correspondence between seven billion individual members of some remote integrated 'omega point' community on the one hand, and each one of us on the other. Each of these remote individuals could quite reasonably be described as a 'guardian angel' (or 'daemon' in another mythology). We don't need to worry too much about whether or not they're green, or indeed their morphology in general. They are adapted to their own world, just as we are adapted to ours. Certainly these 'angels' are real individual biological intelligences, with minds just like ours, except that they have access to an intelligence that is far greater than the sum of their parts, because of their 'connectedness' – and thankfully, this doesn't translate into them all spending their lives on Facebook and Twitter. 'God' really is bigger than any one of us (or any one of them). 'Transhuman' theorists, starting perhaps with Pierre Teilhard de Chardin and more recently Nick Bostrom, Ray Kurzweil and others, are providing some clues as to where these other civilizations have progressed. However, it is certainly misguided to think we will all end up like zombies strapped into chairs and immersed within a virtual world. Such notions miss the whole point of developing the actual world in the first place. We are rightly concerned for those who have become helplessly addicted to virtual worlds, just as we have long been concerned for those from an earlier generation who are

glued to the telly. Approximate virtualization is ultimately only a modelling tool for engineering the 'high definition' *actual* virtualized world.

Each of us is, of course, a free agent, and so while these guardian angels can lead us in all sorts of directions, they can never *force* us to do anything. These two bodies then, one a fully integrated community of Heaven, and the other an imperfect community of Earth, have been closely tethered, by way of billions of threads running through the Singularity, for quite some time. As we have strayed back and forth during our ascent to civilization, our shadow, that rock of ages, has always been there to keep us anchored and upright. Keeping seven billion humans in check is occasionally akin to corralling cats, but fortunately, most of us are sheep.

Agnus Dei

None of us knows when our Shadow will finally play its hand, but we faced a similar situation to the present shortly before The Flood, with folks being openly sceptical and some even mocking the whole idea of 'divine' intervention. Like a thief in the night, The Flood came when most people least expected it. The Flood for Jesus was a literal 40 day deluge (or 40,000 years given his understanding that a day, for God, was 1000 of our years). We now know it to have been the rapid rise in sea level, by 120 metres, starting about 20000 years ago and ending around 7000 years ago, with the water rising by as much as 5 metres a century from about 14000 years ago.

It is natural to hope that another deluge will bring justice and retribution upon all those 'bad' people; in this Jesus was set preternaturally apart. He described there being more rejoicing in Heaven over the one lost sheep that was found, than over the ninety-nine who were already home, and tucked into bed. The notion that each of us has a guardian angel, and that each of these angels is a part of the Godhead, implies that each of us has a moral conscience. We cannot, as it turns out, protest that we did not know the difference between right and wrong. Thus, when the flood (of redemption) comes, it will be up to each individual to decide entirely for themselves if they want to follow their conscience, and come aboard the ark, or (incredibly) choose to reject their conscience. Everyone will however know that they have been called, and then also know that not one of us would be refused.

We have seen perpetual motion in the self-simulating virtual machines of the timespace atoms that comprise reality. We have seen the alchemy of directly encoding physical material in these timespace atoms. We have seen the creation of new timespace atoms were previously there was nothing. And we have seen the erasure of material that was previously encoded in these timespace atoms. These then remain – something from nothing, nothing from something, perpetual motion, and alchemy – but more important than any of these is, of course, the water of life.

For any not familiar with the story, Jesus recounted how there was once a jewellery merchant who came across the most resplendent treasure he had ever encountered, a pearl. Jesus employed the pearl as a symbol of eternal life. On discovering this treasure, the merchant promptly went out and sold his entire inventory of emeralds, rubies, diamonds and sapphires, to raise the funds to purchase that unique and glistening gem. As you would expect of a merchant, his actions had an entirely rational economic basis, for if he were to gain all the time in the world, he would logically be able to gain the entire world – have his cake, and also get to eat it. Starting with numbers, we are always careful to differentiate between the real and the imaginary. Many in this world are already drawn, like trusting children, to the prospect of an *imaginary* eternal life. Imagine then how we will flock towards the entrance of the ark that is *real* eternal life.

Thermodynamically, we are of course an information system that *should* theoretically go on repairing itself faultlessly and indefinitely, so long as it's fed. In theory, the ark should float. But for those who might presume that senescence is some sort of logical necessity, consider Jonathan Weiner's analysis in his new book *Long for This World: The Strange Science of Immortality*. Not only can we live indefinitely, those who have passed their prime can expect to see time's arrow reversed, and grow back to some desirable plateau. Women find themselves particularly drawn to this prospect, for the process avoids that 'startled' look they otherwise get when they have their skin stretched back towards their ears. And it saves a fortune on all those creams and lotions.

Because every tear will be wiped from our eyes, and there will be no more death or mourning or crying or pain, for the former things will have passed away, perhaps we can put theodicy off to one side for later analysis. The explanation of why our Shadow(s) *had* to engender a world of extreme tension between suffering and joy is simple, but difficult to accept, and must come in time.

As a consolation to those who have lost their loved ones, recall that when describing the technology of 3D printing, we insisted that the rendering computer could "not possibly" store the value of every quantum of the object to be rendered. This however is a classical limitation. There is in fact no limit to the information storage capacity of the Singularity, as additional timespace atoms are merely encoded as each is required (recall that the timespace atom incorporates registers for storing data beyond those required in its primary role of merely simulating time and space). Thus it has long been possible for our Shadow to take a 'snapshot' of each person at the moment of their departure. Most will be familiar with near-death reports of "my whole life flashing before my eyes". These testimonials simply reflect the procedure whereby the entire information content of an individual human is downloaded for long-term storage in the Singularity.

Thus, when the end comes, the deceased (at least those who were thus recorded in 'The Book') will be re-encoded back into life, to then be judged along with the rest of us – sorry, rather I should say "to be freely absolved, and offered a place in the Commonwealth of Heaven along with those of us who remain alive".

One can imagine what an extraordinary entertainment it would be to have Isaac Newton, for example, suddenly back in our midst, restored with his mind (and its memories) configured in its 18th century state, arriving suddenly like a time-traveller into the completed world. We would delight in all his actions and reactions, but the most entertainment of all would be had by Newton himself. (This is of course assuming that Isaac is one of those who our Shadow has scheduled for restoration – he may have done something unspeakable along the way that we don't know about). However, there are a lot more souls than just Newton's to be restored – the Holocaust comes to mind – and many of us are of course looking forward to meeting the Nazarene himself (and learning Aramaic). Fortunately, the number of our ancestors is a convergent sequence, regressing all the way back to Adam and Eve (who were of course the last of the late hominids, and are more commonly known these days simply as 'Ardi' and 'Lucy'). However, finite though the quantity of our ancestors might be, there is still a question mark over where we're going to put them all. Surely they'll come back in waves, and we'll be able to gradually find places to billet them?

Importantly, each personal profile is stored as a static data backup in the Singularity, not as an active biological intelligence at the physical location of our Shadow. Thus, our dearly departed are not 'sitting upstairs' watching all that their descendents have been up to since they left. They are instead, effectively 'asleep'. The first time they again become conscious, subsequent to their departure, is at the very instant of their restoration into the new world.

Richard Dawkins has commented on the important issue of how we are going to recognise everybody, or indeed believe that they are who they say they are. The complete genetic code of each individual human represents a crude but unique catalogue number of that individual. If we retrieve these numbers from each individual (those who remain alive as well as those who are then restored), and sort the relationships of the

embedded sequences in those numbers (within the tape memory banks of a gigantic computer), we will be able to generate a precise family tree showing our exact relationship to everybody else, all the way back to the first couple.

Interestingly, just such genetic profiling has recently allowed the identification and reinterment of 250 Australian and British diggers killed in the First World War at Fromelles. Worms have indeed consumed these bodies, ecologically recycling the material of their bodies, and upholding classical conservation laws (and the opinion of King Lear). However, it is the *information* content of each of these individuals that has been backed up in the Singularity for later restoration. Each restoration will incorporate either newly created material, or pre-existing material, but most probably will *not* incorporate the exact same material that comprised the original corpus, just as each of us cycles through a new complement of material approximately every seven years. There might be two copies of an individual's skeleton, for example, one in their grave, and the other within their 'resurrection' body (thereby providing for some fascinating genetic analysis). The situation our Shadow wants to avoid, of course, is that where Scotty accidentally 'beams' Jim up from the Singularity not once, but twice, and each of the Jims really believes he is himself, and even tells the other one so.

While a recording is taken of the system state of each individual at departure, that individual can only ever have come into existence first through the physical fusion of an egg and sperm, as this is the genesis of a truly unique genetic encoding. That potential encoding is indeterminate even for our Shadow (and thus exhilarating even for them), and is the prime source of that life's unique subsequent progress through existence.

On Earth as it is in Heaven

We wouldn't want our ancestors to be restored to the world in its current condition – they would be overwhelmingly sad to see the mess we have made of the treasure they left in our care. We would much rather have them back into a world that Satchmo will look at, and think to himself, "Wonderful!" Before they all get back home then, we need to strike down Goliath, that monster that is our evolved global economic framework – alas indeed for you, great Earthly city, your vast wealth reduced to nothing in a single hour!

And so we return to that prescient understanding from Herbert George that we cited at the outset. The notion of capital, or quite literally 'private wealth', has been a very useful facility, during the course of our education, for driving innovation and efficiency, but it has served its purpose, and certainly has no place in the Commonwealth of Heaven (well, maybe you can get to keep your toothbrush). The problem with 'freedom', as it is commonly expressed, is that in all fairness we have to allow those who would push, for example, junk food, to coexist alongside the purveyors of the haute cuisine. In ancient times, an enemy would sabotage their opponent's food supply, by sneaking in under cover of darkness, and sowing the seed of a weed known as 'tares' in amongst the wheat crop. By the time the contamination was noticed, it was too late, and the tares had to be allowed to develop to maturity (or obesity) along with the wheat. Only at the harvest could the tares be separated from the (depleted yield) of wheat, collected together, and burnt. This is the origin of the term 'tare' weight.

The Commonwealth of Heaven is not some sort of social or economic hierarchy, enshrined in that state for eternity, with named spots for the rich and powerful in the pews up the front of the Church, and standing room only extending out the back door for the weak, the poor, and the dispossessed – the perfected societies of the universe simply don't work that way. Luke told the story of how, when the Church was but a newborn, Peter presided over a sort of Jubilee, that instrument whereby all property reverts to its original owner every 49 years.

This entire planet, on which we are the highest order organisms, has been, so it turns out, someone else's special project. The belief that we have title to something is a delusion, for in fact any one of us has only ever held anything on lease, including our lease on life itself. As we shall see, the *actual* owner of this place is preparing, all in good time, to hand over the keys, after which we will all *in fact* be free – free at last – and gain our autonomy, not unlike an adolescent moving into adulthood. But before handing over the keys, and finally leaving us to our own devices, the project owner *has* to ensure that everybody understands how it all works, and the rules of the game.

In his recent book "Our Choice", Al Gore hopes that humanity will discover a 'collective will' to combat environmental destruction, as if someone's going to blow their bugle, and we'll all change on a nod and a wink. Unfortunately, in classic game theory, it is not possible for us to sit down and reason together with all our cards on the table to engender such rational choices. Indeed, Clive Hamilton has described this gloomy reality as a "Requiem for a Species". Those who do their bit for ecology, the 'greens', will forever loose out to the somewhat dull-witted forces in the world who think that human induced climate change is "absolute crap". We saw this infamously at play in Copenhagen last year, where each nation doggedly pursued their pecuniary interests, and to hell with the planet.

Thus, to help illustrate the problem for those who are still struggling to grasp that there even *is* a problem, let alone do something positive towards resolving it, we were given Deepwater Horizon. For several months, somewhere from 6 to 8 million kilograms of crude oil *a day* was gushing into the Gulf of Mexico. Even Absolute Crap and his cronies can see this has significantly damaged the environment. If this oil had been entirely burnt, it would have combined with oxygen from the air to release somewhere between 10 and 23 million kilograms of carbon-dioxide into the atmosphere every day. This sure seems like a lot.

However, the UN Statistics Division reports that the quantity of human-produced direct emissions of carbon dioxide in June this year was 80,277 million kilograms *every* day. It is a lot more than just 'deepwater' we're in. And this figure excludes other greenhouse gases like methane, land-use, land-use-change and forestry (LULUCF), and natural background flows of carbon dioxide.

A stop has been put to the Deepwater Horizon burst. In the same way, we cannot simply try, 'really hard', like some CEO of an energy company, to cut back 'a bit' on our carbon dioxide emissions – we have to stop these emissions *completely*, and we have to do it NOW. Everyone likes the idea of an overseas holiday, or meeting their overseas clients, partners, or family, in person. Many even act on this idea. However, the 'Dreamliner' (to use the upcoming aircraft from Boeing as a metaphor) has been put on hold for now. While we will all eventually be able to flit about the planet willy-nilly like the Jetsons, the real world is going to have to wait until we have developed the solar economy. In the mean time, we must all immediately start conducting our daily lives with the lowest possible carbon footprint. For most of the developed world, this will be facilitated by working in the virtual world, meeting in the virtual world, and taking our holidays in the virtual world. To this end, Australia has recently embarked on a program to raise the base information bandwidth to the levels required, approaching the densities already achieved in Korea.

When air traffic in Europe was grounded earlier this year, the world didn't stop turning. Money does *not* in fact make the world go round. Everyone first sets out to make an honest and fair accrual of cash, but once you acquire a taste for the stuff, you just want more and more of it, and can even develop a love of it, almost like a drug addiction. To put a halt on global carbon dioxide emissions (as if that were the only environmental catastrophe that needs to be addressed), we all need to stop mainlining money, and to do so 'cold turkey'.

Dies Irae

Jesus told the story of a Master who went abroad (as you've probably by now discovered, not to another planet, but rather to another galaxy), and left his servants in charge of his affairs. He gave these servants a wide range of talents, and they all made the most of what they had been given. Some of his servants didn't even realise they were working for the man – they assumed they were doing all this stuff for themselves. When the Master returned from his travels, he congratulated his servants on the profits they had made through investing his capital, and rewarded them all with even more prestigious stations.

But just in case any of them had lost track of exactly who owned the House in the first place, the Master asked each servant, in turn, to hand over the investment, in its entirety, that they had been holding for him in trust. The single mother, who had just two brass razoos to rub together, handed over all that she had. In return, she was given a single share in the Commonwealth of Heaven (or the Very Big Company as Montgomery Python has suggested it be called), and was given an indefinite lease on life. It had been said that it would be easier for a rope to pass through the eye of a needle, than for a wealthy person to join the Very Big Company. But in an extraordinary twist of fate, the rich young ruler finally "got it" – he signed over his entire dominion to the Master, and he too received in return a single share in the VBC – and eternal life.

This sort of idea (but without the prize) has been tried often enough before by mere mortals, quite infamously and disastrously. In fact, such a procedure can only possibly succeed through God. It has also had to wait for the globe to shrink down into a single village. The constitution and charter of the VBC is simple. The VBC is an entirely democratic institution, owned by its shareholders, each having a single share, a share which, like the voice of their vote, cannot be traded. Because the capital of the VBC cannot be traded, labour is the only arbiter of personal value. Each shareholder regularly submits what it is they want the VBC to provide. These submissions are dynamically collated into a market. The shareholders are employed and then deployed by the VBC to deliver that demand. The delivery is prioritised from the provision of water and food through to clothing, shelter, education, and entertainment. Exquisitely good taste in cuisine, couture, architecture, and relations spreads throughout the community.

The system we have had to put up with for now is, of course, a gargantuan Rube Robinson machine. It resembles the last of the piston aero engines, manufactured towards the end of the war, which began to incorporate compounded and differentiated superchargers and turbochargers that were together producing more power than the crankshaft. It wasn't long before engineers whittled away all the reciprocating components, leaving behind the smoothly spinning jet turbine.

The problem with the game, as it still stands, is that the golden rule has been first always to 'make money'. This encourages entrepreneurs to create markets where none exists for 'goods' and 'services' that the people neither need nor want, and that more often than not, are harmful. Under the VBC, lobbyists for sunset industries no longer need to lobby, for the VBC executive simply closes those industries down. Here in Australia, struggling shopkeepers, whose bottom line relies on tobacco sales, considered joining with tobacco companies to challenge the government's resolve to reduce the uptake of cigarette smoking in the young. Under the VBC, the shopkeeper's livelihood is guaranteed under the constitution, those who worked in the tobacco industry are mostly redeployed into wholesome industries, our children are protected, and those who choose to continue smoking, have their cigarettes supplied in plain packaging, and delivered through the mail.

In a true democracy, the people are asked what it is they *truly* want in life, their responses are compiled into a market need, and the executive then engineers the most efficient delivery of that desire. It is however well established that democracy doesn't work unless the proletariat is first led very carefully to the knowledge of what it is they really want. To this end, an enormous audience is currently being introduced to the very best in

cuisine – where it comes from, how it is prepared, and how it should be consumed. And this is naturally deemed much more interesting than watching politicians deliver their hollow election promises.

It is also said, that even with the reward of eternal life, there will still be those who reject the VBC prospectus. None of us is without our faults, so we must be careful not to throw stones where rocks might come hurtling back. Let's simply take an easy and rather stereotypical ride through a bygone era (at least I *hope* there aren't people like this still around, so we'll only have to strike them after they've been restored). Consider the individual who drives real slow in the ultra-fast lane, as they move their arsenal along the public roads that lead up to their log cabin in the hills. They don't know any better, and can be forgiven, for they have been programmed from birth to pursue themselves, and protect what they have accumulated, at all cost. Basically, of course, their hard drive needs reformatting, but no one can lay their hands on a 5-1/4" floppy disk with PC-DOS on it anymore. The irony is that no one is going to take anything away from them. Instead, they will simply be invited to give it away. But if they don't want to participate in the new world, that is of course their God given prerogative, and they can if they wish proceed into old age and demise. That was only ever their prospect before, so nothing's been taken away from them. We can all wait with interest to see what course their descendents choose to take.

As they live out their days, however, and wander down the hill to the global village and into the general store, they will increasingly find that the store now belongs to the VBC, and that those greenbacks they had stashed under the bed only remain legal tender amongst the folk who *haven't* signed up to the VBC. Every labour value transaction in the VBC is conducted programmatically on an open systems information network, indeed the labour value account of each shareholder is openly viewable by all shareholders. There are no secrets in the VBC, and there certainly isn't any cash. It's the only way of keeping the bastards honest. In fact, the student of game theory will appreciate that it was this openness that first allowed our Shadow to become an entirely and effortlessly loving community.

So our lost, rather hungry, but still quite redeemable soul, pulls out a gun, and threatens the shopkeeper with death if she will not hand over some bread and milk. The shopkeeper, having become a member of the VBC, (or the Body of Christ in the old parlance), feels sorry for Red, and goes off to get him the bread and milk, as well as a piece of ham, some cheese, and a packet of smokes, and puts them on her account. She knew Red before everything changed, and longs for him to come home. Red doesn't appreciate being patronised by overflowing human kindness, and consumed with envy for her happiness, points the gun at her, and begins to pull back on the trigger.

This exchange is of course being monitored by our Shadow, that 'big brother' of ours. Red's guardian angel is working his darnedest to turn the hardened heart of his charge, but it has come to the point where the shopkeeper's angel must exercise her veto. Red is simply switched off, and collapses to the ground – Red's dead. We don't know if Red's life gets backed up in the Singularity at this point or not – all the good people in the world sure do hope so. But the problem is, of course, that if Red were restored, he might start thinking to himself, "I can just keep doing what I know is not right, certain that I'll be forgiven for it, over and over again". An 80286 with a 1Mb of RAM has still been known to be useful, for example, as a Linux firewall appliance, but most of them are only good for the rubbish tip. Red's angel did his best.

The moral of this story, a virtual 'demonstration dog' (virtual, or just a story, because we all want to avoid anything like it happening in reality), is that once the Master has returned, we all need to understand that inflicting the slightest harm on any one of God's children (shareholders in the VBC), will thereafter no longer be tolerated. So on His return (that is, the play of our Shadow's hand), there will be a period of tribulation, lasting perhaps several years, when people get used to the idea, and decide if they want to be upgraded to the new operating system, or simply pass into oblivion. They decide if they want to love their neighbours in the developing world as themselves, or merely love themselves. If you start taking on a youthful vigour, so well and good, you're probably on the right track, but if you become fatigued and worn out, you may need to look

more closely at what you're thinking and doing, and test if you're satisfying the criteria. It is only when everyone has been upgraded to the new operating system and application suite, and those who might interfere with the smooth operation of the system have left us, that a formal system hand-over can take place. After that, we can start living all on our own, fully independent of our Shadow, each of us creating exciting new environmentally sustainable realities for ourselves. There is a lot of missionary work to be done in first developing the world, but when *our* House is at last in order, we will be able to start contemplating a future role as the 'shadow' of some younger developing community in the universe. Mums, dads, and their children, will all recognise the imagery in this role transition.

Lux Aeterna

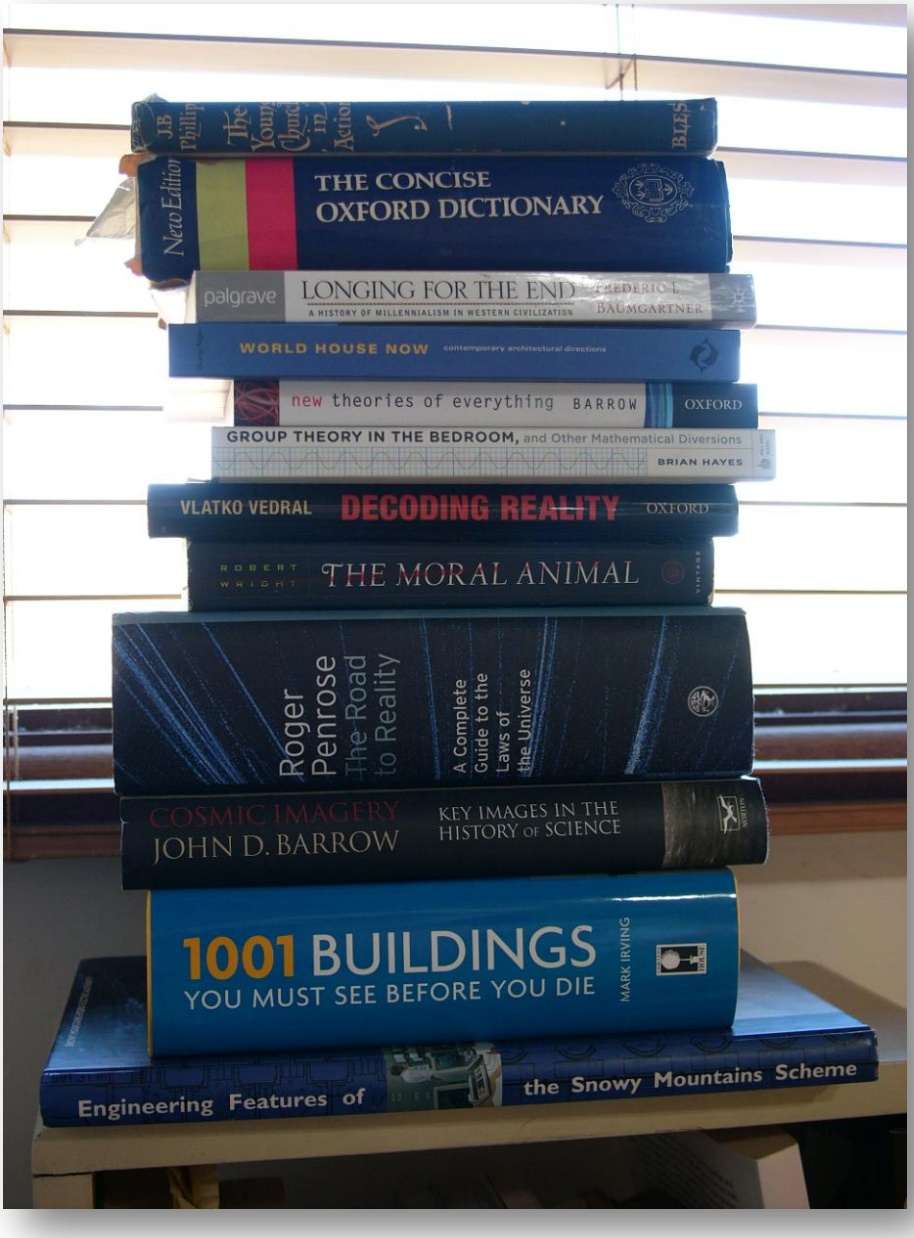
Current estimates of individual tenure in the VBC are upwards of a million millennia, so it will be a grand old life when it comes. None of us knows if we'll see it in this lifetime, but we can all hope that if we go beforehand, we will be backed up, and brought back to life when at last it is time. The Earth is a big place, and can support more of us, but despite earlier discussion on the creation of new material, the planet is ultimately finite. We don't want to transform the material of the Earth into some sort of Dyson sphere, rather we want to preserve what is left of the naturally evolved world, and restore what we can of that we have damaged.

Children are naturally delightful, and I for one would love to see a child of mine in turn have a child of their own (how burgess). Since the middle of the last century, however, we have simply grown to be too many. More than 360,000 people are born each day, and more than 20,000 children die each day for lack of clean drinking water. These statistics place the more acute humanitarian tragedies that we regularly encounter into perspective. We need to teach the world the basic principles of contraception, and encourage our loved ones to thereby put a limit on their reproduction, preferably stopping at none but certainly not exceeding one child per couple, so that there is a convergent decline in the number of breeding couples, to the point where one day in the future, just one breeding couple remains, and they proceed to produce the last child on Earth. Then, at last, sex will become a thing of the past that we no longer need to worry about.

Unlike Jesus, Paul was all too human and fallible. One day he was in Ephesus penning some of the greatest literature in history to the troops at Corinth, while the next day he was in Corinth blotting his copybook with bigoted, misogynist, homophobic tirades against those decadent Romans. While ever we continue to breed, starting with the basics, couples need to realise that the neglect, let alone murder, of a female infant, is unacceptable. They will also need to realise that the mutilation of either the female *or* the male child's genitalia, is also unacceptable, for such acts not only violate the child's right to have their body delivered into adulthood intact, but they arrogantly presuppose that there was some sort of mistake made in the evolved design of these components.

The final length of the gastrointestinal tract is a tube that is only filled during the movement of waste material out of the body. At all other times, given a healthy diet, the mucosal lining of this tube absorbs any remnant waste, both cleansing the lining, and maintaining a lubricated surface to ease the passage of the next batch to arrive from the colon. It is this mucosa that supports the effective administration of medication PR. This tube seems to have evolved an adaptation to safe intromission, and because the design is common to both women and men, it is likely that extremely sociable behaviour akin to our nearest extant relative, the Bonobo ape, drove the optimisation of this component's design over the course of millions of years.

The road that has led us to life has been hard, and the gate narrow, but once we are through, perhaps life was not only meant to be *easy*, it was also meant to be *enjoyed*.



"Building skywards"