

*The Sixteenth*

**ERIC SYMES ABBOTT**

**Memorial Lecture**

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## Deep Time: Does It Matter?

### The Problem of Deep Time

My topic is the problem of Deep Time: that is, the ethical and metaphysical effect of placing ourselves in the context of bygone and future ages. On this occasion I shall concentrate on the impact of possible *futures*, and address (a) the Doomsday Argument - that our future will be brief, (b) the Omega Point Argument - that the future will be long and triumphant, and (c) the Presentist Argument - that all such stories are only metaphors for present-day experiences and desires. In an earlier version I called that last the 'Platonist Argument' - but I now see some differences between a proper Platonism and 'commonsensical presentism' (which is actually much the same as egoism).

This will continue an exploration begun in *God's World and the Great Awakening* (Clarendon Press: Oxford 1991), a paper written on 'The End of the Ages' for a volume on the Millennium<sup>1</sup> recent papers to the Wittgenstein Conference at Kirchberg in 2000, to a Templeton Fund Colloquium in Rome in 2001, and a forthcoming paper for a conference on *Nature and Technology* in Aberdeen. It is also a pretext for reading science fiction during working hours.

That Deep Time, or the idea of Deep Time, does have an effect on our ethical and metaphysical sensibility is certain: witness the number of scientists as well as science fiction writers who testify to the emotional impact of Olaf Stapledon's work, especially *Last and First Men*, *Last Men in London* and *Star Maker*. Witness the stories told in Hindu and Buddhist sermons: reminding us of our littleness, and the real insignificance of fortune, by piling up the years and distances around the little clearings of our lives. Oddly, contemporary Western philosophers do not seem to have addressed the issue, though our predecessors did. We appear to take it for granted - even when engaged in philosophical study of evolutionary theory or of speculative cosmology - that the only proper temporal context for our lives is the humanly accessible one. *Our* time is very much less than a century, even though we know that centuries and even millenia are - by comparison with geological or cosmological aeons - hardly more than a moment. Philosophers follow fashion - as do theologians. The religious imagination - reminding us that 'a thousand ages in Thy sight are like an evening gone' - has been displaced, and even the religious prefer to believe in a merely immanent deity whose attention-span is not much longer than our own. Once upon a time - and not all that long ago - Berkeley could cheerfully declare that a charitable benefaction 'seems to enlarge the very Being of a Man, extending it to distant Places and to future Times; inasmuch as unseen Countries and after Ages, may feel the Effects of his Bounty, while he himself reaps the Reward in the blessed Society of all those who, *having turned many to Righteousness, shine as the Stars for ever and ever*'.<sup>2</sup> And again: 'We should not therefore repine at the divine laws, or show a frowardness or impatience of those transient sufferings they accidentally expose us to, which, however grating to flesh and blood, will yet seem of small moment, if we compare the littleness and fleetingness of this present world with the glory and eternity of the next.'<sup>3</sup> It is that literal belief which sets the seal on Berkeley's account of religion. 'I can easily overlook any present momentary sorrow, when I reflect that it is in my power to be happy a thousand years hence. If it were not for this thought, I had rather be an oyster than a man, the most stupid and senseless of animals than a reasonable mind tortured with an extreme innate desire of that perfection which it despairs to obtain.' What happens here is at once much more and much less important than we think: much more, because our immortal life rests on it; much less, because 'if we knew what it was to be an

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<sup>1</sup> *The End of the Ages*: David Seed, ed., *Imagining Apocalypse: studies in cultural crisis* (Macmillan: London; St Martin's Press: New York 2000), pp.27-44.

<sup>2</sup> *Proposal*: George Berkeley *Works* eds A.A.Luce & T.E.Jessop (Thomas Nelson: Edinburgh 1948-56), vol.7, pp.359f

<sup>3</sup> *Passive Obedience*: *ibid*, *Works* vol.6, p.40

angel for one hour, we should return to this world, though it were to sit on the brightest throne in it, with vastly more loathing and reluctance than we would now descend into a loathsome dungeon or sepulchre’.

The religious are now uncomfortable with these attempts to diminish or to exalt the significance of present time, and it is the non-religious who are more likely to remind us how brief our lives and history are (as though it should come as a shock to realize that there are many things much bigger, and much older, than we are). The religious are eager to believe that the only available Infinite is alongside and in us - to hold infinity in the palm of your hand, and eternity in an hour<sup>4</sup> - perhaps because the actual, literal past and future revealed through geological and astronomical enquiry is less to their taste. The irreligious think that our smallness, by comparison with the unimaginable expanse of space and time that surrounds us, casts doubt upon religion: *our* lives cannot be important. But though cosmological and biological science may *tell* us that the real world is longer than our lives, or even than our histories, we rarely permit this to affect us. The enterprise designed by Stewart Brand - the Clock of the Long Now - may perhaps spread some clearer sense of Deep Time: but it would be optimistic to expect this to make much difference. Most of us will continue to act within a time frame very much shorter even than our own lifetime. Why else would most of us agree even to read a paper in a few months time, were it not for the happy conviction that May will never actually occur? And even Brand’s Long Now is very much shorter, at ten thousand years, than the Aeon.<sup>5</sup>

One way of retaining some sense of the significance of stories about the Very Beginning or the Very End is to insist that these stories are ‘really’ about our ordinary present. A *literal* reading of mythographic speculation assures us that the days of the very beginning were a long time ago, ‘before’ the everyday world of human life got started. But it is of the very essence of fairyland that it is ‘once-upon-a-time’: however far back along the normal run of history we look we shall find that the fairies have already ‘gone away’, and yet are ‘there’ alongside us. Their ‘pastness’ is not that of last year’s papers - though one could suggest, contrariwise, that last year’s doings very rapidly become mythological. For the young, their parents’ talk even of twenty years ago invites them to contemplate an age beyond imagining, half way back to the dinosaurs that occupy another alongside world in their imaginations. The ‘pastness’ of the Beginnings is better understood as their permanent alongsideness. The world is always Beginning, from the omnipresent centre of attentive consciousness, which we represent to ourselves under the style of myth. At the same time it is always breaking out into a wider world, waking up to judgement. Stories of ending and transforming, which we project into the future, are as little to do with an historic time-to-come as stories of beginning are to do with an historic long-ago. In fact they are often just the same story: the gathering of sticks and stones and bones to make the world, the crashing together of the fire and ice to end a world. In the ‘long-ago’ the people crawled out of the earth to people it; in the ‘yet-to-come’ the dead break from their tombs. Sometimes, as in the literary expression of Norse ritual, this is explicit: Ragnarok is just the opening passage of the new heaven and the new earth, whose coming is disaster for the former powers.

By this account, Creation and Judgement both alike are not events far off, but present experiences of eternal truth. To believe that God made the world is to live by the Covenant; to think that Christ will come to judge the living and the dead is to see ourselves in the light of his life and death. ‘The Christ event can here be understood in a wholly non-eschatological way as epiphany of the eternal present in the form of the dying and rising *Kyrios* of the cultus’<sup>6</sup> - or the realization of human guilt and possibility. This is not what our predecessors taught, in imagining an End.

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<sup>4</sup> William Blake *Complete Works*, ed. G.Keynes (Oxford University Press: London 1966), p.431

<sup>5</sup> Stewart Brand *The Clock of the Long Now* (Weidenfeld & Nicolson: London 1999)

<sup>6</sup> Jurgen Moltmann *Theology of Hope*, tr.J.W.Leitch (SCM Press: London 1967), p.155

A final belch of fire like blood,  
Overbroke all heaven in one flood  
Of doom. Then fire was sky, and sky  
Fire, and both, one brief ecstasy,  
Then ashes. But I heard no noise  
(Whatever was) because a Voice  
Beside me spoke thus, 'Life is done,  
Time ends, Eternity's begun  
And thou art judged for evermore'.<sup>7</sup>

It is comforting to believe that this is not intended as a *literal* event, but only an allegory of sudden insight, or even a nightmare from which we can expect to wake. Worlds end, no doubt, but each new world-age is simply a continuation of our ordinary, time-bound, moment-bound existence. That is only common sense.

But 'the commonest sense of all [is] that of men asleep, which they express by snoring'.<sup>8</sup> Presentism perhaps has a point, but it certainly seems to rest upon an error. One of the oddities of contemporary literary criticism is the critics' unargued conviction that *science fiction*, which focuses on the larger world, and tries to encompass a more literal reading of such Ends and Beginnings, is less 'realistic' than stories about parochial and personal affairs. Of course the particular scenarios that science fiction writers sketch are false: but their underlying theme, by rational standards, is correct. The world we construct for ourselves, in every minute of our sleepy lives, is as foolish as the Hobbits' dream that the Shire belongs to them. "But it is not your own Shire" said Gildor. "Others dwelt here before hobbits were; and others will dwell here again when hobbits are no more. The wide world is all about you: you can fence yourselves in, but you cannot for ever fence it out."<sup>9</sup> And the moral has a wider significance than the merely territorial. It is the essence of reason that our reasonings do not exhaust reality, and those who trust to much in what they think is reason actually betray it. 'If we repose our trust in our own reasonings, we shall construct and build up the city of mind that corrupts the truth ... The dreamer finds on rising up that all the movements and exertions of the foolish man are dreams void of truth. Mind itself turned out to be a dream'.<sup>10</sup>

So how can we begin to wake, and what is the relevance of the new mythologies to be found in speculative fiction? Even if the stories *are* - at least in part - ways of structuring our everyday awareness, orienting it to the grand themes of Creation and Judgement, maybe we diminish their significance by not thinking them through.

### **Whether or Not the End is Nigh**

The religious - or at any rate respectable religious - no longer seem to expect a literal Judgement or an End of Days, and the quotation from Browning only evokes a momentary shudder. Those who declare that the End really is Nigh do not normally occupy the pulpits of mainstream Churches (or at any rate, I have never myself heard a sermon of the sort that our predecessors would have found familiar). Preachers may mention personal mortality, but not the End of Days. Those who do, in

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<sup>7</sup> Robert Browning 'Christmas Eve and Easter-Day' §17: *Poems* (Oxford University Press: London 1912), p.522

<sup>8</sup> W.D.Thoreau *Walden* (Dent: London 1910), p.26

<sup>9</sup> J.R.R.Tolkien *The Fellowship of the Ring* (Allen & Unwin: London 1954) p.103.

<sup>10</sup> Philo L.A. III.228f: *Collected Works*, tr.F.H.Colson, G.H.Whitaker et al (Loeb Classical Library, Heinemann: London 1029-62) I, 457

terms like the following extract from a random website, are easily identified as mavericks ignorant both of history and of true religion:

The Second Coming, the return of Christ to Jerusalem, and the end of the world (end of the age) alluded to by Messiah Jesus Christ, could occur as soon as the year 2007. The middle east conflict over Jerusalem and the temple mount is now scheduled for complete and final settlement by September 15, 2000. The Sharm Memorandum signed by Israel and the PLO on September 5, 1999 requires finalizing the permanent status of Jerusalem by this date, presumably including the temple mount and the Dome of the Rock. This could be the agreement described in Chapter 9 of the Book of Daniel that Christ referenced in Chapter 24 of the Book of Matthew. This treaty could start the 7 year countdown to the end of the age (not the "end of the world") resulting in the construction of the third temple on Mount Moriah and the mid-point "abomination of desolation" that Christ described. The battle of Armageddon will be at the end of this seven year period. Nevertheless, the Sharm negotiations may not result in the treaty referred to by Daniel and our Lord. We will have to watch developments and be aware of the Third Temple teachings of Scripture. An event such as war, terrorism, an earthquake, etc. may be the catalyst in the rebuilding of the Temple.

Jesus said "watch" for His coming, and that is the purpose of this site, constructed in September of 1999. We will also diligently and logically examine the Scripture that is related to this great event! God has said that His temple will be built during this last 7 year period and is THE sure sign of His return. The prophesied regathering of the Jewish people into a reborn Israel in 1948 and their regaining control of Jerusalem in 1967 are sure signs that this is the last generation (40-70 years) that Christ said would see His return. This generation will also witness the anti christ, the abomination of desolation, and the great tribulation-all end time subjects of Bible prophesy [sic].<sup>11</sup>

No doubt we are wise to disregard all such attempts to uncode biblical prophecy. But it is worth noticing that there is a *naturalistic* argument against any easy expectation that life will go on without any particular change or interruption. It is also worth noting that Babbage's Paradox (that a simple computer programme may suddenly generate entirely unexpected results which show that something else entirely was occurring than we had supposed) destroys any simple faith in rational continuity.<sup>12</sup> But here I address the Carter Catastrophe rather than Babbage's.

It may seem entirely rational to discount all warnings that the End is Nigh. After all, we have survived (or else our line, our species and our world has survived) so far, despite war, plague, famine, meteor strikes and mass pollution. Any possible disaster will be no more than local: there are too many of us now, and we are technologically too well equipped, to vanish. It is surely perfectly reasonable to respond to prophecies of doom with a degree of scepticism. One such sceptic, on being told that she had 'learnt nothing' from the happy pessimism of a particular newsgroup (established to consider the likely outcome of the Y2K bug), replied as follows:

I've learned from reading the newsgroup that I ought to be stocking up with 300 pounds of grain, 60 pounds of legumes, 60 pounds of sugar or honey, five pounds of salt and 20 pounds of fat or oil for the first year, along with a gallon of water per person per day; that I should be buying candles, fuel, medical supplies, a generator, canned vegetables and fruits, garden seeds, blankets, sleeping bags, hand tools, lots and lots of batteries, and even more guns and ammunition to protect the stockpile from the starving and desperate hordes who will flee the

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<sup>11</sup> <http://www.geocities.com/secondcoming1/> - the site has apparently had over 35,000 hits since its creation.

<sup>12</sup> Robert Chambers *Vestiges of the Natural History of Creation* (1844), after Charles Babbage *Ninth Bridgewater Thesis: a Fragment* (Frank Cass: London 1967; 1<sup>st</sup> published 1837; 2<sup>nd</sup> edition 1838); see Clark *Biology and Christian Ethics* (CUP: Cambridge 2000), 22f.

burning cities in search of sustenance; and that gold is a poor choice for storing currency because the government can seize it at any time during a national emergency. I should also be buying any books that might tell me how to make things I need when civilization falls. And I should work out, so that I'm physically fit enough to survive whatever humanity and nature throw at me. Except for the guns (illegal where I live), none of this advice is necessarily bad.

Aside from sad postings about how most of the world's population is going to die - four fifths, according to some postings - there's an element of satisfaction among these Cassandras. They make up the in-group that is going to survive because they're smarter and tougher than the rest of us. Computing gurus are at the mercy of the political and financial decisions of others, just like the rest of us (Wired magazine recently featured a few software programmers who were stocking up and taking to the hills). People who have rigorously refused to have computers still rely on the ready availability of electric power, food, telecommunications and, most important, a clean supply of water. About the only people in the U.S. who might escape all effects are the Amish.

On the newsgroup, you can watch at work what one skeptic in another context called the "ratchet effect." Anything - the doubling of the federal government's estimate of the cost of remedying its systems, for example - that depicts Y2K as a catastrophe is carefully reported and believed. Any news suggesting that a remediation effort might succeed is dismissed as lies, stupidity or denial. Off the newsgroup, a computer science researcher of my acquaintance tells me he figures the chances of catastrophe are about 5 percent, and that's enough for him to have sold out of the stock market and filled his country home with supplies, just to be safe.

Over the centuries, of course, there have been many doomsday prophecies: a list published in James Randi's *The Mask of Nostradamus* gives many historical dates on which the world was to end: 1524, when a deluge was supposed to flood London; 1719, when mathematician Jakob Bernoulli expected the earth to be hit by a comet; and 1947, when "America's greatest prophet" John Ballou Newbrough thought (in 1889) that all governments and rich monopolies would cease. After that, the cold war made it completely rational to believe "they" might blow up the world.<sup>13</sup>

So it seems that we have strong inductive evidence that such prophecies are likely not to be fulfilled - and an interesting sidelight on the preparations now considered appropriate for surviving Doomsday! It is Brandon Carter's achievement to demonstrate how little reason there is for confidence: precisely because we have survived so far, and there are so many of us, we have reason to suspect that our time is nearly up.<sup>14</sup> And 'Cassandra', of course, was a prophetess whose entirely *accurate* prophecies were doomed to be disbelieved.

It is easy to believe that our survival so far (despite occasions when we - ourselves, our line, our world - might not have done) is evidence that God or the gods are fond of us. But - obviously enough - if there are many possible worlds, or many other worlds, where life, intelligence or civilized society has not survived, it is not surprising that civilized intelligences will always see a world where, so far, they themselves survive. Each of us in this hall - or each of you now reading this account - is still alive, and can look back complacently on many occasions when we might have

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<sup>13</sup> Wendy M. Grossman 'The End of the World as We Know It': *Scientific American* 1098.1998: <http://www.sciam.com/1998/1098issue/1098cyber.html>. The Y2K bug was no more successful in bringing the system down than any of the other perils.

<sup>14</sup> John Leslie *The End of the World* (Routledge: London 1996)

died. It does not follow that we are immortal. Even as a culture, or a species, we cannot reasonably expect to do much better than other species and cultures.

Cities and Thrones and Powers  
Stand, in Time's eye,  
Almost as long as flowers,  
Which daily die. ...  
This season's Daffodil,  
She never hears,  
What change, what chance, what chill,  
Cut down last year's;  
But with bold countenance,  
And knowledge small,  
Esteems her seven days' continuance  
To be perpetual.<sup>15</sup>

Our past survival gives us no inductive ground for trusting in a future survival as a culture or a species any more than as individuals: rather the contrary. But our trust seems almost absolute, and infects even those who imagine the End. The Y2K millennialists I described before were as complacent as any commonsensical sceptic in their belief that human, and specifically American-stereotypical characters, being 'fittest', would survive. And had as little evidence for their claim. Current evolutionary theory gives us little ground for thinking that there were always bound to be multicellular living creatures, or civilized ones, or that any particular species is likely to last. The chances are high that we are the only strictly *intelligent* creatures in the universe - unless indeed *intelligence* is a privileged image of the Divine. In a godless universe, it seems most probable, there is no reason to expect intelligence either to appear or - once apparent - last: the dangers facing such an evolutionary track are far too great to make it likely.<sup>16</sup> That we are the only such intelligences anywhere (or almost so) may explain the absence of any evidence of extraterrestrial civilization. It normally takes too long for civilization to appear (by chance), and there are far too many risks attached to give such creatures, even if they happen to exist, sufficient time to colonize. The more improbable our emergence the likelier it is that we are near the end of that period in which it is even possible for us to exist.<sup>17</sup>

So if we are the only ones might we be the first? Suppose that things turn out that way: our kind *does* colonize the solar system, and the local stars, or even advances (as the story books imagine) to infect and manage the whole universe. In that case we here-now will prove to have been astonishingly early hominids. Almost all the human beings there will ever be will prove to have lived generations later. Do we have any right to expect this to be true? Plainly not. Imagine a collection of large rooms, in which there are successively five, fifty, five hundred, five thousand people, and so on. Suppose that all the inmates, including you, have been placed, blind-folded, in one of the many rooms. The rational bet would be that you will find that you are in the largest room: if the largest is the fifty billion room, that is the one you should assume that you are in. If, on removing the blind-fold, you find yourself instead one of the five hundred, you should suspect that

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<sup>15</sup> Rudyard Kipling *Collected Verse 1885-1926* (Hodder & Stoughton: London 1927), p.479. This is not to endorse the false analogy that treats species and cultures as mortal individuals, as though they must *inevitably* grow old and die. It is only to agree that species and cultures *do* end.

<sup>16</sup> Extraterrestrial Intelligence, the Neglected Experiment: *Foundation* 61.1994, pp.50-65. Even eucaryotic and multicellular organisms took so long to develop that we should assume that most biospheres are entirely bacterial! Some science fiction writers have imagined bacterial civilizations (Greg Bear *Blood Music* (Gollancz: London 1986); Orson Scott Card *Children of the Mind* (Tom Doherty Associates: New York 1996), but if such really exist they are unlikely to be ones that we could ever hope to understand or converse with.

<sup>17</sup> See John D.Barrow, Frank J.Tipler & John A.Wheeler *The Anthropic Cosmological Principle* (Oxford University Press: Oxford 1988).



*this* is the largest room. It follows that our initial assumption - as it should also be if our view-point must be assumed to be typical - has to be that we are far more likely *not* to be untypically early hominids. No-one - on this account - will ever have occasion, in actual fact, to remark that ‘in the afterglow of the Big Bang, humans spread in waves across the universe’.<sup>18</sup> We are unlikely even to find that we - or even the hominid species that come after us - last out the two billion years of Stapledon’s fantastic history. It is always a lot more likely that we are in or very near the largest generation of humankind: when it becomes true that there are more people alive than have ever lived before - and that moment is not far off - we will have excellent reason to suspect the imminence of ‘the Carter Catastrophe’.

There are many ‘blindingly obvious’ (but probably mistaken) objections to this line of argument. The only objections that have much force comes from those who would deny that there is now any fact of the matter about how many generations of humankind there are yet to be, and those others who speculate that the number of generations might in fact be *infinite*. If there really are no other generations of humankind than the ones that there have actually been, then it is certainly true that everyone has always been in the largest generation that then existed, but there may still be a larger to come. On the other hand, there may not be: if the future of our kind is open then, perhaps, there is no reason to think that we are near the end, but there is also no reason, on those terms, to think we aren’t. If nothing at all is determined about our future, our survival isn’t either. On the other hand, if there are - as it were - *infinitely* many ever larger rooms, there is nothing improbable about being in an ‘early’ room. But even though Aristotle thought the generations of humankind had in fact been infinite (since there had been no beginning of things), it is unlikely that he was right. It seems more reasonable to think that there are a finite number to be expected - and in that case, perhaps we really do not need to worry about Deep Time: our human time is shallow.

Science fiction writers have written of many possible catastrophes - in the forties and fifties chiefly those brought on by nuclear or biological warfare. Perhaps those fantasies served us as warnings, and left their prophets as disconcerted as the unfortunate Jonah.<sup>19</sup> The fashion in catastrophes since then has been for ecological disasters, meteor strikes, the revolt of the machines or alien invasions - often with the conscious or unconscious motive of upsetting people whom the author happens to dislike! The thought that human time is short may not always be unwelcome: once we are gone the earth can revert to ‘normal’ - a normality in which no sentient creature even pretends to have a time-frame larger than the immediate moment. Lawrence had fantasies of that ‘cleaner’ world. And even Simone Weil expressed the thought that we polluted the landscape just by looking at it.<sup>20</sup> Maybe all sentience will perish, and all definite being -

Then star nor sun shall waken,  
Nor any change of light:  
Nor sound of waters shaken,  
Nor any sound or sight:  
Nor wintry leaves nor vernal,  
Nor days nor things diurnal;  
Only the sleep eternal  
In an eternal night.<sup>21</sup>

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<sup>18</sup> Stephen Baxter *Time: Manifold I* (Voyager: London 1999), p.3: a novel whose most memorable and sympathetic character is a genetically-enhanced squid, and which takes it for granted that we all hate and fear anything we cannot control, perhaps has few insights into the ordinary human condition, but it is still a serious attempt to think through what Deep Time might mean for us and for our projects.

<sup>19</sup> *Jonah* 3.10 - 4.1: ‘And God saw their works, that they turned from their evil way; and God repented of the evil, that he had said that he would do unto them; and he did it not. But it displeased Jonah exceedingly, and he was very angry.’

<sup>20</sup> See my *How to Think about the Earth: models of environmental theology* (Mowbrays: London 1993).

<sup>21</sup> A.C.Swinburne ‘The Garden of Proserpine’.

Some have seen in this a metaphor for uncluttered, uncontaminating being - the end of confusion or the vindication of their own preferred viewpoint. If civilization, humankind, the world itself must perish, it will be because - in the authors' eyes - we have slipped too far from 'nature' (rather as inexperienced intellectuals welcomed the Great War). Others, perhaps initially depressed, have consoled themselves with the thought that all of us must die as individuals: why then should we care if all are doomed to die together? 'The happiness of ten million individuals is not a millionfold the happiness of ten.'<sup>22</sup> To which the only answer is presumably that we *do* count genocide as worse than homicide: the end of the world must be the end of all our ambitions, all our ordinary reasons for thrift or creative action, all our care. The thought of universal death may make each moment precious - but such 'perfect moments' are only those in which we manage to forget the universal death.<sup>23</sup>

But perhaps there is another way of looking at the Catastrophe. Maybe it will be the very same moment as the Singularity expected by some futurologists - the moment when the advance of computer science, of nanotechnology, and the communications network marks a sudden break with all our pasts, the end of that Aeon in which there are singular individuals of our sort.<sup>24</sup> The Singularity, so-called, marks a break with the past so enormous as to make all rational inference impossible. We are on the brink of an epoch utterly unlike all other, earlier ages. Computer power is doubling every eighteen months. The practical existence of molecular and atomic engines - nanotechnology - is probably closer than we can let ourselves imagine. People everywhere now have access to information, skills, energy and mechanical assistance that was once the province only of the immensely rich. Even if a genuinely unified, genuinely universal Theory of Everything is impossible even in principle, we are likely to have some very powerful theories about everything from gravity to the human genome. Very soon it will be true that every human individual must make decisions which will affect us all, and could make utterly disastrous ones. It will be our *duty* to become 'as gods'. The End of the Age, or of the Ages, will lie in the discovery of Forever: we shall not inhabit that Forever in the forms we now possess. 'For we shall all be changed, in a moment, in a twinkling of an eye, at the last trumpet.' (1 Corinthians 15.51-52)

Science fiction has tended to represent that ending in material or atheistic terms, and so to exaggerate the alien nature of whatever sensibility is more appropriate to Forever. But the breakout from our crystal palace has long been anticipated in religious fiction:

And for us this is the end of all the stories. and we can most truly say that they all lived happily ever after. But for them it was only the beginning of the real story. All their life in this world and all their adventures in Narnia had only been the cover and the title page: now at last they were beginning Chapter One of the Great Story which no one on earth has read: which goes on for ever: in which every chapter is better than the one before.<sup>25</sup>

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<sup>22</sup> J.B.S.Haldane *Possible Worlds* (Chatto & Windus: London 1927), p.307.

<sup>23</sup> One answer might be to claim that, since the passage of time is unreal, nothing is ever really lost: all moments are eternal. But that is little consolation - 'while the past was thought of as a mere gulf of non-existence, the inconceivably great pain, misery, baseness, that had fallen into that gulf, could be dismissed as done with; and the will could be concentrated wholly on preventing such horrors from occurring in the future. But now, along with past joy, past distress was found to be everlasting' Olaf Stapledon *Last and First Men* (Penguin: Harmondsworth 1972: 1<sup>st</sup> published 1930), p.242; see also p.305f on the Last Men's avowal of the closed circle of time proposed by the Stoics.

<sup>24</sup> See Vernor Vinge *Across Real Time* (Gollancz: London 2000)

<sup>25</sup> C.S.Lewis *The Last Battle* (Puffin: London 1964), p.165

## The Emergence of Omega

So consider the idea of a New, Unprecedented World as it is expressed in speculative fiction. The point of speaking of a 'Singularity' is of course to emphasise that we do not have, and cannot have, the slightest idea of what life will be like beyond it - but negative theology has never stopped anyone from seeking to imagine the unimaginable, and getting some benefit from the exercise! Even if the Change is not as close as I have just suggested, it might come or have already come someday, somewhere, and some how. Even if intelligent life is very improbable indeed, it might have happened for the very first time in some very distant place and period - and we are amongst its products. Suppose that there really is, or that there will be, a conclusive synthesis of power and intelligence, an imagined Omega. It might remain the case that any individual intelligence of the sort we are must always expect to be amongst the last of its kind, and yet there be a sense in which it is an early and unfinished version of the larger sort. Arthur C. Clarke's flawed novel *Childhood's End* (1954) can be given many interpretations - and in the past I have regretted his curious idea that the essence of 'religion' lies in the hope of absorption into an Overmind.<sup>26</sup> On this occasion let it stand proxy for a branch of speculative fiction that simultaneously conceives the literal end and extinction of the human species, and its transfiguration. The Carter Catastrophe occurs - though not the ones that we might more easily expect - but there is something, not ourselves, in which our purposes and memories are raised to life immortal.

Suppose that Omega or the Overmind is real. If ever it does come into being it will be as difficult to eradicate as life itself, and as likely to occupy all possible times and places. Even we, at the tag-end of our likely lives as mortal individuals, can imagine ways in which it could persist and grow. The only question is: what sort of growth, what sort of growing thing, will Omega or the Overmind turn out to be? Clarke's Overmind, as I have already hinted, does not really engage our religious or our ethical devotion. The supposed Overlords of his story, commanded to prepare the way for the Overmind's absorption of our species, are more admirable characters in their dreams of fighting off its influence - and later sf writers, like Jack Williamson, have given an altogether blunter picture of the Overmind as Parasite.<sup>27</sup> Greg Bear's cosmic intelligence, in *Eternity*, turns out to be the descendant rather of humankind's greatest, genocidal enemy, than of any 'humane' purpose. In Gregory Benford's imagined future humans and their like exist like rats or cockroaches within the triumphant culture of Kipling's Machines, who 'are not built to comprehend a lie, [and] can neither love nor pity nor forgive'.<sup>28</sup> Writers frequently give mythological shape to the notion that there is, or could be, 'war in heaven' - a conflict between radically different characters, each striving to be the meaning and culminating synthesis of all that has ever been.

No such Omega, it is easy to conclude, could actually be God - even if its character and purposes turned out to be ones that creatures like us could share, or at any rate appreciate. God, by hypothesis, is that than which none greater can be conceived, the necessary standard of all value and the one necessary existent. An entity, even the greatest possible, that might have one character or another, and might emerge in one possible history but not another, cannot be what theists have supposed as God. Stapledon's cosmic spirit (itself created not even by the Eighteenth Species of humankind, but by creatures of an entirely different sort) turns out to be infinitely distant from the hoped-for 'Star Maker' - and that Star Maker itself is something other than God. Peter Hamilton's recent *Night's Dawn Trilogy* takes delight in devising a wholly naturalistic version of familiar myths whose conclusion vitiates any notion that there is Someone with the power, authority and will to require obedience. Baxter's novel likewise embodies the possibility that the Final Spirit will have good reason to despair - and therefore not be God. Greg Egan's openly atheistical *Diaspora* similarly ends in weariness: the 'whole thing' is simply not worth knowing or enjoying. But my

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<sup>26</sup> See my *God's World* op.cit., p.177

<sup>27</sup> See my *How to Live Forever* (Routledge: London 1995)

<sup>28</sup> Kipling op.cit., p.676

concern today is not with philosophical theology, nor with the dispute between ‘naturalism’ and ‘supernaturalism’, but with the impact and importance of Deep Time, and the stories we tell of it. Where the Carter Catastrophe reminds us of immediate Judgement, the Omega Story reminds us of the gathering of the faithful on the far side of catastrophe. The hope expressed in such stories (as well as the fear) is that our lives, though we lose them, will be vindicated. We shall have contributed something of value to the final synthesis, and that synthesis will turn out to have reached ‘back’ into our own lives to guide its own first steps. But the Catastrophe hangs over all such imagined Omegas: whatever their power and brilliance they still face an End - unless there is, somehow, an escape from Time.

Omega isn’t God - any more than the god of Milton’s *Paradise Lost* is God - but the stories we tell or enjoy about such images are both revealing and helpful. Science fiction writers and other futurologists, in speaking of Omega, sometimes draw the conclusion that our role must simply be to keep the research funds coming. Just as the threat of Doomsday causes some to hoard artillery and practice their ‘survival skills’, so the promise of Omega only suggests, to some, that technology has to be supported at whatever present cost. Better to lose the whole world - through climate change and soil erosion - than to lose the future - by cutting back on technological investment. Both inferences display complacency: the former, as I suggested earlier, by taking a particular political stereotype for granted; the latter, by forgetting that Omega must be the inheritor of *every* form of life and not just ours. Or rather - if it is the inheritor only of *one* form of life, it is unlikely that it is ours. It will be something of which we have any chance of approving only if it is also the confluence of unnumbered other agencies. That apparently sounds undesirable to some: ‘But it won’t be *me*’, and ‘they won’t be *human*’. Others - and I think the more rational - can only express surprise that anyone should think that either complaint much matters.

Haldane drew a false contrast in his essay on ‘The Last Judgement’:

Man’s little world will end. The human mind can already envisage that end. If humanity can enlarge the scope of its will as it has enlarged the reach of its intellect, it will escape that end. If not, then judgement will have gone against it, and man and all his works will perish eternally. Either the human race will prove that its destiny is in eternity and infinity, and that the value of the individual is negligible in comparison with that destiny, or the time will come

‘When the great markets by the sea shut fast  
All that calm Sunday that goes on and on;  
When even lovers find their peace at last,  
And earth is but a star, that once had shone.’<sup>29</sup>

A full response to Haldane would take another paper. Although I am here agreeing with him that ‘the use, however haltingly, of our imaginations upon the possibilities of the future is a valuable spiritual exercise’,<sup>30</sup> I endorse little else in his metaphysics, ethics or futurology. Specifically, we do not have to choose between thinking only of the present and devising a communistic utopia to seed the stars with our progeny.<sup>31</sup> Sacrificing the present for the sake of the future is suicidal. Nor can a merely material, temporal future ever be enough to satisfy us. ‘If the many become the same as the few when possess’d, More! More! is the cry of a mistaken soul; less than All cannot satisfy Man.’<sup>32</sup>

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<sup>29</sup> Haldane op.cit. p.312, citing Swinburne (a passage used by Arthur C. Clarke as the conclusion of *Prelude to Space*)

<sup>30</sup> Ibid., p.310

<sup>31</sup> An enterprise rendered ridiculous in C.S.Lewis’s *Out of the Silent Planet* (Pan: London 1952; 1<sup>st</sup> published 1938), p.164: “‘Men go jump off each [world] before it deads - on and on, see?’” “‘And when all are dead?’”.

<sup>32</sup> Blake ‘There is no Natural Religion’ 2<sup>nd</sup> series: op.cit., p.97

So the moral is that all ages will seem shallow, and soon to end, unless Omega is understood to be a metaphor for something greater than the ages. And one last deeply speculative story: if Omega is real, might it not choose to resurrect us? And if it did, must it not - at least initially - provide us with the context in which the lives for which we are programmed can be lived, the context in which we can exist at all? And how could we tell that this has not already happened? Rather than being a distant, imagined prospect (as Frank Tipler supposes<sup>33</sup>), might it not be the actual situation of our present lives? How could we tell that we were 'really' the original entities from which Omega took its beginning or the entities it has already resurrected in a small region of itself with a view to guiding them into a deeper association?<sup>34</sup> And is there any difference - especially if Omega can reach 'back' to its beginnings - between being the originals and being the resurrected? So the Carter Argument - an insight I owe Dr Barry Dainton, one of my colleagues at Liverpool - may have less bite: we are indeed in the largest possible collection of mortal individuals (that is, all there ever are), momentarily provided with the narrower context in which such individuals can have a sense of their own individuality before they learn - or something in them learns - the larger way. What other dream scenarios Omega devises, time will tell. What Omega's character will turn out to be (and to have been already) depends on what the whole company of the faithful can come to imagine. We are at once its product and amongst its many ancestors.

When Stapledon's narrator returns from his wanderings at the edge of time to the hillside overlooking his home, it is with a renewed sense of the importance of 'our little glowing atom of community', the relationship between himself and his wife.<sup>35</sup> 'Immensity', as Stapledon went on to say, 'is not itself a good thing. ... But immensity has indirect importance through its facilitation of mental richness and diversity'.<sup>36</sup> Re-absorption in the merely personal amounts to falling asleep again: *transformation* of the personal may be a mode of waking up. My suggestion is slightly different from Stapledon's: immensity, or the imagination of immensity, awakens in us a recognition of that Infinite which surrounds and confronts us.

By John Crowley's evocative account the moment when Giordano Bruno fully realised that the Sun did not revolve around the Earth was his release from the crystal spheres that bound all human souls. Instead of having to clamber, in imagination, upwards to the heavens, he realised that the Earth itself was swimming through the heavens, that he had already escaped. 'You made yourself equal to the stars by knowing your mother Earth was a star as well; you rose up through the spheres not by leaving the earth but by sailing it: by knowing that it sailed.'<sup>37</sup> We escape the Carter Catastrophe by knowing that we - in Omega - already have. Deep Time is all around us - and that, rather than the commonsensical presentism of too much contemporary thought, was probably always Blake's point.

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<sup>33</sup> Frank Tipler *The Physics of Immortality: modern cosmology, God and the resurrection of the dead* (Macmillan: Basingstoke 1994).

<sup>34</sup> See Robert Charles Wilson *Darwinia* (Orion Books: London 1999), p.214: 'the world you and I inhabit is nothing more than a sustained illusion inside a machine at the end of time'.

<sup>35</sup> Olaf Stapledon *Star Maker* 1937, p.333

<sup>36</sup> *ibid.*, p.335

<sup>37</sup> John Crowley *Aegypt* (Gollancz: London 1986), p.366