



Climate Blues: or How Awareness of the Human End might re-instil Ethical Purpose to the Writing of History

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ABSTRACT The accumulating evidence on the depth and accelerating trajectory of anthropogenic climate change poses the possibility of an early end to human existence as part of a more general biotic extinction. But if that is the case what does that mean for the latter day writing of history? Our response follows two main lines of thought. The first relates to the concept of the 'Anthropocene' and the possibilities that it offers historians to reconsider their subject in the light of what earth science is saying about earth history and our particularly recent role in its shaping. From this perspective, while the idea of a reconceptualised history by reference to key geological and other natural historical thresholds would certainly destabilise current academic practice, it might equally galvanise the historical discipline towards recognition of our present biospheric crisis. The second line of thought explores how history writing might contribute to an ethical response in the face of the end and an almost inevitable, accompanying violence, anomie and destruction. Apocalyptic language is eschewed by a progress-centred history. Here we argue that it is exactly the proper recovery of such discarded religiously subversive notions which could assist in the opening up of an alternative space repudiating a bankrupt political-economic system and envisioning instead a millennial social and environmental justice. The writings of Walter Benjamin, among others, offer historical pathfinders for such ideas. Combined with his presentation of an alternative, qualitative 'Now' time—thereby reconfiguring Judeo-Christian notions of *kairos*—such ideas speak both to the urgency for a purposeful, non-violent response to Endtime but also by implication, an ongoing human quest for grace.

Is it conceivable that our species, *homo sapiens sapiens*, through its undoubted cleverness, has brought this planet to the brink of a biospheric destabilisation so enormous that it heralds not only our own destruction but that of most if not all of Earth's multitudinous life forms? A very public answer from some people with considerable *sapientia* was proffered in the august surroundings of the Royal Society on 17 January 2007. The Society was playing host to the Bulletin of Atomic Scientists who 60 years earlier had visualised a Doomsday Clock to symbolise the threat to human survival from nuclear weapons. Back in 1991 their clock had been in abeyance, at 17 minutes to midnight. Since then it has been moving forward, seemingly inexorably. At the 2007 meeting with no less than 18 Nobel Laureates as event sponsors, the Bulletin moved the clock forward once again, to five minutes to midnight. This time, however, the grounds cited for the gloomy prognostication were not just a matter of nuclear arsenals. The danger posed by anthropogenic climate change, the Bulletin pronounced,

equally threatened “irremediable harm to the habitats upon which human societies depend for survival.”¹

How much does climate change actually change a picture we already know? From the moment when the first atomic bomb was detonated at Trinity on 16 July 1945, there has existed a human potential for planetary destruction. Granted, the potential has not been vested in us all equally. As then, so now, nuclear weapons are a statement of political as well as technological power and domination. But while this might offer historians among the last women and men a final occasion to debate the hegemonic origins of the present world order, the reality of the weapons’ primed existence underscores the ongoing twilight zone nature of our existence. Nor, even if the nuclear weapons were not there, would we require climate change to confirm “that we are now in a great dying time of evolutionary history.”² In 1972, in response to a Club of Rome commission, a group of MIT systems analysts constructed a model of global humanity which forecast that on the basis of exponential growth patterns in industrial and food production, resource depletion, population and pollution, a resulting ecological overshoot was likely to engender a universal economic and societal collapse sometime in the 21st century.³ Despite a torrent of criticism for its alleged neo-Malthusianism, the findings of *Limits to Growth* have only been corroborated in similar, more recent assessments.⁴

At first sight, it is not obvious how anthropogenic climate change alters this prospect or competes with the nuclear threat. Our millennia-long impact on the climate has not been a conscious, nor obviously malign one. On the contrary, one might argue that it is simply an indirect consequence of essentially *constructive* efforts at self-betterment, the recent emergence of a fossil fuel-based economy underpinning both the planetary reality of a seven billion-plus human population and material and physical comforts for a significant proportion of them beyond even the wildest dreams of once great kings. The manner, moreover, by which climate change will bring disaster, or when, exactly, that might be, is opaque. Neither with a bang, nor necessarily a whimper, its remoteness from our daily lives and lack of apparent existential threat compared with the ever-present possibility of Cold War nuclear Armageddon, plus the obvious scientific complexity of understanding cause and effect, are all sufficient grounds for most people to push it to the very margins of their consciousness, or to deny its existence altogether.

Unfortunately, what such responses tell us most about is a human propensity to avoid or repudiate unpalatable truths, particularly when those truths are bound up inextricably with the way we (certainly a Western ‘we’) live.⁵ We may not be able to pin down with exactitude its precise contours or timeline but the scientific evidence on the reality of anthropogenic

¹ See <http://thebulletin.org/content/mediacenter/announcements/2007/01/17/doomsday-clock-moves-two-minutes-closer-to-midnight>.

² Alastair McIntosh, *Hell and High Water: Climate Change, Hope and the Human Condition* (Edinburgh: Birlinn, 2008), 191.

³ Donatella Meadows et al., *The Limits to Growth: A Report for the Club of Rome on the Predicament of Mankind* (New York: Universe Books, 1972).

⁴ For example the, *Millennium Ecosystem Assessment Synthesis Report* (Washington DC: Island, 2005).

⁵ Clive Hamilton, *Requiem for a Species: Why We Resist the Truth about Climate Change* (London: Earthscan, 2010), for searing indictment.

climate change and its planetary, especially biotic consequences is now overwhelming.⁶ It is not the purpose here to reprise the scientific arguments. The purpose is to ask what this means for our understanding of that element of cross-generational human experience we have come to describe as 'history.' Whether we will be able during this century to keep the nuclear genie in its box remains an open question. But by dint of hysteresis—in other words the time-lag before carbon dioxide and other greenhouse gas (GHG) accumulations in the atmosphere really kick in—climate change *will* accelerate even if it were possible to turn off the fossil-fuel engine now.⁷ It is this very engine which is first cause as to why we are where we are. Though the relationship between ourselves and 'Nature' is not actually dialectical, we might still, nevertheless, perceive the biospheric feedbacks, or more exactly 'blowbacks' now setting in, as Nature's antithesis to the globalised carbon economy we have created. If the latter continues on its present upward trajectory, the synthesis of this imagined argument will not be human fulfilment. It will be its foreclosure.

The challenge for scholars, in the coming precious years, lies in the degree to which we choose to link our disciplinary explorations to urgent ethical responsibilities. The most fundamental of these, now, as perhaps always, relates not only to matters of human conduct with each other. What equally is at stake is our responsibility to those life forms on this planet whose future fate has unknowingly become one of utter dependence on *us* but without whose existence our own sustainability as a species is null and void.

As the truth sinks in, in what will inevitably be a monumental societal crisis of hope—we will be required to tear down many, perhaps all of our standard assumptions as to how history 'works' and begin a probably very painful process of 'reconstruction.' Working backwards we almost certainly will wish to reconsider the very basic map of history—the architecture of human experience over centuries and millennia—to understand how we arrived at this end-game. From this perspective, too, it may be that some areas of great recent historiographical debate become academic, superfluous, even quaint. By the same token, other elements which point to practical resilience or moral compassion in the face of past environmental breakdown or acute psychological insecurity may take on magnified importance. Paradoxically, this may lead us in directions many historians have been at pains to distance themselves from in recent decades: structure, metanarrative, even teleology. What *really* matters, though, is whether historians have the heart, guts, and 'ethical fire,' to grasp the enormity of what is now required of them.

R.G. Collingwood, in 1939, proposed: "We might very well be standing on the threshold of an age in which history would be as important for the world as natural science has been between 1600 and 1900."⁸ More than 70 years on, history *can* have that role. But to do

⁶ See the meta-analysis by Ilya M. D. Maclean and Robert J. Wilson, "Recent Ecological Responses to Climate Change Support Predictions of High Extinction Risk," *Proceedings of the National Academy of Science* 11 July 2011, which suggests an 11 per cent species' extinction by end of this century, and the further assessment by 22 leading earth scientists in Anthony D. Barnosky, *et al.*, "Approaching a State Shift in Earth's Biosphere," *Nature* 486, 6 June (2012): 52-58.

⁷ See Kevin Anderson and Alice Bows, "Reframing the Climate Change Challenge in Light of Post-2000 Emission Trends," *Philosophical Transactions of the Royal Society* 366, no.1882 (2008): 3863–3882.

⁸ From R. G. Collingwood, *An Autobiography*, quoted here in Paul Dukes, *Minutes to Midnight, History and the Anthropocene Era from 1763* (London: Anthem Press, 2011), 92.

so *historians* would have to be willing to eschew the conventional wisdoms most of us have chosen to live by. Our purposefulness firstly, would be in showing how these wisdoms, far from being normative, self-evident and benign, are instead indicative of a particularly toxic turn in the human trajectory whose ultimate planetary riposte has been none other than climate change. Secondly, and more importantly, it might be to suggest how—even *in the face of the end*—the past can assist humanity towards alternative ways of right-living. With the bridge between the two being the present. The rest of this argument follows this three-part, if interlinked schema.

Past

In a recent piece in *Rethinking History*, Penelope Corfield, revisited the notion of staging history and whether it is objectively possible to offer clear breaks between one age and another. With a cacophony of voices all offering their own subjective criteria, the idea that historians can arrive at some consensus as to where and when, for instance, Modernity—or even more nebulously Post-Modernity—begins, is bound to fail. Corfield's own response is not to throw the baby out with the bath-water but to offer a three-dimensional model which might incorporate "very long-term micro-changes" alongside dramatic revolutionary "breaks" enabling turmoil, momentum and persistence, to "intersect and cross-impact in complexly different ways in different eras and climes."⁹ This is sane, sensitive and well-considered historical thinking. However, in the light of what we now know about the human trajectory's impact on the *natural* historical continuum, is the Corfield model really the most appropriate for *ongoing* historical good practice?

Let me offer instead an approach which takes its cue *not* from historians but earth scientists. In 2000 the atmospheric physicist and Nobel Laureate, Paul J. Crutzen, and his marine scientist colleague, Eugene F. Stoermer, proposed that we now inhabit the epoch of the Anthropocene.¹⁰ Clearly, some cross-reference to other successive *geological* periods was intended in this statement. But what was entirely more startling was the proposition that this new geological sequence was the result of human activity on a global scale, or, put another way, anthropogenic agency was "changing the most basic physical processes of the earth."¹¹ Actually, the idea was not new. In the 1920s, the great Ukrainian earth scientist and metaphysician, Vladimir Vernadsky, had recognised that an increase in human-caused biogenic gases in the atmosphere could be dated to the 18th century.¹² But Crutzen and

⁹ Penelope J. Corfield, "POST-Medievalism/Modernity/Postmodernity?" *Rethinking History* 14, no. 3 (2010): 395.

¹⁰ Paul J. Crutzen, and Eugene F. Stoermer, "The 'Anthropocene,'" *Global Change Newsletter* 41(2000): 17-18.

¹¹ Naomi Oreskes, "The Scientific Consensus on Climate Change: How Do We Know We're not Wrong?" in *Climate Change, What it Means for Us, Our Children, Our Grandchildren*, eds. Joseph F. C. Dimento and Pamel Doughman (Cambridge MA. 2007), 93.

¹² Oliver Smith, "The Ecology of History: Russian Thought on the Future of the World," in *Ecological Awareness: Exploring Religion, Ethics and Aesthetics*, eds. Sigurd Bergmann and Heather Eaton (Berlin and London: Lit-Verlag, 2011), 125-26. Smith's article also considers Vernadsky's hopes that human consciousness would help transform the biosphere into a new, better condition, which he called the 'noosphere.'

Stoermer had at their disposal data from retrieved glacial ice cores enabling them to more precisely mark the threshold associated with this shift. They agreed that assigning a specific date might seem “somewhat arbitrary.” However, up to c.1750-1800 GHG concentrations had been stable for a relatively long time, carbon dioxide, for instance at 280 parts per million. After then, its almost inexorable increase, year on year, to the present c.390 ppm closely mirrored the acceleration of energy usage from fossil fuels which began with the Industrial Revolution. Crutzen and Stoermer noted the coincidence between James Watt’s invention of the steam engine in 1784 and the onset of their proposed new geological epoch. More recent historical consideration by Paul Dukes resets the threshold at 1763, citing not just technological but others factors associated with the geopolitical rise of Britain to hegemonic status.¹³ What is interesting about the Crutzen-Stoermer thesis is the degree to which it infers changes in earth system processes can also be applied historically.

But is such conflation of the historical and geological justified? The term Anthropocene has yet to become standard currency, though there has been sufficient acclamation from a wide range of scientific and non-scientific disciplines to suggest its durability.¹⁴ There is, to be sure, a wider, in some respects different debate about the degree to which human activity, especially associated with deforestation and the advent of intensive farming, was already causing climate change as long as 8,000 years ago. William Ruddiman, for instance, has proposed that rising atmospheric methane concentrations in particular, as caused by millennia-long Eurasian agriculture, may well have slowed down a scientifically-anticipated earlier return to ice-age conditions.¹⁵ Ruddiman, however, has not challenged a basic premise that only in very recent time has the human impact on climate *exceeded* that of Nature.¹⁶ If the notion of the Anthropocene, thus offers an historical marker for what formerly we might have spoken of as the advent of Modernity, what would using broader geological criteria reward us with for the rest of ‘history’?

Such an earth-centred staging could only seriously offer a basic tripartite division. Working back from the late 18th century divide, the comparable moment prior would be the last time there was significant climate change—in this case caused by a *natural* orbital oscillation of the planet c.11-10,000 year ago. This brought to the estimated five to ten million humans at that time a quite rapid deliverance from the severe glacial conditions of the Younger Dryas and in its place offered a much warmer but also *relatively* stable (inter-glacial) Holocene epoch which enabled them to take “increasing control over biospheric flows of energy and resources.” The species, by then, was already almost ubiquitous with further indication of its ever-widening “ecological virtuosity” expressed in the rise of its global population to over 500 million, by c.1500.¹⁷ In turn, if we were to travel back in time once again to seek the previous pre-Holocene threshold, the most logical contender would not necessarily be the species’ emergence in Africa, some 200,000 years prior: not least as palaeontologists have yet to

¹³ Dukes, *Minutes*, 7, 11-13.

¹⁴ Dipesh Chakrabarty, “The Climate of History: Four Theses,” *Critical Inquiry* 35, Winter (2009): 210.

¹⁵ William F. Ruddiman, *Plows, Plagues and Petroleum: How Humans Took Control of Climate* (Princeton and Oxford: Princeton University Press, 2005), chapters 8-10.

¹⁶ *Ibid.*, 150.

¹⁷ David Christian, “World Environmental History,” in *The Oxford Handbook to World History*, ed. Jerry H. Bentley (Oxford: Oxford University Press, 2011), 132, 135.

determine an exact biological timeline. However, there was a major geological event, some 73,000 years ago, which arguably does represent the deep *historical* beginnings of humankind. And one all the more remarkable because at the time its consequences pointed not towards the promise of even greater numbers and wider geographical range for this already well-established—species, but on the contrary its extinction.

The event was the Sumatran Mount Toba volcanic supereruption—the largest in the past 25 million years. It threw up so much smog into the atmosphere that it triggered an intense ice age that lasted for a millennium. In the course of that estimated 40 generations our ancestors' numbers plummeted to no more than a few thousand survivors, and possibly only in a handful of East African enclaves.¹⁸ To be sure, the turn-around in the species' prospects thereafter can be read as the great breakthrough in its development, this time all the more remarkable because this "Revolution of the Upper Palaeolithic" appears not to have involved any genetic change but rather a slew of behavioural and cultural ones. But aspects such as "an unprecedented degree of social cooperation," combined with an ability to anticipate changes in the environment—the latter the key cognitive tool which would set *Homo sapiens* apart from all other species, other hominids included—were selections and adaptations, it has been suggested, directly attributable to the post-Toba shock.¹⁹

Putting all other issues aside for one moment, these two geological thresholds offer two critical pointers on both the continuity and rupture elements of the human trajectory. The first is that confrontation with natural catastrophe actually precipitated humanity towards an enhanced problem-solving mindset which enabled them to survive more than 40,000 years of further ice age—the major part of our deep history. The second is that in spite of their techniques and organisation for resilience, and thus the precious existential debt we ourselves owe to these ancestors, *Homo sapiens* nevertheless remained entirely dependent on a benign, long-term biospheric shift for its full flourishing. Without the onset of the Holocene and with it the "parametric conditions" of a basic climatic stability which (mostly) year on year, millennium upon millennium, allowed for cereal grasses to grow, humans would not have been able from their previous ice age *refugia* to colonise, or re-colonise the continents, let alone engender agriculture and civilisation.²⁰

From this perspective David Christian's plea that "history is *not* an attribute of human society alone, but that the earth itself, life on earth and even the universe have histories,"²¹ should read as perfectly legitimate; doubly so, as we hurtle towards our renewed encounter with extinction. Christian's own 'big' three-part natural history-cum-human history

¹⁸ Stanley H. Ambrose, "Late Pleistocene Human Population Bottlenecks: Volcanic Winter and Differentiation in Modern Humans," *Journal of Human Evolution* 34, no. 6 (1998): 623-51.

¹⁹ See Fred Pearce, *Confessions of an Eco-Sinner: Travels to Find Where My Stuff Comes From* (London: Eden Project Books, 2008), chapter 31, "Close Shave: Why We are All Children of Toba," for cogent reinforcement of the Ambrose thesis.

²⁰ Chakrabarty, "The Climate," 217-18.

²¹ Quoted in Tom Griffiths, "A Humanist on Thin Ice," *Griffith Review* 29 (2010), <http://www.griffithreview.com/edition-29-prosper-or-perish/a-humanist-on-thin-ice>. Thanks to Marc Hudson for pointing me in the direction of this important article.

periodisation approximates quite closely with the schema herein.²² His reconfiguration of the human aspect into a much deeper cosmic timeframe does not preclude micro-levels. Just as geological epochs can be broken down into more specific strata, each sediment with its own distinctive signature fossils, so can the detailed human record be equally recovered, through increasingly sophisticated environmental techniques. While most historians will not or ever be expert in such techniques, each will have other more traditional, including written sources with which to argue the case for further breakpoints in such a history.

Certainly, such a proposition can only engender intense disciplinary resistance. To argue for time-scales, ideas and methods more in keeping with archaeology, geology or even astrophysics, would be to demand not only an unconscionable wrench out of most colleagues' comfort zones but an almost perverse desire to wreck the whole order of (very often for the individual practitioner, painstakingly mastered) specialisation, each sub-division underpinning "entire systems of teaching, examination, research funding, public assessment."²³ More tellingly, this working historian, in practice, would display the same caution as others about any single causative factor, even a sustained climate one, or its consequent environmental impact, determining the course of history, when set against the totality of political, societal and cultural trends over decades or even centuries.

For instance, while a series of combined climate and tectonic plate shocks, c.1250-1100 BC, associated with the onset of neo-glacial conditions, may have been a key factor in bringing deeply-embedded Bronze Age civilisations to a spectacular end in one of several Holocene "Dark Ages,"²⁴ did this preset the slow and tortuous post-Bronze Age recovery towards the even more aggressive, violently empire-building civilisations of the new "Iron Age," or, indeed, to the cosmological life-affirmations of the "Axial Age" religions? By the same token, while we now know that it was a climatic shift which was the fundamental cause of first the "Great European Famine" of 1315-18, then a generation-later, the epidemiological after-shock of the wholly more catastrophic Black Death,²⁵ are we to assume that these events and the subsequent related sequence of poor harvests and food shortages of the early modern Little Ice Age were the fundamental catalyst to north-west European expansion into the wider world? And thus to the human activities which paved the way for the Anthropocene?

Dipesh Chakrabarty speaks of humanity "stumbling" into the Anthropocene, Tom Griffiths of "tumbling" into it.²⁶ Viewed through a standard historical prism this in itself should not surprise. As Holocene humanity became organised in increasingly populous, complex societies, the possibilities for how history might pan out became literally endless. Human agency intermeshed with a high degree of contingency always determined that much. Yet this

²² David Christian, *Maps of Time: An Introduction to Big History* (Berkeley CA: University of California Press, 2004). His schema is of Palaeolithic, Holocene and Present Era from c. 1500.

²³ Corfield, "POST-Medievalism," 381.

²⁴ Brian Fagan, *The Long Summer: How Climate Changed Civilisation* (New York: Basic Books, 2004), for wider discussion of the entire Holocene sequence.

²⁵ See Jim Galloway, "Unit 3, Climate Change as Harbinger of Disaster: Population, Famine and Disease in the 14th Century," in "Past Actions: Present Woes, Future Potential: Rethinking History in the Light of Anthropogenic Climate Change: A Teaching Guide by Rescue!History", http://www2.warwick.ac.uk/fac/cross_fac/heahistory/elibrary/internal/co_levene_pastactions_2010073

²⁶ Chakrabarty, "The Climate," 217-18; Griffiths, "A Humanist."

also might suggest why the notion of a human-induced, geological threshold demands all the more serious historical scrutiny. Certainly, the emergent, Western-led, global economic-political system, from c.1750 onwards, was hardly the first to attempt to take control of biospheric flows of energy and resources in excess of Nature's own ability to replenish. In this sense it represented no more than an addition to the litany of societies whose signs of impending collapse were marked by unmitigated political and social violence. The key difference is that while in Mesopotamia, Easter Island, or Maya Meso-America collapse may have been isolated to these regions or their hinterlands, the outstanding characteristic of high-Anthropocene environmental breakdown is that it is likely to take place within a single, human world order.²⁷

Moreover, what both fuels and drives this global system is the same uniquely historical force that is radically disrupting those once parametric Holocene conditions. It should be unnecessary to reprise here that what we are talking about is the atmospheric burning in the twinkling of a geological eye of a sequestered but finite source of solar energy, — i.e. rotted organic matter, as laid down over 350 million years—at the rate of hundreds of thousands of litres or kilos *a second*.²⁸ Similarly, it should be clear that this global human system, qua system—leaving aside the climate consequences—stands or falls on this alchemy-like conjuring trick.²⁹ It also happens to be at the heart of the 'metabolic rift' (as ecologically-minded Marxists would say) that separates that great mass of us from Nature.³⁰ To be sure, the implicit environmental destructiveness of this Nature-detached, capitalist-driven, fossil-fuel enabled, one-way consumerist mode does not apply to the entirety of today's humanity. One paradox of the high-Anthropocene is that there remain billions who live literally by the sweat of their brow (dependent as they are on *direct* solar energy) as did the vast majority of our Holocene forbears. But that discrepancy only highlights a final, very important division between the dominant humans of this current epoch and those who came before.

In the past there was always religious authority reminding rulers and ruled alike of the consequences of overweening appetite, even when that authority was not heeded. The ancient, sacred texts called such self-aggrandisement *hybris*—literally 'wanton violence'—against the divine order of Nature.³¹ Yet a key cultural characteristic of the high Anthropocene is the rejection of any constraint or restraint on material profligacy. On the contrary, it is not simply sanctioned, it is universally mandated as the basic building block of economic prosperity and growth. And doubly so by dint of a fundamental Enlightenment premise that through scientific knowledge humanity might be liberated from both fear as well as perpetual labour. Having

²⁷ See Jared Diamond, *Collapse: How Societies Choose to Fail or Survive* (London: Penguin, 2005); Joseph A. Tainter, *The Collapse of Complex Societies* (Cambridge: Cambridge University Press, 1988).

²⁸ See Tony Waterston, "The Public Health Implications of Climate Change," power-point presentation, Crisis Forum "Climate Change and Violence" workshop 5, York St John University, 18 August 2011, http://www.crisisforum.org.uk/events/workshop5_resources.php, for some recent statistics on fossil fuel usage.

²⁹ George Monbiot, *Heat: How We Can Stop the Planet Burning* (London: Penguin, 2006), 1-3, on the Faustian implications of fossil fuel usage.

³⁰ John Bellamy Foster, "Marx's Theory of Metabolic Rift: Classical Foundations for Environmental Sociology," *American Journal of Sociology* 105, no. 2 (1999): 366-405.

³¹ McIntosh, *Hell*, chapter 5, "Pride and Ecocide," esp. 112, 115.

arrived, ostensibly, at the conditions for material happiness, the small matter of environmental overreach appears to have no moral, let alone economic standing, at least for the social organism as a whole. To be sure, it is precisely the science of the matter which should be scaring us witless. Yet the paradox is that minus the psycho-dynamic grounding—historically provided by religious notions of ‘good’ and ‘evil’—which might otherwise have enabled our individual and collective imaginations to be mentally alert to the crisis, Anthropocene humanity is singularly ill-prepared and desensitised to the planetary Nemesis which awaits it.³²

Future

When general recognition comes, long after any chance of mitigating the situation has gone, there will be both rage and violence. It is unlikely to be limited to a demotic fury. As nation-states—the hegemons in the van—struggle to secure for themselves the remaining residual sources of fresh water, food and oil on the planet, the chances of increasingly frenzied, social Darwinian conflict tipping over into a spasm of universal self-destruction, the resort to nuclear weapons included, are entirely plausible. If this happens it will not be climate change *per se* which will bring the Anthropocene to its squalid terminus but ourselves.³³ But even were Western society to avoid this particular fate (for billions in the Third World violence has already been long in train) the possibility of whatever comes next in terms of *ongoing* geological succession including a period of general human recovery or replenishment, remain *implausible*. Our previous reference to hysteresis implies as much, even if by some miraculous intervention humanity’s carbon footprint could be cut to zero.

But how can one be so sure of this bleak prognosis? And, moreover, is it the right and proper role of an historian to be making such prognostications at all? Historians are well aware that such ‘end is nigh’ claims have been a facet of the more colourful language of disturbed individuals, or, more likely, millenarian religious sects, across historical time. And they will know that these claims can often tell us valuable things not just about the nature of crisis in any given society but its underlying cultural anxieties, indeed milieu. However, such analysis does not obviously require the analyst to accept the forecast at face-value.

Those familiar with the work of David Wasdell’s independent, decade-long and highly specialised quest to understand the dynamics of anthropogenic climate change in a truly holistic sense, may have grounds for considering otherwise. Wasdell’s project focuses on combining into a macro-picture the various earth sub-system feedback mechanisms amplifying the effect of the anthropogenic disturbance. In this way he has repeatedly confounded more conservative estimates for what will be the likely average change in surface temperature before the dynamic thermal equilibrium of the planet is re-balanced. If this more or less one-man attempt to bring everything together into a dynamic climate system matrix makes Wasdell an undoubted maverick, he remains one who is not only an accredited reviewer for the Intergovernmental Panel on Climate Change (IPCC) but somebody—perhaps in no small part

³² Sigurd Bergmann and Heather Eaton, “Awareness Matters: Introductory Remarks about the Interwoven Gifts of Life and Belief,” in Bergmann and Eaton, *Ecological Awareness*, 3, for exploration of the notion of ‘wakefulness’ to our current situation.

³³ Mark Levene, “Afterword: From Past to Future: Prospects for Genocide and its Avoidance in the 21st Century,” in *The Oxford Handbook of Genocide Studies*, eds. Donald Bloxham and A. Dirk Moses (Oxford: Oxford University Press, 2010), 638-59, for further development.

because he is not governed by political or institutional constraints—who is repeatedly invited to speak to the highest levels of state and inter-state governance around the world.

In early 2011, Wasdell produced the latest of his ongoing studies on the value of climate sensitivity: put simply, the likely change in the earth's temperature as measured against changes in its atmospheric composition, including the amplification effects from the feedback dynamics of the natural world. Wasdell's number-crunching conclusions are that once one factors in *all* the feedbacks, which he argues most of the major computer models to date have only partially or incorrectly done, the value of climate sensitivity would have to be increased by a factor of two and a half times that currently endorsed by the last IPPC (4th) Assessment Report in 2007. In terms of average surface temperature rise this would mean a difference between a consensual figure of three degrees and the minimum of 7.8 degrees Celsius which Wasdell proposes should now replace it.³⁴

Let us try and put these figures into a layman's context. The historically dramatic shift from the Medieval Warm Period to the Little Ice Age around 1300 AD involved a temperature fluctuation in the range of about one degree.³⁵ Standard "state, corporate and NGO responses to climate change are predicated on normative assumptions of a 2 degree... 'dangerous limit'" even if this figure tells us more about how policy makers seek to construct climate change as a quantifiable but manageable *future* problem rather than as something dangerous now.³⁶ Mark Lynas in his rightly acclaimed *Six Degrees*, presents a series of gut-wrenching insights into how, as we might approach the five degree marker, our planet becomes increasingly unrecognisable and the chances for sustaining life on it decrease to zero. One might add that before even three degrees—which risk assessors, working to the precautionary principle and linked to cost-benefit analysis, still use to make calculative planning geared towards long-term societal recovery—the scale of destruction and the, by then, likely run away effects of feedback amplification make of the figure an irrelevance.³⁷ Significantly when Lynas arrives at six degrees—the IPCC's worst-case scenario—he only offers evidence from the deep geological record to demonstrate what the earth might be like. There were indeed great swings of temperature in the past; after all, we have been living in a very unusually benign episode *within* a Quaternary (Pleistocene, Holocene and *now* Anthropocene) range in which ice ages have been the norm. What Lynas emphasises, however, is how the shift into climate change in previous epochs was associated with the gradual, then dramatic build-up of interacting composites of positive feedbacks. The relevant literature repeatedly focuses on the release of high levels of methane hydrates into the atmosphere. It was such an eruption which brought about the mass extinction event at the end of the Permian period, 251 million years ago, the

³⁴ David Wasdell, "Critical Issues in the Domain of Climate Dynamics," Paper presented to the Department of Land Economy, University of Cambridge, 3 November 2010, www.apollo-gaia.org/Climate%20Sensitivity.pdf

³⁵ Griffiths, "A humanist."

³⁶ Christopher Shaw, "Dangerous Limits; Climate Change and Modernity," in *History at the End of the World?: History, Climate Change and the Possibility of Closure*, eds. Mark Levene, Rob Johnson and Penny Roberts (Penrith: Humanities Ebooks, 2010), 94.

³⁷ Stefan Skrimshire, "Seeing Beyond the Tipping Point: Climate Risks, Faith and Political Action," in Bergmann and Eaton, *Ecological Awareness*, 102-105.

worst of its kind in the geological record, wiping out 95 per cent of species on earth. It took a mere "50 million years—well into the Jurassic—before anything like pre-extinction levels of bio-diversity returned."³⁸ The escape of methane from the permafrost of a melting Arctic happens to be currently a point of acute anxiety among earth scientists studying the circumpolar effects of climate change.³⁹ And Lynas was 'only' speaking of six degrees. Not the 7.8 degrees of Wasdell's calculation.

Present

What, then, is the point of pursuing this argument at all, unless perhaps as some peculiar statement at the far end of deep ecology or 'disanthropic' thought celebrating humanity's demise?⁴⁰ I would certainly concur with the critique expressed in 'Uncivilisation, The Dark Mountain Manifesto', that "our whole way of living is already passing into history."⁴¹ But what equally should matter is the manner of that passing and most fundamentally whether it can be achieved without a resort to an amplified version of the violence we are already perpetrating against our planet and ourselves. Alastair McIntosh has put the matter eloquently:

The question of whether technology, politics and economic muscle can sort the problem is the small question. The big question is about sorting the human condition. It is the question of how we can deepen our humanity to cope with possible waves of war, famine, disease and refugees without such outer wounds festering to inner destruction.⁴²

From this perspective, climate change as such is the occasion, *not* the cause of humanity's ultimate challenge. Or put interrogatively, in "living the pathos of the end" does there remain a way of "bringing hope to crisis,"⁴³ perhaps even a summoning of humanity towards a *reason* (in the ancient, philosophical sense of *Logos*) for our twilight existence? Arnold Toynbee's great valedictory work, *Mankind and Mother Earth*, an all-encompassing metahistory of 'civilisation' within its biospheric context, intimated that human salvation ultimately can only come through the abandonment and renunciation of "suicidal aggressive greed" in favour of an opposite ideal founded on a spiritual consciousness of the "non-material and infinite." The loftiness of

³⁸ Mark Lynas, *Six Degrees: Our Future on a Hotter Planet* (London and New York: Harper Perennial, 2007), chapter 6, "Six Degrees," esp. 226-34.

³⁹ Dan Krotz, "As Climate Changes, Methane Trapped under Arctic Ocean could Bubble to the Surface," 4 May 2011, <http://newscenter.lbl.gov/feature-stories/2011/05/04/methane-arctic> See also Arctic Methane Emergency Group (AMEG). www.ameg.me/

⁴⁰ See Greg Garrard, "World Without Us: Some Types of Disanthropy," *SubStance* 41, no.1 (2012): 40-60, for ecocritical terminology, survey and reflection.

⁴¹ Paul Kingsnorth and Dougald Hine, *Uncivilisation: The Dark Mountain Manifesto*, 2009, www.dark-mountain.net

⁴² McIntosh, *Hell*, 191. Also idem., "Popping the Gygian Question," *Dark Mountain* 1, Summer (2010): 101-107, for McIntosh's own dissenting conversation with the *Uncivilisation* project.

⁴³ Oliver Smith, "Living the Pathos of the End," and Sarah S. Amsler, "Bringing Hope to Crisis: Crisis Thinking, Ethical Action and Social Change," were the titles of two of the papers among the many presented in a remarkable trio of interconnected "Future Ethics," workshops organised by Stefan Skrimshire at the Lincoln Theological Institute, University of Manchester, through 2008-9. Many of the papers in revised form appear in Stefan Skrimshire, ed., *Future Ethics: Climate Change and Apocalyptic Imagination* (London and New York: Continuum, 2010).

the appeal combined with its obvious ethereality, may explain why few contemporary historians have time or patience with this once eminent historian. Yet writing in the early 1970s, Toynbee was prescient in his recognition—considerably before anthropogenic climate change was widely understood—that humanity’s potency had become greater than that of the biosphere itself and that this carried with it an ability to liquidate all planetary life. Nor did he stop short of describing this as nemesis.⁴⁴ The burden on today’s historians to share this recognition may simply be too great. But in returning to our profession and hence its broader responsibilities to the common weal, I will conclude by briefly outlining an argument for disciplinary purposefulness in the face of ‘the end.’

In 2007 I asked: “How exactly do we understand the moment we are in?”⁴⁵ At that juncture I still held onto the faintest of hopes that the political movers within the international system might grasp the gravity of the situation as repeatedly urged by the earth scientists and so, finally, belatedly, initiate a rapid but *orderly* retreat from the carbon economy. This was always a remote prospect given the congruence between it and the global capitalist economy. Moreover, as Jared Diamond has pointed out—where there has been heavy long-term financial (and emotional) investment in any human project, the “sunk-cost effect” generally rules, however redundant or irrational the premise upon which that investment was built.⁴⁶ The years since 2007 confirm the negative appraisal. Much has been made of the Copenhagen Climate Summit (COP-15) in December 2009 as the great missed opportunity. An alternative assessment might instead focus on the economic meltdown of 14 months earlier as the real moment of truth. Faced with the imminent demise of the banking system at the core of an economic growth engine which is first cause of all our contemporary biospheric woes, the world’s hegemonic leaders blinked and then, in the space of days and hours, proceeded to plough all their (our) available resources into propping up that self-same system. Whatever course the ‘recession’ takes hereafter what in world historical-cum-natural historical terms the events of 2008 signify is that the international system *qua* system lacks the mechanisms, imagination or will for re-setting humanity on a course of renewal. In short, there is no contingency Plan-B and no top-down road-map bar the redundant and entirely unsafe ‘business as usual’ one. Looked at in terms of a normative *longue durée*, this hardly matters. Sooner or later, an outworn order is bound to implode or collapse. But, given the *real*, environmental crisis against which the 2008 events are set, the latter’s legacy in terms of long-term human prospects is profoundly cheerless. Carbon reduction aims, hence climate change mitigation, always had to operate within a timeline determined by what the biosphere could withstand. That mitigation path is now blocked off. As for Nature, metaphorically speaking, it has already passed its verdict.

But if this assessment is correct, it can only raise one of two options for professional practitioners of any kind, historians included. The first is to carry on making obeisance to the system and attempting to extract whatever short-term professional or individual advantage one

⁴⁴ Arnold Toynbee, *Mankind and Mother Earth: A Narrative History of the World* (New York and Oxford: Oxford University Press, 1976), 18.

⁴⁵ Mark Levene and David Cromwell, “Introduction: Survival Means Renewal,” in Cromwell and Levene, *Surviving Climate Change: The Struggle to Avert Global Catastrophe* (London: Pluto Press, 2007), 10.

⁴⁶ Diamond, *Collapse*, 432.

can by feeding and supporting its moribund existence.⁴⁷ Of course, it will not die quietly. On the contrary, its hegemonic elements, sooner or later, will marshal and deploy whatever military and/or industrial resources they can throw in the path of the crisis in an attempt to recover what is environmentally unrecoverable. The systemic default position on this fast-approaching horizon is geo-engineering. Independent bodies such as the Royal Society are likely to be drawn in to give endorsement to such representative projects of high-Modernity, on the one hand, the most brazen examples of technical fix yet devised “to take control of the climate”, on the other.⁴⁸ There is no reason why historians—alongside other professionals—cannot offer themselves as advisers, cheer-leaders and propagandists for such projects. For instance, they may be able to garner policy makers’ praise by helping to smooth the path of public opinion towards acceptance, or at least acquiescence of such grand designs, perhaps by quoting any number of historical precedents where states have argued their efficacy and need in terms of the greater good and alleged long-term *developmental* benefits. They may even be able to offer a rearguard action in support of their institutional autonomy by offering caveats and the need for consultative processes and safeguards to be built into these Promethean programmes. Whether they prove futile or otherwise, to align oneself with them is effectively to accept a super-enhanced phase of ‘business as usual’, when all logic points to its demise, plus, much more pointedly, a prolonged spasm of ever more controlling, annihilatory violence whatever the consequences for people and planet.⁴⁹

There is a second option: though it is an entirely more subversive one. It would involve prising open and then widening up an *alternative space* where all those who have repudiated the possibility of amelioration through the system can fully concentrate their individual and collective energies towards reconciliation with Creation—and hence reconciliation with *ourselves*.⁵⁰ Such a project does not preclude the probability of an end to humanity in the very near future. It cannot be geared towards some dispensation in the face of our extinction. Its compensation, if that is in any sense an appropriate term, lies rather in the knowledge that we have sought to act as guides towards a reawakened sense of humanity’s interconnectedness with the living planet, and in that process may have helped facilitate a *recovery* of wisdoms, both practical and spiritual, which have eluded most of humankind through the long centuries

⁴⁷ Dean Bavington, “Environmental History during the Anthropocene, Critical Reflections on the Pursuit of Policy-Orientated History in the Man-Age,” *EH+*, 27 March 2011, <http://niche-canada.org/node/9933>, for a searing critique.

⁴⁸ See Royal Society discussion meeting, “Geo-engineering: Taking Control of our Planet’s Climate,” 8-9 November 2010, <http://royalsociety.org/Geoengineering-taking-control-of-our-planets-climate/speakers> Also James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed* (New Haven and London: Yale University Press, 1998), for the high-Modernity thesis.

⁴⁹ See Harald Welzer, *Climate Wars: Why People Will Be Killed in the 21st Century* (Cambridge: Polity, 2012) and Christian Parenti, *Tropic of Chaos: Climate Change and the New Geography of Violence* (New York: Nation Books, 2011), for more on this theme.

⁵⁰ Rather belatedly in redrafting this article Bruno Latour’s “Will Non-Humans be Saved? An Argument in Ecotheology,” *Journal of the Royal Anthropological Institute* 15, no. 3 (2009): 459-475, offered something of a lifeline as to how the term Creation, rather than Nature (from which Latour argues ‘modern’ Christianity, at least, has become divorced), might provide a terminology reconcilable with Darwinian science yet also commensurate with the religious urge “to seize, or seize again, this world, this same one and only world, to grasp it *otherwise*...” 473.

of hubris and domination. I do not have the scope here to fully develop this theme. Necessarily, in down-to-earth terms, such a project can only be geared towards a right-living in which actual or anticipated material scarcity is both cultivated and celebrated instead as an abundance. The path towards reconciliation is also one fundamentally grounded in the principles of non-violence. That said, the notion of alternative space may take many forms and operate on many levels. A great myriad of individuals, communities and groups world-wide, consciously, or unconsciously, practice its tenets.

What could the historical discipline bring to this quest? First of all, as we have already implied, a re-alignment of history with natural history. That, interestingly, would also mean the re-population of our alternative space with peoples who have repeatedly been flung to the very margins or even beyond history altogether by dint of their 'primitiveness' and, or, non- or counter-relationship with dominant, progress-driven Modernity. In other words, all the hunter-gatherers, nomads, peasants, and migrants, past and present, each in their different ways steeled in resource scarcity; each with implicit and explicit notions of restraint and limitation built into their cultures and cosmologies. By high-Anthropocene nearly all of these diverse societies have become the poor, weak and dispossessed of the earth. And yet for serious paradox, through the very resilience built into their fibres, these are the self-same societies most likely, *if any*, to become the epoch's survivors.⁵¹

Of course, one might argue that historians *have* taken into their embrace all manner of 'subaltern' groups, and through the adoption of many linguistic, psychological and anthropological insights worked towards an empathetic exploration of the *mentalité* of diverse human cultures. But it is one thing to analyse a society (even lovingly), quite another to take it *seriously*. How for instance, do we respond to something one of my students uncovered in her research on Australian aboriginal views of water as something which is "living" and, therefore, has "moral, spiritual and social consequences"?⁵² In other words, are we willing to take on board both the practical life-skills and cosmologies of human communities living before or apart from dominant Anthropocene modes, not as if they were relics of some quaint but outdated yesteryear but as cultures which might teach the rest of us something not just about managing our material wants but psychological well-being in times of unending adversity?⁵³ To continue the antipodean thread, while it was clearly the benign Holocene which forged the general environmental conditions enabling humanity's mainstream take-off towards civilisations, from our present vantage point how might we view the utterly versatile and culturally creative Aborigines who sustained themselves through persistent ice-age droughts in the central Australian deserts from *fifty thousand years earlier*?⁵⁴

⁵¹ Mark Levene and Daniele Conversi, "Subsistence Societies, Globalisation, Climate Change and Genocide: Discourses of Vulnerability and Resilience," *Journal of Genocide Research* [forthcoming].

⁵² Sophie Mihailovic, "Discuss the Ways in which the Value of Water is Portrayed Through the Culture of Australian Aborigines. How do these Compare with how the Wider World Values Water?" "In the Face of Humanity" (HIST 2054) undergraduate module, University of Southampton assessed essay (2010).

⁵³ See Hugh Brody, *The Other Side of Eden: Hunter-Gatherers, Farmers and the Shaping of the World* (London: Faber, 2001), for revelatory insights.

⁵⁴ Griffiths, "A humanist."

What is at stake is more than space but also time. There is, of course, the Braudelian long-view.⁵⁵ Magnificent and life-affirming as it is, whether it is anymore *sufficient* to getting to grips with the anthropocenic temporal rupture we are now living through than Spenglerian pessimism—for all the latter's insight into a 'Faustian' (Western) civilisational striving for the unattainable—is debatable.⁵⁶ The probability of foreclosure on the human experience as an ultimate consequence of such striving has carried with it herein the argument that it ought to be making historians especially think long and hard about our place in universal time. Explorations by physicists of a space-time continuum have led to dramatic shifts towards a four-dimensional model of phenomenal reality.⁵⁷ Whether such insights can offer solace for the rest of a humanity 'imprisoned' within its climate-induced hour-glass, remain doubtful. Breaking out from that would require us instead to be able to see some *human* point and purposefulness as we move towards the end.

Interestingly, there have been historians who, while they may not have been able to confront the notion of species' obliteration, have not only grappled with realities of catastrophic historical rupture but have sought to interpret such events as containing the seeds of a life-transforming potential. One who stands out is the German-Jewish historian-philosopher, Walter Benjamin. In various writings culminating in his posthumously published *Theses on the Philosophy of History*, from 1940, Benjamin contrasted 'empty time' with what he called 'Now-time' (*Jetztzeit*). What is also striking about the contrast is Benjamin's representation of the former as quantitative, homogenous linearly 'progressive' and by implication Taylorian clock-orientated time, compared with the qualitatively 'filled' but heterogeneous historical time of the latter. In short, Benjamin's repudiation of the former also carries as its corollary not just his affirmation of 'Now-time' but as an expression of historical *messianism*.⁵⁸

Benjamin's sense of historical rupture came out of the early 20th century catastrophes of Modernity, Nazism included, set against the initial optimism engendered by the Russian Revolution. In fact, various thinkers—Ernst Bloch, Martin Buber, Gershom Scholem whether or not associated alongside Benjamin with the Frankfurt school—found themselves mid-century, grappling with repeated spates of political and environmental catastrophe which progressive conceptions of history dismissed as little more than unfortunate aberrations or collateral damage on the forward march of Modernity. By contrast, our dissenting voices struggled both to find a wider but "discontinuous vision of temporality" against the inevitability of industrial civilisation and, at the same time a break-out from "the eternal repetition of the ever-the-same" into a "qualitatively distinct utopian world."⁵⁹ The fact that they shared Jewish origins, does not obviously explain their embrace of actually very subversive Judaic ideas given that nearly all of them came from stridently secular backgrounds. Instead, attraction to the messianic seems to

⁵⁵ Fernand Braudel, *Civilisation and Capitalism: 15th-18th Century*, 3 volumes, trans. Sian Reynold (Berkeley CA: University of California Press 1979).

⁵⁶ Oswald Spengler, *The Decline of the West*, eds. Arthur Helps, and Helmut Werner, trans. Charles F. Atkinson (New York: Oxford University Press, 1991).

⁵⁷ Smith, "Ecology," 114.

⁵⁸ See Michael Löwy, *Redemption and Utopia: Jewish Libertarian Thought in Central Europe, A Study in Elective Affinity*, trans. Hope Heaney (London: The Athlone Press, 1992), 205-207.

⁵⁹ Löwy, *Redemption*, 204.

have been in major part because it offered a resource for critical thinking about the possibility of discontinuity to abstractly 'progressive' notions of historical time and, concurrently, a basis for a practical regrounding of revolutionary action in which ordinary humans themselves might become active agents for radical change.

Particularly relevant here is a core Judaic idea: *Et Ketz*, 'the Time of the End.' The notion is predicated on a view of temporality in which disjuncture is not aberrant but inseparable from the *entire* historical sequence. It also is one in which the overthrow of worldly powers, by God—but in which oppressed humanity may have a hand—leads (as in biblical prophecy) to the establishment, or re-establishment of "an age of harmony between man and God, between man and Nature, and among men."⁶⁰ To be sure, once one is onto this eschatological terrain, even metaphorically, one is effectively being drawn towards engagement with a whole raft of millenarian-infused ideas—utopia, chiliasm, prophecy, apocalypse—which are usually dissonant, even repulsive to modern, secular ears. But that may tell us more about the way Modernity has chosen to suffocate the historical relevance of the messianic rather than the ideas themselves. For example, when the language of climate change catastrophe is particularly graphic it is often disparagingly referred to as apocalyptic, forgetting that the originally Greek term *apokalyptein*, meant an uncovering of something which had been concealed: a *revelation*. As McIntosh explains: "The word has a technical usage that implies a transformation, perhaps in consciousness, by which an existing corrupt socio-ecological order is turned upside down by the astonishing irruption of new hope."⁶¹

This also resonates with Toynbee's juxtaposition between the age-old pursuit of worldly material power and the struggle for a spiritual self-mastery.⁶² Put into more precise historical context, it leads us back to the civilisational crises of the Axial Age and to the religious counter-cultures which not only sought to defy the premises upon which militarily-aggressive empires were built, but to guide an oppressed humanity towards genuine paths of redemption. In the Judaic case, what was further posed was the creation of a wholly other world, a heaven on earth, a New Jerusalem. Its moment would come through messianic rupture. But as Benjamin apprised from Judaic scripture, this need not be a distant moment in the course of an otherwise empty time, "for in it every second of time was the narrow gate through which the Messiah could enter."⁶³

Benjamin's desire for an active human participation in the coming of the Kingdom has its close corollary in radical Christian usage of the term *kairos*. "The notion describes transformation of lived time into a time of action. The translation from the Greek is generally given as 'the right moment' or 'the opportune.'"⁶⁴ But this is not simply a concept with attraction to theologians. Jacques Derrida, among others, repeatedly explored the notion of a time which is 'out of joint', and hence unpredictable as also one in which the consequent

⁶⁰ *Ibid.*, 19.

⁶¹ Alastair McIntosh, "Foreward," in Skrimshire, *Future Ethics*, ix.

⁶² Toynbee, *Mankind*, 18.

⁶³ Walter Benjamin, "On the Concept of History, 1940,"

<http://www.marxists.org/reference/archive/benjamin/1940/history.htm>

⁶⁴ Stefan Skrimshire, *Politics of Fear, Practices of Hope: Depoliticisation and Resistance in a Time of Terror* (London and New York: Continuum, 2008), 107.

destabilisation of “the normal synchronic logic of events” has its own liberating potential.⁶⁵ The linked notions of *Et Ketz* and *kairos* as ‘special, chosen, timely time’ which is the God-given *now* is surely a bequest from the historical record which ought to have particular resonance for our current situation. We do not have to be religious ‘believers’ to grasp their contemporary relevance. From a historian’s point of view what should especially matter is the way during times of relentless, ongoing, catastrophic crisis ideas have emerged which, questioning the normative *Zeitgeist*, have looked instead to the potential in the *human condition* for wrenching time out of its empty corruption and investing it with a transformative power. It is, indeed, ironic that we live today according to a calendar of supposedly normative time whose first cause was exactly such a moment of subversive, millenarian rupture.

What is equally significant about this historically-grounded eschatological *resource* is the manner in which it transcends the argument for purely and simply merging history with natural history. Ideas about the end appear to be an *outcome* of civilisational development from the ancient Near East, yet endured when all such civilisations had long gone the way of Nineveh.⁶⁶ Why? Fundamentally, I suspect, because they are expressive of a deeper consciousness about what is ‘wrong’ with civilisation and what needs to be put right to set humanity on its path to reconciliation with itself and Nature. That path implicitly carries with it a great inventory of unfinished business by way of environmental and social justice. In our own time, the climate campaigner, Aubrey Meyer exquisitely captured the essence of this purposefulness in his entirely scientific proposition for a route—Contraction and Convergence—by which humankind might arrive at *equal* carbon entitlements which would also provide a practical framework within which yearly, incremental carbon reduction could be brought to safe-limits.⁶⁷ While mitigation of dangerous climate change—and within an actually, normative time-ordered process—has been the project’s ostensible aim, underlying it is an ethical end-goal suffused with compassion and loving-kindness for all living things. Yet the reason why Meyer’s proposition has been and remains still-born is not on account of its practicality, but, more pointedly, because its implementation would undercut, indeed starve, the sources of hegemonic worldly power.

One can almost speak of Contraction and Convergence in the past tense now because the chronological time has come and gone in which the international system might have grasped mitigation as its urgent priority. Looking back from a further vantage point, we are unlikely to be surprised by the system’s failure. Indeed, in a sense there was no failure because it had nowhere else to go other than ‘business as usual.’ What will be truly disastrous for humankind, however, is if—as a consequence of the system’s impending climate-precipitated collapse—the rest of us give way to despair, anomie and even greater estrangement from each other. Yet there is an alternative to this ‘system’ dependency—and implicit violence. As believers or agnostics, humanists or atheists, those who were system acolytes who have had

⁶⁵ Ibid., 134-36. See also Antonio Negri, *Time for Revolution*, trans. Matteo Mandarini (London: Continuum, 2003), 163, for a consciously Marxist appropriation of the notion of *kairos* for “the apperception of the creative moment.”

⁶⁶ See Norman Cohn, *Cosmos, Chaos and the World to Come: The Ancient Roots of Apocalyptic Faith* (New Haven and London: Yale University Press, 1993).

⁶⁷ See Aubrey Meyer, “The Case for Contraction and Convergence,” in Cromwell and Levene, *Surviving Climate Change*, 29-56.

their Damascene conversion, or dissenters who were never there in the first place, we might yet take into *our* own hands the opportunity which this crisis now offers: to create our own alternative, right-living space and to invest its accompanying special time with *meaning*. This is not the path of resignation but on the contrary, one of heightened awareness followed by practical grass-roots action for and by the common weal. Historians might have a critical role as pathfinders and beacon carriers in this process by bravely demonstrating that in the context of where we find ourselves this is neither misplaced nor lunatic but rather a project whose legitimacy and worth is embedded in human consciousness and historical experience.

The difference now is that we are truly living in an anthropocenic epoch which heralds the human end. It is time to put our house in order. For our individual and collective wellbeing what other choice do we have but to strive for some measure of what the kabbalists call *tikkun olam*, some healing of our condition on this earth and thereby, with it, some measure of cosmic repair? Or, as Christians, and indeed not just Christians might put it, so that we might finally receive some degree of *grace*. That, I propose, is something still worth striving for in this *kairotic* time.

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