

From the Anthropocene epoch to a new Axial Age: using theory fictions to explore geo-spiritual futures¹

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Earth scientists have proposed that the activities of a technologically enhanced humanity are tipping the Earth and its subsystems out of the Holocene – the geological epoch that, with its relatively stable climate, hosted the rise of agriculture and civilization – into a new and uncertain state, which it is proposed should be called “the Anthropocene”.² How might we think the Anthropocene through the lens of religion and the sacred? In any new “geo-spiritual formations” that might emerge – any new, more-or-less stable configurations of humans, non-humans, spiritual beings and Earth processes – what forms might religion take and what roles might it perform?

I have tried to explore such questions in a series of “theory-fictions”.³ Borrowing Karl Jaspers’ idea of the Axial Age, in these writings I have presented the cultures and religions of the Earth over the coming century as undergoing a “Second Axial Age”, a radical shift in thinking and praxis, involving a deeper awareness of being as conditioned by the dynamic material becoming of the universe on multiple spatial and temporal scales. As the idea of the (First) Axial Age is an important part of the backdrop for my theory-fictions – and one with a complex relationship with the emergence of the Anthropocene – it is worth rehearsing the significance of Jaspers’ ideas.

The Axial Age

Jaspers proposed that around the middle of the first millennium BCE a revolutionary shift in human culture occurred in Eurasia.⁴ The main evidence to which Jaspers brought attention was the near-simultaneous appearance, across a broad swathe of Eurasia stretching from Greece, through the Middle East to South and East Asia, of religious and philosophical classics regarded as the work of exceptional concrete historical individuals – works that quickly came to be regarded as fixed but timeless contributions to a shared human cultural heritage and the basis for further commentary. The usual examples cited were the work of the major Hebrew prophets, the writings of

¹ I would like to thank Brian Black, Carlos Mondragon, Douglas Osto, Kim Stanley Robinson, Ashkan Sepahvand and Adam York Gregory for conversations which were crucial in shaping the theory-fictions on which this chapter is based. Thanks are also due to Sigurd Bergmann and Celia Deane-Drummond for extremely helpful comments on an earlier draft of the chapter.

² Crutzen, “Geology of mankind”; Steffen, et al., “The Anthropocene”.

³ Szerszynski, “Liberation”; Szerszynski, “Onomatophore”; Szerszynski, “Martian Book of the Dead”.

⁴ Jaspers, *Origin*.

Plato and Aristotle, the Bhagavad Gita and the teachings of Buddha in South Asia, and the Confucian Analects and the Tao Te Ching in China. Jaspers and others subsequently argued that Axial cultures were characterized by the idea of a cosmological gap between the mundane and transcendent realms, which had two complementary corollaries: the relativization of local rituals and ideas of sacred power, now subject to interpretation and critique; and the idea that there are some truth claims which transcend particular social formations and are universally true for all cultures.⁵

Jaspers' ideas have not gone without criticism. Jan Assmann for example argues against the claim that there was a synchronous turning in Eurasian culture in the middle of the first millennium BCE.⁶ Using the case of Egypt, he argues that the arising of Axial features such as canonicity, cultural disembedding and universal truth claims occur at quite different times in different cultures across the world, encouraged by globalization and the shift from a "sectorial" literacy in which writing is confined to specialist activities to a wider "cultural" literacy where writing affects the operation of cultural memory.⁷ Scholars of indigenous cultures have also criticized the way that the literature on the Axial Age tends to exaggerate or misrecognize differences and relations between indigenous and so-called "world" religions.⁸ Nevertheless, despite such disagreements most critics seem to accept the validity and utility of the basic distinction between Axial and non-Axial cultures.

There are many ways in which the emergence of Axial cultures could be seen as a harbinger of the Anthropocene. In 1967, the historian Lynn White Jr. famously argued that Christianity "bears a huge burden of guilt" for the contemporary environmental crisis.⁹ White describes the victory of Christianity over paganism in Europe as a psychic revolution which elevated humans to a privileged status in the cosmos, banished the nature spirits who were the source of taboos on resource use, and thus laid the grounds for the systematic technological despoliation of nature that took place in later centuries. White's argument is particularly applicable to the Abrahamic religions, but aspects of his argument can with care be applied to all Axial cultures, which, in their invention of the abstract human and of universal ethics, created cultural forms that were ripe for export and expansion.

In my own analysis of nature technology and the sacred, the Axial Age is a stage in what I call "the long arc of monotheism", the contingent cosmological trajectory in the West that leads from the common heritage of indigenous cultures interacting with spirits of the Earth to secular modernity with its view of non-human nature as either a resource for exploitation or a Romantic object of veneration.¹⁰ Non-Axial, small-scale societies generally experience the world as a unified natural-divine cosmos, in which ritual is concerned not with other-worldly salvation but with reproducing harmonious existence in this world through interaction with the animal and spiritual beings with which it is shared. Agricultural and early urban societies tend to shift to an "Archaic" ordering of the sacred, similarly involved with the reproduction of a monistic cosmos, but in which deities become more definite gods with whom humans must interact in an

⁵ See discussion in Eisenstadt, *Axial Age Civilizations*, and Bellah and Joas, *Axial Age*.

⁶ Assmann, *Akhenaten to Moses*.

⁷ Assmann, "Myth of the Axial Age".

⁸ E.g. Cox, "A critique".

⁹ White, "Historical roots".

¹⁰ Szerszynski, *Nature, Technology and the Sacred*.

ordered way, organized into a proliferation of competing cults.¹¹ In the context of ancient Egypt, Jan Assmann calls this “cosmotheism”, a sacral ordering in which the cosmos is worshipped through a collection of deities.¹² Archaic societies manifest a shift from a more “magical” orientation focused on the *ad hoc*, circumstantial meeting of needs and crises towards “religion proper”, which involves a more systematic regulation of relations with supernatural beings through practices such as worship and sacrifice.¹³ Such a shift is associated with the emergence of more systematic thinking about technology, and such societies certainly developed relatively advanced and organized techniques for transforming the material world. However, members of Archaic societies typically see the aspiration to mastery over nature as dangerous and foolhardy, and understand social order and power in terms more of harmony with the cosmos than of power over it.¹⁴

By contrast, in Axial cultures, religious praxis becomes not about reproducing the cosmos but about turning away from it to a “higher” or “next” one – whether through conforming to religious law, a sacramental system, asceticism, mystical exercise, or philosophical discipline.¹⁵ In Israelite and later European religion, the supernatural powers of ancient divinities were progressively gathered together into the experience of a numinous, monotheistic God situated in a transcendent realm “outside” the cosmos. With the Protestant Reformation came a further development, in which the institutional and supernatural hierarchies that both constituted and spanned the gulf between the now-mundane world and the transcendent divine were stripped away. At the same time as this radicalized the gulf between the empirical and transcendent worlds, it also brought the latter close to each individual. In this context, asceticism became conceived not as an other-worldly “high watermark” of religious achievement that assumed a contrast with average, worldly morality, but as a straightforward refusal of worldly pleasures in favor of purposive conduct within the world.¹⁶ This formulation allowed the centered, Axial self to operate *outside* of world-denying practices, amidst the complexities of empirical social reality. There are themes of clear Anthropocene relevance here: as well as the Reformation elevating the *vita activa* and worldly action, its theology of radical transcendence enabled the emerging mechanical philosophy by rendering matter passive and knowable in a way it could not have been for the Greeks or medieval theologians.¹⁷ Newton and Boyle’s de-animation of nature would be just as crucial for the acceleration of technological change as the growing commercialization of society, by providing a way of looking at nature in terms of lawful regularities that could be harnessed to human need.¹⁸

The path from Jaspers’ “Axial Age” to the Anthropocene is a complex one. One must be careful before implying anything as simple as the idea that the innovations of the Hebrew prophets, Aristotle and Lao Tzu somehow led inexorably to the Great Acceleration of the late twentieth century; the interplay between cultural and material change needs to be disentangled by careful historical analysis. Nevertheless, it is clear that the worldview of the contemporary mastery of nature bears a close, if complex,

¹¹ Bellah, “Religious evolution”, 29–32.

¹² Assmann, *The Mind of Egypt*, 204.

¹³ Weber, *Sociology of Religion*, 28.

¹⁴ Mitcham, “Three ways”.

¹⁵ Bellah, “Religious evolution”, 32–6.

¹⁶ Weber, *Protestant Ethic*, 118–9.

¹⁷ Deason, “Mechanistic conception of nature”.

¹⁸ Arthur, *Nature of Technology*, 50.

relation to this cultural development. On the one hand, the contemporary understanding of the human being as mandated or even destined to dominate its home planet seems to be a complete rejection of some key Axial ideas. In its focus on the reproduction and optimization of immanent life-processes within *this* world, the modern “Anthropos” seems like a thorough rejection of the Axial sense that the role of this world is largely to point towards the *next* one, by both symbolizing transcendent truths and preparing the faithful for eternal life; indeed, in its immanentist definition of the human condition, modern culture seems curiously closer in some respects to that of small-scale societies.

Yet on the other hand the modern world view can be seen as continuing many Axial ideas in altered form, in what I have oxymoronically called the “modern sacred”.¹⁹ The modern notion of objective truth can be seen as a version of the transcendent axis, now made immanent within the very empirical world that was constituted by its ejection; the laws of nature, once seen as imposed on creation by its creator, are thus now seen as inherent to it. The abstract human subject – the Anthropos – has similarly come to take on attributes that had previously been ascribed to the divine: for example, whereas for Anselm it was God who was the necessary being – that being whose existence could not be denied without logical contradiction – for Descartes this status is assigned to the human subject. And the contemporary cultural imaginaries and hopes that circulate around technology can be seen as an introjection into the empirical world of salvational tropes once applied to God alone.²⁰

Is it possible to move beyond the orbit of the (First) Axial Age? If so, how might this help us to imagine alternative geo-spiritual futures: different constellations of human, planetary and spiritual realities? I explored such questions in my theory-fictions of the Suryamandalan Period.

Theory-Fiction and the Suryamandalan

The relationship between theoretical and fictional discourse in modernity is a complex one. Although sixteenth-century Renaissance humanism was the flowering of a very broad understanding of literary form in relation to truth, the scientific revolution in the following century encouraged a far more sharp delineation between scientific objectivity and other forms of speech and writing, encapsulated in Descartes elevation of “clear and distinct” ideas as necessary for truth claims.²¹ As academic disciplines became more clearly delineated in the nineteenth-century University, and intellectual networks became more international and impersonal, there was a strong tendency towards “aperspectival” rhetorics of objectivity which did not place excessive demands on readers to trust distant, unknown authors, or to adopt multiple points of view as was the case with the modern novel.²² Thus even in the case of disciplines such as sociology which were quite literary in their origins, with authors such as Balzac and Zola referring to themselves as social scientists, practitioners were over time encouraged to make ever sharper distinctions between academic discourse and fiction.²³

“Theory-fiction” is a contemporary term without a stable, accepted definition. There is no space here to do a thorough exploration of the many different kinds of relationship between theory and fictional writing, but a number of tendencies can be

¹⁹ Szerszynski, *Nature, Technology and the Sacred*.

²⁰ Szerszynski, “Technology and monotheism”.

²¹ Toulmin, *Cosmopolis*.

²² Daston, “Objectivity”.

²³ Lepenies, *Between Literature and Science*.

distinguished, more than one of which might be present in any given work. Firstly, literature can be the object of theoretical *application*. As well as literary analysis being an autonomous form of inquiry in its own right, fields such as sociology, linguistics, cultural studies and philosophy can all take literature as an object to which their own forms of analysis can be applied. Secondly, literature can be used as rich source of *evidence*, as it was for Lewis Coser in his plea for a more humanistic sociology that paid less attention to statistical significance and more to finding rich, complex representations of social reality from which to work.²⁴ Thirdly, theory and literature can sometimes be in a more complicated, unstable relation of mutual *implication*, in which both are folded into each other in complex relations of interdependency. Shoshana Felman uses this term to describe the relation between psychoanalytic theory and literature, pointing out that psychoanalysis does not merely apply itself to literature but draws its very concepts from literature, which thus constitutes a theoretical unconscious that can never be wholly “othered” and which may come back to trouble it.²⁵ Fourthly, some writers have produced fiction in which ideas from academic theory are made to work as *theoretical plot devices*, often voiced through characters who are themselves academics – the work of Jorge Luis Borges and Umberto Eco sometimes fall into this category, as does more recent work by Steven Shaviro and Reza Negarestani.²⁶ Fifthly, in a long tradition which has come to be known as *para-academia*, writers without official positions in academic institutions often prefer the novel or the short story as a way to develop their own distinctive philosophical positions on modern existence, such as the German-Czech Franz Kafka, the French-Algerian Albert Camus and the Argentinian Borges. Some established French intellectuals such as Georges Bataille and Jean-Paul Sartre also chose to write fiction as well as academic treatises for similar reasons. In the 1960s and 1970s the work of French theorists such as Jacques Derrida and Gilles Deleuze did much to expand thinking about the various truth-effects of different kinds of text, thereby troubling any simple distinction between theory and fiction and encouraging greater experimentation with form – recent notable examples of the latter include works by Negarestani and *The Confraternity of Neoflagellants*.²⁷

Academics working in the area of climate change have been particularly attracted to futurological fictions, often working with novelists.²⁸ Generally this move could be seen as a reaction to the way that an overly scientized discourse of climate change is failing to engage publics, leaving a gap for more hermeneutic, affective and sensory descriptions of climate change and its possible implications. As I will explain below, my own theory-fictions have a more indirect set of objectives, drawing on a number of the traditions of theory-fiction enumerated above.²⁹ None of the three pieces are written in a conventional fictional form; instead, each of them take a particular “found genre” (legal declaration, academic article and funerary incantation respectively) and use this as the basis to construct a fictional document that belongs to my imagined world. They are set in a single fictional future spanning a period from the middle of the twenty-first to the late twenty-second century. Partly in order to effect a

²⁴ Coser, *Sociology through Literature*.

²⁵ Felman, “To open the question”.

²⁶ Shaviro, *Doom Patrols*; Negarestani, *Cyclonopedia*.

²⁷ Negarestani, *Cyclonopedia*; *The Confraternity of Neoflagellants*, *thN Lng folk 2go*.

²⁸ For example, Oreskes and Conway, *Collapase*; Jamieson and Nadzam, *Love*; Mathews, *Ardea*; and climate scientist Chris Rapley’s play *2071*.

²⁹ Szerszynski, “Liberation”; Szerszynski, “Onomatophore”; Szerszynski, “Martian Book of the Dead”.

defamiliarization away from current debates about the Anthropocene, I expand away from the idea of a geological transition occurring in the Earth alone, to one that also involves the wider solar system. Using the Sanskrit term sometimes used to refer to the solar system, the Earth is judged by an extraterrestrial authority to have entered the “Suryamandalan” geological period—the period in which the becoming of the planet has escaped its own boundaries and became fully incorporated into a larger, evolving star system, itself open to the wider stellar environment.³⁰ In this version of the future, the near solar system has been colonized, artificial intelligence has developed to the point that the uploading and downloading of consciousness has been achieved, the science and general awareness of planetary evolution has advanced well beyond the current situation, contact has been made with a multi-species extraterrestrial civilization, and terrestrial cultures have gone through a Second Axial Age. I develop in some detail one particular example of this cultural shift, an offshoot of Tibetan Buddhism, Mangalayana Buddhism, which involves a form of geological mysticism and a new understanding of cosmic human destiny.

“The Onomatophore of the Anthropocene” was written first; this takes the form of a formal document from the 2030s stating the decision of a galactic bureaucracy, the Commission on Planetary Ages, in response to a petition from human beings that the emerging new geological epoch of the Earth should be named after them and that the human species should thus be designated as the *onomatophore* (“name-bearer”) of the new planetary epoch.³¹ The document explains the request, and the way that the Commission makes such decisions, including its distinctive understanding of time and planetary evolution. It explains how the onomatophores of any planetary age are determined, involving a nine-fold theory of causation, and how entities that are made onomatophore are elevated to a mysterious “Palace of the Ages” outside the normal passage of time. It then assesses the evidence about the current changes taking place in the Earth, and humanity’s role in these. It finally arrives at a decision, which at once greatly amplifies the implications of the current changes and diminishes the role of humans as controllers of nature.

“Onomatophore”, originally written as a performance piece with video and music, had a partly satirical intent: gently mocking the idea that earthbound, human practitioners of a science barely two centuries old were competent to name the new a geological period of a whole planet, and one which had barely started. But I also found that the fictional form enabled me to pursue a number of ideas further than would have been the case in a conventional scholarly genre, and was also effective in engaging the imagination of listeners and readers in different ways. Those objectives came more to the fore in the second and third pieces in the series. The second piece to be written, “Liberation through hearing in the planetary transition”, purported to be an academic essay written by a historian of religion towards the end of the twenty-second century.³² Building on the small clues provided in “Onomatophore”, it explained how in the mid-twenty-first century, Earth religions and cultures underwent a revolution in thought, oriented around new conceptions of space, time, matter, and the infinite. It suggested that this “Second Axial Age” occurred in response to a number of factors, including scientific and technological developments and contact with the “Common Culture” shared by diverse sentient lifeforms – or *hnau*, a term borrowed from C. S. Lewis –

³⁰ A period is a geochronological time unit larger than an epoch but smaller than an era or an eon.

³¹ Szerszynski, “Onomatophore”.

³² Szerszynski, “Liberation”.

across the galaxy.³³ The essay particularly focused on the transformation of Buddhism on Mars, which has been colonized, exploited and terraformed under Chinese leadership. Starting amongst settlers of Tibetan origin, a form of geo-spirituality has emerged under the inspired leadership of a Buddhist monk who has taken the name Migdmargyi Norbu Rinpoche (“Jewel of Mars”), and is now the principal founder and systematizer of what has become Mangalayana (“Mars-vehicle”) Buddhism.

The third piece, “The Martian Book of the Dead”, like “Onomatophore”, was originally written as the script to a performance with sound and video, and only later published as a text.³⁴ It is presented as the introduction to a Mangalayana text based on *Bardo Thodol*, the “Tibetan Book of the Dead” – strictly speaking, not a text but the script for an artificial intelligence (AI) program used on a future Mars to prepare dying Mangalayana Buddhists for the experience of “interval-being” (*bardo*) and the possibility of avoiding rebirth into one of the finite modes of existence and instead achieving the “deep abiding” that comes from merging with the becoming of their planet and thus of the cosmos. Within the text, the AI reminds its listener of the “areophany”, a mystical perception of Mars, and an interplanetary myth-cycle of love and sacrifice, which inform both ongoing terraforming activity and the post-mortem goal of planetary communion.

In the next section, I will explain how the three pieces develop the idea of a Second Axial Age.

A Second Axial Age?

What would it mean to identify a new kind of Axial culture? There have been a few claims that a Second Axial Age is already emerging in the twenty-first century. However, the descriptions offered by such commentators suggest that their Second Axial Age is in effect a re-run of the first Axial Age, in a way that echoes the way that the Protestant Reformers felt that they were returning to and renewing the unfulfilled promise of the early Church. The First Axial Age around 2,500 years ago was supposed to have emerged when the particularity of tribal ethics was being confronted with an awareness of cultural diversity due to growing trade and mobility, encouraging the development of a more universalistic ethic. Jaspers argued that the first Axial Age emerged not within empires but in a world characterized by a multitude of states and cities in interaction with each other.³⁵ Assmann makes the same point – that in many ways the later rise of large empires saw the closing down of the earlier potentialities exhibited by Axial cultures.³⁶ Some commentators see in contemporary globalization a second chance for that early Axial potential to be realized. Ewart Cousins, for example, suggests that the contemporary dialogue between faiths – and with those who are spiritual but not religious – constitutes a new Axial Age, contributing to the growth of a global consciousness in which the world is approached in a shared, spiritual way.³⁷ Richard Madsen similarly claims to see the conditions for a new Axial Age in the contemporary loosening of old cultural affiliations and the opening up of global communication. He sees the greatest potential for “authentic world community”

³³ Lewis, *Silent Planet*.

³⁴ Szerszynski, “Martian Book of the Dead”.

³⁵ Jaspers, *Origin*, 8.

³⁶ Assmann, “Myth of the Axial Age”, 367

³⁷ Cousins, *Christ of the 21st Century*.

emerging “at the interstices of the great economic political powers, in societies challenged by neoliberal globalization and made vulnerable by great power rivalries”.³⁸

However, in my theory-fictions such developments are both implicitly and explicitly dismissed as the last gasp of the old Axial Age; here, the Second Axial Age is not simply a “re-turning” of culture, a turning again towards the same themes of transcendence, universality, individuality, canonicity and interpretation; instead it is a turning in a radically new direction. Thus in “Liberation” I had my historian pointing out that First-Axial-Age thinkers typically understood the infinite as an *exteriority* in relation to finite existence. In First-Axial-Age science, infinite was thus seen as a *background* for the finite – as a necessary and unconditioned space of possibility. In First-Axial-Age religion the infinite was seen as transcendent *origin* – outside, prior to and unconditioned by finite existence. And in First-Axial-Age ethics, the infinite was seen as a *command* – paradigmatically in the Mosaic commandments or Kant’s universal deontological imperative. In contrast, my theory-fictions described a radically *new* turning in human culture, one that involved a fundamental shift in ideas in which the infinite was experienced not as an exteriority but as an *interiority* generated by things themselves as they engaged in the great dance of self-organization. In conceiving of this new turning in human experience, one which implies very different ideas of matter, space and time, I was particularly indebted to the work of Henri Bergson and Gilles Deleuze.³⁹

I prepared this idea in “Onomatophore”.⁴⁰ In the pronouncement of the Commission on Planetary Ages I wanted to give a sense that we needed to think in a new way about the relationship between the ages of the Earth. This involved a number of shifts. Firstly, the Commission reminded the reader that they regarded time not as an ontologically prior container for events but as a plural, interlocking nexus of temporalities that are produced internally by the activity and evolution of various worldly assemblages, including planets. They laid out this idea as the four laws of “endokairology”, the science of the qualitative, intensive times produced by processes of material self-organization. Secondly, this meant that matter is not a passive slave to natural laws, but active, associational and self-organizing, in dynamically interlinked spatial, temporal, and complexity hierarchies; here I drew particularly on the ideas of Ilya Prigogine and Stuart Kaufman.⁴¹

Thirdly, I wanted to give a sense that in my future solar system ideas of scientific objectivity had moved on from today. I thus had the Commission insist that “planetary ages are determined not by the visible signs that are written on the face of a world, but by the hidden signs and communication within it”. Here there was a nod towards the insistence of contemporary speculative materialists that there are relations going on between material things that have little or nothing to do with human beings, and do not have to pass through the human mind to have significance.⁴² Fourthly, in my extraterrestrial science of time, “the immanent time that a world generates through its own mode of becoming folds back on itself, so that the way a world changes changes”.⁴³ This implied the existence of singularities, bifurcations, irreversible shifts in

³⁸ Madsen, “Future of transcendence”, 445, 436.

³⁹ Bergson, *Creative Evolution*; Deleuze, *Difference and Repetition*.

⁴⁰ Szerszynski, “Onomatophore”.

⁴¹ Prigogine and Stengers, *Order Out of Chaos*; Kauffman, *Origins of Order*.

⁴² Harman, *Tool-Being*; Meillassoux, *After Finitude*.

⁴³ Szerszynski, “Onomatophore”, 178.

the way that material systems self-organize, an idea that was inspired by ideas such as the macroevolutionary “major transitions” of John Maynard-Smith and the Earth system “revolutions” of Tim Lenton and Andrew Watson.⁴⁴ It was also designed to evoke the idea of the philosophy of the “event”, of the possibility of an ontological change in being and becoming that is generated not by divine intervention from outside but from within the world itself.⁴⁵

Fifthly, the upshot of multiple times being generated from within things as they self-organize is that, to paraphrase Derrida, “il n’y a pas le hors-temps”.⁴⁶ The Commission wrote that “there is no time which can comprehend all the ages of a world”: thus “the ages of a world cannot be laid side by side”, and “each age starts but never finishes”.⁴⁷ The intention behind this idea was to disrupt any notion of a simple, unified, absolute timescale for the Earth or the wider universe, instead opening up the idea of multiple incommensurate temporalities. Part of the motivation for this was to open the space for seeing alternative, non-Western conceptions of time as legitimate; but I also liked the counter-intuitive idea of this shift coming from changes within the physical sciences, rather than from the humanities or social sciences. In “Liberation”, my future historian explains how late-twenty-first century scholars struggled to shake off First-Axial-Age habits of thought that were hampering their understanding of the universe.⁴⁸ Shifting to what the Commission call a “lacework” model of time was an important part of this new turning in thought. Echoing ideas of sacred, mythological or primordial time in anthropology and religious studies, it implied that what were apparently distant points in time could in another sense be “coeval” and thus ready-to-hand.⁴⁹ This would make geological time, with its distant extinct inhabitants and moments of systemic bifurcation, more like the great ages or *kalpas* of Hinduism, which with their vast numbers at once signal a move from the time of humans to the time of the gods but at the same time remain intricately connected with everyday spiritual practice.⁵⁰ It also strengthens the intuition that “earlier” geological ages, such as the Carboniferous Period in which many fossil-fuel reserves were laid down, can be seen as still operating in the time of the Earth.⁵¹

Sixthly, in my projected Second Axial Age, difference becomes not an external relation between things but an explosive force internal to them. As mentioned above, in First-Axial-Age thought, the infinite is seen as standing outside the empirical world, thereby constituting the latter as a bounded, finite unity. In a move inspired by Bergson and Deleuze, in Second-Axial-Age thought the infinite is conceived and experienced as situated *inside* that world, as an inherent aspect of its apparent finitude, thus shattering its unity into boundless difference. Thus In “The Martian Book of the Dead”, the dying Mangalayana Buddhist is invited to contemplate “Mars not as a material landscape but as an ineffable body; not as a finite object contained within the infinity of space and time, but as containing and generating the infinite within itself”.⁵²

⁴⁴ Maynard Smith and Szathmáry, *Major Transitions*; Lenton and Watson, *Revolutions*.

⁴⁵ Badiou, *Being and Event*.

⁴⁶ The phrase of Derrida’s was ‘il n’y a pas de hors-texte’, translated controversially as ‘there is nothing outside the text’ in Derrida, *Of Grammatology*, 158.

⁴⁷ Szerszynski, “Onomatophore”, 178.

⁴⁸ Szerszynski, “Liberation”.

⁴⁹ Eliade, *Sacred and Profane*.

⁵⁰ Kloetzli and Hildebeitel, “Kāla”.

⁵¹ Yusoff, “Geologic life”.

⁵² Szerszynski, “Martian Book of the Dead”.

In a way that echoes Annemarie Mol's analysis of the "body multiple" constituted through divergent medical and care practices, this was meant to suggest the idea of a "planet multiple", one impossible to contain within the sort of single unified account attempted by the contemporary Earth sciences.⁵³ Such a concept of planetarity echoes Bruno Latour's interpretation of the ideas of James Lovelock, in which the Earth as Gaia is not a unified entity, but a multiplicity of concatenating and mutually ironizing agencies.⁵⁴ It is also broadly consistent with Eduardo Viveiros de Castro's concept of "multinaturalism", grounded in indigenous Amerindian metaphysics, whereby different Earth societies live not just in different cultures but in different natures.⁵⁵

Seventhly and finally, notions of post-mortem existence are also transformed in the Second Axial Age. The question of death has loomed large in the humanities discussion about the Anthropocene, animated by a sense that authentic existence in relation to epochal planetary change and deep geological time must involve a deeper recognition of human mortality, in relation both to individuals and to the human species as a whole.⁵⁶ Given the radical immanence of the new metaphysics, one which has no external transcendence with which it can be contrasted, First-Axial-Age ideas of an otherworldly afterlife are no longer tenable. But on the other hand the idea of infinite difference *within* material self-organization provides new ways to think about post-mortem existence.

I develop one version of what that might look like in the context of Mangalayana Buddhism, drawing on the Dzogchen ("Great Perfection") tradition of Tibetan Buddhism, in which the story of an individual's birth and rebirth is inextricable from the cosmological story of the emergence of the cosmos from undifferentiated pure ground.⁵⁷ As my future historian writes, liberation from the cycle of rebirth in Mangalayana Buddhism is understood "not as moving to a non-temporal realm outside time, but as passing from shallow to deep levels of the internal temporalities of universal becoming" – a process that involves a post-mortem encounter with a hundred deities which variously terrify or guide the departed.⁵⁸ I developed this idea further in "The Martian Book of the Dead". Drawing on the multiple resonances of the Tibetan word *né* – abode, or abiding – the AI narrator reminds the listener that in Mangalayana Buddhism "the liberation that we call non-abiding [in Tibetan, *mi né pa*] is in reality the fullest form of abiding".⁵⁹ *Nirvāṇa* involves neither leaving the cosmos, nor non-existence, but dissolving one's being into the deep temporalities of planetary emergence.

Sacred work

In my theory-fictions I also wanted to explore how religious change concerning a growing awareness of the interdependence between human society and planetary dynamics might be caught up in other social, economic and technological changes. If I had had to restrict myself to defensible predictions, this would have been very difficult, but the quasi-fictional form gave me license to flesh out a scenario in some detail. I also

⁵³ Mol, *Body Multiple*.

⁵⁴ Latour, *Face à Gaïa*.

⁵⁵ Viveiros de Castro, *Cannibal Metaphysics*.

⁵⁶ Colebrook, *Death of the PostHuman*; Scranton, *Learning to Die*.

⁵⁷ Cuevas, *Hidden History*, 61.

⁵⁸ Szerszynski, "Liberation", 158.

⁵⁹ Szerszynski, "Martian Book of the Dead".

tried to avoid the extremes of dystopia and utopia, but instead tried to create a world with characteristics about which a contemporary reader might struggle to make a clear moral assessment. In my fictions, rather than non-human nature being treated as sacred and to be preserved, the new forms of religious belief and practice that I describe are intertwined with the technological transformation of planetary systems, not least the settling, material exploitation and terraforming of other planets.

Nevertheless, I tried to provide something of a sacralized view of human activity. Whereas in the aspects of the Second Axial Age that I described in the last section I was more or less inverting some of the characteristic metaphysical presuppositions of the so-called First Axial Age, here I was teasing out some historical themes in the longitudinal dynamics of the latter and replaying them in my new scenario. For, despite my emphasis above on the affinities between the First Axial Age and the Anthropocene, for much of the intervening time societies touched by Axial culture do not seem to have been exceptionally encouraged towards the transformation of non-human nature. Indeed, the fourth-century Roman Emperor Julian accused the Christians of the Roman empire of ruining its industry and hastening its decline.⁶⁰ In the monotheistic sacred of the Abrahamic religions more generally, nature and the body were still understood as much in symbolic as in causal, technical ways – albeit now as signs pointing to higher, scriptural or heavenly realities. This symbolic approach to nature was more or less abandoned by Protestants, for whom nature was seen as fallen and without spiritual meaning.⁶¹ However, although for Protestants economic activity could serve as a sign of spiritual election, and technology can be used to pursue religious aims, the technological was not for them yet a whole way of thinking. In Protestant culture the practical arts may have been regarded in a newly positive way, but technology was still largely seen as incapable of guiding action, simply as a means to achieve particular goals within a context construed in terms of non-technical understandings of human flourishing and destiny. It was only in the work of the German Enlightenment thinker Johann Beckmann (1739-1811) that the concept of technology as “a functional description of the process of production” really emerged in its recognizably modern sense.⁶² Beckmann’s work is crucial for the development of a systematic approach to technology, an approach which results in an explosion in the scope and purchase of technique, and a progressive harnessing of the practical arts to the goal of shaping and optimizing human life. It is only here that we see a clear intellectual formulation of technology in a way that was consistent with what Jacques Ellul would later describe as self-directing “technique” and Peter Haff as an autonomous “technosphere”.⁶³

It is with these considerations in mind that I sought to make the point that in the more distant future the lines between religious and other activities – and thus what is human or humanizing, and divine or sacralizing – might be drawn very differently than they are in modern society with its differentiated realms and various traditions of secularism. Thus in “Onomatophore”, in the middle of what is ostensibly a legal document, drawing on a combination of terrestrial and extraterrestrial science and legal precedent to adjudicate whether the Earth is indeed entering a new unit of planetary

⁶⁰ Ellul, *Technological Society*, 34.

⁶¹ Harrison, *Rise of Natural Science*.

⁶² Mitcham, *Thinking through Technology*, 131.

⁶³ Ellul, *Technological Society*; Haff, “Technology as geological phenomenon”.

time, at what level, and how it should be named, the Commission for Planetary Ages insert a creedal interlude on the Palace of the Ages.⁶⁴

In “The Martian Book of the Dead” I developed this theme further, exploring the difficulty of describing activities as “humanization” in the context of a post-secular cosmology in which human activities are seen as the acting out of cosmological imperatives.⁶⁵ Here, the terraforming activities of Martian settlers are not seen as a secular humanization of Mars, but as a spiritual vocation involving the balancing of Martian landscape energies and forces. In this idea I was indebted to anthropologist Carlos Mondragon, who introduced me to Tibetan toponymy and geomantic landscape practices.⁶⁶ I extrapolated this tradition to my future Martian context, in which it became the basis of a kind of sacred, practical exo-geological hermeneutic of Martian landscape formations. The landscape is seen through Tibetan eyes, as a mandala whose energies need to be harmonized and corrected through the siting of temples and shrines.⁶⁷ It is also a landscape through which human bodies move in pilgrimage and circumambulatory prayer, oriented around *né*, dwelling places of divine power.⁶⁸ I combined these ideas from Tibetan source materials with science-fiction writer Kim Stanley Robinson’s idea of the “areophany”.⁶⁹ In Robinson’s “Mars trilogy”, the Areophany – literally the “appearance” or “revelation” (“*phainein*”) of Mars (“Ares”) – is an underground movement of human settlers on Mars with a mystical reverence for the living power of nature. I kept Robinson’s emphasis on the areophany as a cultural response to the challenge faced by those settlers who felt obliged to try to discern what Mars wanted to become, rather than imposing human and Earthly ideas on the planet. However, I expanded its focus way from biological and ecological vitality to embrace the non-living geophysical aspects of planetary becoming on the one hand and Tibetan ideas of spiritual energies and presences in the landscape on the other. For the Mangalayana Buddhist settlers of Mars, the areophany is neither a set of beliefs (an orthodoxy) or set of prescribed behaviors (an orthopraxy) but a *way of seeing*, one which both guides and emerges from the practical task of terraforming – or, as Robinson’s settlers prefer, “areoforming”. Seeing guides doing; and doing informs seeing. This is work as prayer, according to a creed which is not so much Anthropocene as *nécene*.

I also grounded this notion of sacred work in a new Mangalayana mythos – an interlocking system of mythological narratives. Many commentators have argued that the contemporary human condition for many in the secular West is one of “amythia”, the lack of an orienting metanarrative.⁷⁰ In this context, there have been a number of recent proposals for a new mythology that is consistent with both science and the human need for human meaning and purpose, and that can help orient a nascent global civilization towards respect for humans and nature. Proposals for such new mythoi include Brian Swimme and Thomas Berry’s *Universe Story*, in which growing human consciousness of planetary processes is a part of the universe’s unfolding, Stuart Kaufman’s *Reinventing the Sacred*, which redefines “God” as the creativity inherent in

⁶⁴ Szerszynski, “Onomatophore”, 179–80.

⁶⁵ Szerszynski, “Martian Book of the Dead”.

⁶⁶ Huber, *Pure Crystal Mountain*.

⁶⁷ Mills, “Supine demoness”.

⁶⁸ Huber, *Pure Crystal Mountain*, 14–17.

⁶⁹ Robinson, *Red Mars*.

⁷⁰ Rue, *Amythia*.

a self-organizing universe, and Nancy Abrams' *A God That Could Be Real*, in which "God" is the emergent, collective goodwill of human beings.⁷¹

However, all of these proposed mythoi manifest what I would call "late-First-Axial-Age" thinking in their assumption that, under contemporary conditions of intercultural encounter, the specific myths of substantive traditions are untenable and need replacing with a single story to which people from all cultures can assent.⁷² Other contemporary writers have rejected this approach. In his striking theory-fiction *Cyclonopedia*, Reza Negarestani combines Persian pre-Islamic mythology, the Cthulhu mythos of the horror writer H. P. Lovecraft, and Deleuzian social theory in an oil-driven apocalyptic myth of a living, demonic Middle East that scandalises as much for its cultural specificity as its dark tones.⁷³ Donna Haraway's call for a mythos of the "Chthulucene" takes a more multinatural approach, advocating a politics of "kin-making" which "entangles ... myriad intra-active entities ... with names like Naga, Gaia, Tangaroa ..., Terra, Haniyasu-hime, Spider Woman, Pachamama, Oya, Gorgo, Raven, A'akuluujjusi".⁷⁴

My own Mangalayana mythos takes a route that is similar to Negarestani in its doctrinal specificity (in my case, by mining deeply my Tibetan source material), while also trying to be consistent with the idea of the Second Axial Age as I had developed it. The mythos has two main components. The first level involves a fusing of the Western system of nested geological time units (suitably expanded to include interplanetary dynamics) and the Hindu system of nested eons or *kalpas* of vast duration. As my future historian explained, whereas the original Hindu system was typically First-Axial-Age in its construction of *kalpas* as abstract mathematical temporal containers (with for example a *mahakalpa* being equal to four *kalpas*), in Mangalayana thought the transition between *kalpas* is driven by the evolution of planets, solar systems and other astronomical objects as they shift from one metastable state of self-organization to another.⁷⁵ She also discusses the difference between "dark" mahakalpas – where no Buddha is born, the Dharma (understanding of the real nature of existence) decays, and liberation from rebirth becomes impossible – and "bright" mahakalpas where a Buddha is born to renew the Dharma, and also speculates on which planet and in which kind of body the Buddhas of future planetary epochs and eons may be incarnated.⁷⁶

The second element of my Mangalayana mythos is a myth cycle involving the relationship between Mars and Earth. This draws on the ancient Tibetan myth of Srinmo, the chthonic pre-Buddhist demoness whose supine body, in the form of the whole plateau of Tibet, was said to have been deliberately pinned down by the early Buddhists by their placing of temples and shrines.⁷⁷ In my theory-fiction, the nuns who join Migdmargyi Norbu Rinpoche in the first Mangalayana monastery on Mars play an important role in reversing the misogyny and prejudice against pre-Buddhist culture expressed in the old myth. In the new mythos, Mars and Earth are personified as bodhisattva and consort respectively, in a story involving the mutual gifting of life and animacy across multibillion-year time scales. Building on the parallelism between the

⁷¹ Swimme and Berry, *Universe Story*; Kauffman, *Reinventing the Sacred*; Abrams, *God That Could Be Real*.

⁷² Sideris, "Science as sacred myth".

⁷³ Negarestani, *Cyclonopedia*.

⁷⁴ Haraway, "Chthulucene", 160.

⁷⁵ Szerszynski, "Liberation", 157.

⁷⁶ *Ibid.*, 161, 164.

⁷⁷ Gyatso, "Down with the demoness".

two giant plateaus of Mars's Tharsis and Earth's Tibet, each of the two lovers has their chief abode (*néchok*) in their respective plateau, and the planets' combined motion around the sun is a dance of mutual devotion. Yet in this mythos Mars is bodhisattva in a very special sense: many eons ago it sacrificed itself, losing its own biological and tectonic vitality and thus its possibilities of evolution, but in doing so sent biological material to the Earth and bestowed upon it both the circle of rebirth and the possibility of liberation. Now, as humans and other forms of terrestrial life return to Mars and strive to turn it once again into a living planet, they are thus performing a form of holy work that will fulfil the next chapter in a cosmic story.

Conclusion

In the introduction to this chapter I identified two specific challenges facing attempts to explore the relation between religion and the Anthropocene: the challenge of avoiding reducing religion and culture to a merely motivating force in an otherwise unified, secular and Western story, and the challenge of looking beyond the current period of largely unintentional global environmental change to a possible radically different geo-spiritual future. In trying to address these challenges, I used Jaspers' idea of the Axial Age, and showed that the relationship between what I am calling the First Axial Age and the Anthropocene is a complex one. On the one hand, the Axial Age that occurred two and a half millennia ago can be seen as the source of many cultural innovations that would become highly consequential for the Earth, particularly the idea of transcendent axis between a finite mundane world that we inhabit and a supernal world of divine or philosophical truth. The emergence of this axis had the effect of diminishing the significance or even reality of the other spiritual beings that were seen as inhabiting a shared cosmos, and interactions with which had played an important role in regulating human use of natural resources. This time also saw the emergence of more clear notions of human beings as distinct historical individuals – some of whom could change history with their works. The transcendent axis of the First Axial Age was also necessary for the emergence of the idea of abstract humanity, and the privileging of our species as the central analogue, representative or *avatar* of other-worldly realities; in this sense, the very notion of the Anthropos as a collective agent of geological import is a profoundly First-Axial-Age idea. Finally, axial cultures moved from situated magical interactions with non-human agencies towards organized religion involving regulated interactions with transcendent realities; and in parallel to the move from magic to religion came that from *craft* to *technology* – from diverse artisanal skills each of which had to be learned through doing, to a more general systematized understanding of technology as the harnessing of knowledge about natural processes.

However, many of these shifts took a long time to occur. Most Axial cultures still retained non-technical understanding of human flourishing, and a symbolic approach to non-human nature, which did not encourage the evolution, spread and systematization of technique. The material explosion of the Anthropocene required the rejection of the First-Axial-Age idea that this world was a preparation for the next; compared with this other-worldly focus, developments seen as central to the Anthropocene such as the industrial revolution and the late twentieth-century Great Acceleration feel in some respects like a shift back to the emphasis on this-worldly reproduction of pre-Axial cultures.⁷⁸ And, finally, current attempts to generate a critical

⁷⁸ Steffen, et al., "The Anthropocene".

global counter-discourse in resistance to the overexploitation of nature could be seen as a contemporary resurgence of the original impetus of the First Axial Age, involving a critical distance from specific local cultural presuppositions and the development of a shared global vision.

It was against this background that I developed the idea of a future Second Axial Age in my theory-fictions. This age is “Axial” in the sense that Jaspers used the term about the first millennium BCE: it forms an axis in history, a turning in a radically new direction, after which everything changes. But my Second Axial Age is not the *same* turning, the turning that involved opening up a metaphysical gap between the mundane and the transcendent. So, unlike other suggested Second Axial Ages such as those of Cousins and Madsen, this is not a renewal of the original promise of the First Axial Age that emerged in the encounter between autonomous cultures before it was swallowed up in the age of empires. Instead, it is a different turning, based on a radically different metaphysics, and which implies a radically different science (though I found glimmerings of both in contemporary continental philosophy and non-Newtonian science). It is also a turning in which there is not the same commitment to distancing from the specificities of concrete religious traditions. Thus Mangalayana Buddhism is not based in the notion of a scientific cosmogonic narrative to which everyone regardless of tradition can assent, nor on a perennialist belief in a common religious heritage of humankind; instead it is grounded firmly in a particular religious tradition and its doctrines, pantheons, myths, spiritual practices and sacred topographies. This allowed me to “rerun” some themes from the First Axial Age around the idea of sacred work.

The genre of theory-fiction was a useful vehicle for these thought experiments. Indeed, if we are to creatively escape from the orbit of the First Axial Age, we may need many more such experiments in breaking down the received boundaries between literary genres.

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