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SPECIAL CONFERENCE ISSUE: NEW THINKING ON SUSTAINABILITY

THIS ISSUE INCLUDES CONTRIBUTIONS BY

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Joel Colón-Ríos	Greg Severinsen
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Gay Morgan	

TE WHARE WĀNANGA O TE ŪPOKO O TE IKA A MĀUI

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SHIFTING PARADIGMS: BERRY'S EARTH-CENTRISM – AN EFFECTIVE NOBLE LIE?

Gay Morgan*

This article critically examines Earth Jurisprudence's claim of Earth-centredness. It argues that Earth Jurisprudence, carefully considered, is a disguised form of anthropocentrism which is not at all Earth-centred. The article suggests that this means Earth Jurisprudence either is deeply mistaken as to its foundational claims or has been consideredly designed to mislead. If the latter rather than the former is true, the article queries whether Earth Jurisprudence is a well-intentioned myth created to function along the lines of a Platonic Noble Lie. If Earth Jurisprudence is taken as a considered deception, designed by philosophers, to lead people to the individual and institutional behaviours necessary for the long-term flourishing of the current biosphere, the article questions its efficacy as such. The article then proposes an alternative truth-based story, which is not a Noble Lie and which would be more effective, under current circumstances, in facilitating those behavioural changes urgently needed to protect the biosphere from human induced degradation.

I INTRODUCTION

As I understand it, a primary goal of Earth Jurisprudence is to facilitate a paradigm shift in our fundamental normative understandings about our place in the world, from an anthropocentred view to an Earth centred view.¹ The paradigm shift is hoped to be that we are an integral part of something larger than ourselves, and that the Earth and biosphere, and life grouping therein have intrinsic rights which we are morally compelled to recognise and respect. These groupings include ourselves, but that we are but one community of beings in a larger community. Earth Jurisprudence, as Berry set out,

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1 Cormac Cullinan *Wild Law: A Manifesto for Earth Justice* (2nd ed, Chelsea Green Publishing, White River Junction (Vt), 2011).

also includes a sense of spirituality and Earth-centredness, where we are but one community of interest and the well-being of Earth itself is the fundamental normative bottom line.²

My initial project was to develop what a particular mining resource consent judgment, delivered under existing environmental law, might look like if the judicial perspective had been Earth-centric. But to develop the detail of an imagined judicial application of existing law, as it would be, if guided by Earth Jurisprudence, where Earth's basic integrity rights³ could or would trump other considerations, it was necessary to carefully define just what was meant by the Earth-centredness of Earth Jurisprudence. This required a survey of the literature around ideas of Earth-centredness and humans adopting an Earth-centred perspective, back through Berry and like-minded thinkers preceding him.⁴ What emerged from that review was a conviction that the conception of Earth centredness that has been developed in the current casting of Earth Jurisprudence is not Earth centred at all, but is anthropocentrism recast.

Earth Jurisprudence may be cast as an anthropocentrically based jurisprudence because, I will attempt to show, its concerns are not fundamentally focused on Earth interests. Rather its concern is mitigating the climatic and ecosystems impact of human activities which threaten the current climate, biosphere and the wellbeing of human and other species. This begs the question of whether what is an unfolding disaster for us (and for other species) is also a disaster for Earth. Earth, after all, has undergone many drastic and dramatic changes during its existence to date.

The preceding query raises the further question of whether Earth jurisprudence is really a save our skins jurisprudence but deliberately cast in a more noble way for purposes of popular persuasion, as a justificatory myth or story in the style of Plato's Noble Lie.⁵ That logic would be:

- (a) Humanity needs an ecologically focused paradigm shift to occur in order to maintain a biosphere in which humanity can thrive.
- (b) Earth Jurisprudence, as a founding myth, will cast the shift as mandated by a concern and respect for the biosphere, Earth qua biosphere and Earth in their own right (which would be a Noble concern) in order to appeal to people's better natures (and perhaps to become an enduring foundational myth).

2 Thomas Berry "The Origin, Differentiation and Role of Rights" (11 January 2001) Institute for Educational Studies <www.ties-edu.org/gaia/articles>.

3 My turn of phrase for what I imagined might guide a court's balancing of Earth's interests to environmental integrity against diverging human interests in various plans and projects.

4 In particular, the writings of pioneering thinker Gregory Bateson, who struggled early on with the necessity of re-unifying human consciousness and methods of thinking with our human interconnectedness with the world, to address many of humanity's destructive patterns including those of ecological degradation: see Gregory Bateson *Steps to an Ecology of the Mind* (University of Chicago Press, Chicago, 2000); and Gregory Bateson *Mind and Nature: A Necessary Unity* (Hampton Press, New York, 2002).

5 Plato *The Republic* (2nd ed, Penguin, New York, 1986) at 180–182.

- (c) This is a more effective strategy than appealing directly to humanity's own anthropocentric concern to conserve and protect this biosphere for its own long-term best interests.

A further issue is raised: If the Earth Jurisprudence movement is engaging in a Platonic myth-building project, is it doing so deliberately, or does it believe its own Myth? For while Plato thought a compelling myth was needed to render people ideally governable (or to guide them to accept inconvenient rules which were in their own interests), Plato did not think that those who *created* the myth to justify the governing structure would also believe the myth as fact (although he hoped that successor rulers to the myth creators would indeed also believe the guiding and justificatory myth accepted by the governed⁶). Finally, Plato thought to serve its purpose a Noble Lie needed to be a credible myth that coincided with the people's education and experience.⁷ This questioning analysis raised a number of issues which needed to be addressed, and those questions became the project.

II WRESTLING WITH EARTH JURISPRUDENCE, EARTH-CENTRISM AND PARADIGM SHIFT

I will first consider and critique Earth Jurisprudence, as currently conceptualised. My two main criticisms will be, first that it suffers from all the weaknesses of any Natural Law based argument or ideology, which will necessarily impede its effectiveness as a paradigm shift driver. My second criticism will be that Earth Jurisprudence is not Earth-centred at all, but is anthropomorphism re-cast.

I will then explore whether, if Earth Jurisprudence is anthropocentric, it is a truly Earth-centred rationale for preserving *this* biosphere and, if so, whether that truth would be so compelling as to obviate the need for any myth. Further, if the authentically Earth-centred rationales available are not compelling, I wonder whether the paradigm shift needed to assure the thriving of this biosphere on which we are dependent would be better driven by a Noble Myth of Earth-centrism, or whether the naked truth of human self-interest would be more likely to succeed. Finally, could either succeed in a timely fashion? Plato considered that two generations would be necessary to bed in an efficacious governing myth,⁸ yet we are in a situation where the needed ecological paradigm shift needs to occur in very constrained time parameters; two generations will be too late for the changes required.

In the following, I will attempt to explore these ideas, first by elaborating on my critique of Berry's principles, which underpin the normative paradigm-shifting project of Earth Jurisprudence. I will argue those principles reflect the fundamental anthropocentrism of Earth Jurisprudence. I will then attempt to ascertain what a truly Earth-centric paradigm might look like, by separating out Earth's interests from our species specific interests. I will ask, and attempt to answer, if there are, from Earth's perspective and not our own, any strong reasons which would make the preservation of this particular

6 At 181.

7 At 181.

8 At 182.

biosphere compelling. Finally I will explore whether Earth Jurisprudence's actually anthropocentric project would be better served by overtly embracing the anthropocentrism at its heart or better served by maintaining the façade of a philosophical privileging of Earth-centrism as some sort of Platonic Noble Lie, where the deception both is intended to and does serve the people's best interests.

A Critiquing the Foundations of Earth Jurisprudence: Berry's Principles

1 Possible paradigm one: Earth as a moral foundation

Earth jurisprudence considers Earth as a moral/living entity, or at least as a spiritual source/foundation, hence we ought to respect and sustain the biosphere. Berry is represented as arguing for a normative paradigm where the Earth itself is the ultimate referent for the good, rather than the interests of any particular species.⁹ Berry also presumes a biosphere (Earth community) as intrinsic to his definitional conception of the interest or rights bearing Earth.¹⁰ These are, I think, noncontroversial statements. His original 10 principles on which to base an Earth-centric jurisprudence are:¹¹

1. Rights originate where existence originates. That which determines existence determines rights. Rights is defined as giving every being its due.
2. Since it has no further context of existence in the phenomenal order, the Universe is self-referent in its being and self-normative in its actions. It is also the primary referent in the being and the activities of all derivative modes of being.
3. The Universe is composed of subjects to be communed with, not of objects to be exploited. As subjects each component of the Universe is capable of having rights.
4. The natural world on planet Earth gets its rights from the same source that humans get their rights, from the Universe that brought them into being.
5. Every component of the Earth community, both living and non-living has three rights: the right to be, the right to habitat or a place to be, and the right to fulfil its role in the ever-renewing processes of the Earth community.
6. All rights in living forms are species specific and limited. Birds have bird rights. Insects have insect rights. Humans have human rights. Difference in rights is qualitative, not quantitative. The rights of an insect would be of no value to a tree or a fish.

9 Andrew Angyal "Thomas Berry's Earth Spirituality and the 'Great Work'" (2003) 3(3) *The Ecozoic Reader* 35.

10 Angyal, above n 9.

11 Berry, above n 2.

7. Human rights do not cancel out the rights of other modes of being to exist in their natural state. Human property rights are not absolute. Property rights are simply a special relationship between a particular human "owner" and a particular piece of "property" so that both might fulfil their roles in the great community of existence.
8. Since species exist only in the form of individuals, rights refer to individuals and to those natural groupings of individuals into flocks, herds, packs; not simply in a general way to species.
9. These rights as presented here are based on the intrinsic relations that the various components of Earth have to each other. Planet Earth is a single community bound together with interdependent relationships. No living being nourishes itself. Each component of the Earth community is immediately or mediately dependent of every other member of the community for the nourishment and assistance it needs for its own survival. This mutual nourishment, which includes the predator-prey relationship, is integral with the role that each component of Earth has within the comprehensive community of existence.
10. In a special manner humans have not only a need for but a right of access to the natural world to provide not only the physical need of humans but also the wonder needed by human intelligence, the beauty needed by human imagination, and the intimacy needed by human emotions for fulfilment.

(a) Earth jurisprudence and Natural Law

When we consider Berry's 10 principles, a number of things become apparent. Principles one through four can be summarised respectively as: firstly, rights arise from existing; secondly, this universe is the context for, and the source, of rights; thirdly, the universe is a community of rights bearing entities at all levels; and fourthly, this Universe is the source of Earth's and human rights. Principles six, seven and eight also assert specific rights claims as axiomatic truths, that rights extend to all entities and are specific to those entities, that human rights are intrinsically (not just legally) burdened by the competing rights claims of other aspects of the Earth world and that rights intrinsically attach to each individual member of the Earth community. Each of these claims is fundamentally a claim anchored in Natural Law or in the ontology that there exists in fact one universal morality applicable across time and space, and that *this* is the content of that natural morality.

Natural Law theory has a venerable pedigree, dating from at least Plato¹² if not before but, due to its necessarily metaphysical nature, is subject to innumerable weaknesses. The intrinsic malleability of the concept, writ large, was perhaps most famously pointed out by Bentham's criticisms of the Law

12 HLA Hart *The Concept of Law* (Oxford University Press, New York, 1990) at 182.

of Nature as "nothing but a phrase"¹³ which can be used by anyone to criticise any law with which they disagree as repugnant to it,¹⁴ and further begetting imaginary natural rights which are simple nonsense: "nonsense on stilts".¹⁵ Natural law is based in oughtness, making truth claims that can never be proven, only argued. It privileges one set of moral intuitions as reflecting metaphysical truth rather than as one of numbers of competing moral visions or ideologies as how to best and most justly order human existence in the world.

Because Natural Law claims can neither be proven nor effectively refuted, one culture's Natural Law may be radically different from another's. For example, one may embrace the fundamental moral equality of human souls and the other embrace a moral hierarchy between souls. Different consequences flow from such claims being fundamental to particular conception of morality, or from a legal system built on those intuitions, and we may value those consequences differently, but neither claim can be removed from the realm of faith or the metaphysical realm of moral oughtness. Such universal moral claims are projecting a particular human morality (or a humanly divined Earth-Centric morality) as a meta-morality in fact.

Basing law and legal paradigms on metaphysical truth claims can be used to justify actions which are antithetical to other competing Natural Law claims. Aquinas's assertion that the fundamental guiding principle of Natural Law as discovered by practical reason is essentially to "do Good, avoid Evil"¹⁶ does not help, as differing conceptions of human flourishing lead to practical reasonableness to different outcomes.¹⁷ To me, examples abound of the twisted purposes to which a higher universal

13 Jeremy Bentham *A Fragment on Government*, extract in Michael Freeman *Lloyd's Introduction to Jurisprudence* (6th ed, Sweet & Maxwell, London 1994) at 229.

14 Ibid.

15 At 206.

16 Thomas Aquinas *Summa Theologica* quoted in Howard Davies and David Holdcroft *Jurisprudence* (Butterworths, London, 1991) at 161. While there is much literature on what, under either practical reasonableness or otherwise, exactly evil is, the issue is highly normatively and situationally contestable. Thus, basing an ordering norm on do good, avoid evil gives little objective guidance across ideologies and cultures, leading to the categorization of what evil is being a radical choice, of which mine might quite defensibly be different than yours. See generally Richard Bernstein *Radical Evil: A Philosophical Interrogation* (Blackwell, Cambridge, 2002); Susan Neiman *Evil in Modern Thought* (Princeton University Press, Princeton, 2002); Raimond Gaita *Good and Evil: An Absolute Conception* (2nd ed, Routledge, London, 2004); and Marilyn Adams and Robert Adams *The Problem of Evil* (Oxford University Press, New York, 1996).

17 Lest it be thought the author accepts moral relativism that also is a deeply lacking approach. Eschewing any moral responsibility to engage when faced with issues of right and wrong is simply another sort of totalitarian or 'totalising' absolute truth claim, in an area where absolute truth is simply not available for rational proof. See generally Isaiah Berlin *The Crooked Timber of Humanity: Chapters in the History of Ideas* (John Murray, London, 1990) and Gay Morgan "Searching for Common Ground" (2002) 12 J Contemp Legal Issues 757.

moral realism, revealed divinely or through a particular reasoning, can be put.¹⁸ Founding an ideology on a naturally ordained morality, whether ordained by Earth, God or practical reasonableness, simply takes the realm of ideology into metaphysical truth claims which are intrinsically unknowable, unverifiable and unable to be disputed other than by competing metaphysical truth claims with the same characteristics.¹⁹

Basing a jurisprudence on the metaphysical may make it a harder sell than basing it on concrete factors available in shared physical experience.²⁰ This is not necessary and, as I will discuss, may not be helpful to either the long term or timely success of the essential paradigm shift which Earth Jurisprudence is trying to achieve. Only principle nine is indisputably fact-based (as to the interdependent survival needs of the existent Earth community). Berry could have derived some of his principles or very nearly analogous principles from that factual interdependence set out in principle nine, but he does not do that. Rather, he uses his Natural Law extracted principles to govern the relationships in the realm of interdependent survival affirmed in principle nine, which seems both backwards and unfortunate.

(b) Earth jurisprudence and anthropocentrism

I left two of Berry's principles out of the above discussion, not because they do not share the problems that come with basing a jurisprudence on Natural Law foundations, but because they illustrate my concern that Earth Jurisprudence is not Earth-centric at all but is at base an anthropocentric enterprise with a veil of Earth-centrism. Berry principle five, that every component of the Earth community has three rights, the right to be, the right to habitat and the right to fulfil its role in the ever renewing processes of the Earth community, raises one issue. Principle five privileges the continued existence of this particular biosphere, with all that is currently here being invested with a right to be. His principle 10, that "[i]n a special manner, humans have not only a need for but a right of access to the natural world to provide ... the wonder needed by human intelligence, the beauty needed by human imagination, and the intimacy needed by human emotions", raises another.²¹

These two principles point to a concern which is not for Earth, and which is not for Earth with *a* biosphere. Principle five points to a concern for an Earth with *this* biosphere. And principle 10 seems

18 See Roy Baumeister *Evil: Inside Human Violence and Cruelty* (Henry Holt, New York, 1999) at chapter 6.

19 See John Finnis *Natural Law and Natural Rights* (Oxford University Press, London, 1980) at 280. Finnis acknowledges the problem of insufficient proof but is untroubled by it as, unlike Rawls, his is not really an enterprise devoted to helping us find a common acceptable ground but is directly at pointing out the right ground. His is an enterprise devoted to elucidating those things demanded by his understanding of practical reasonableness and he does not expect most people to agree.

20 Note that Plato's noble foundational myth was specifically to be grounded in the commonly shared experience of the populace intended to believe it: Plato, above n 5, at 181.

21 Berry, above n 2.

to reveal that the fundamental reason there is a concern for Earth with this biosphere is because this is *our* biosphere; we need it and we are special in a way other members of the biosphere are not. Those two principles, to me, reflects that anthropocentrism and human exceptionalism is at the core of Berry style Earth Jurisprudence.

To check that the premises in Berry's principles five and 10 are anthropocentric and not Earth-centric, that is, that they emerge out of anthropocentrism itself and not out of some correlative necessity of entwined interests, one must determine if it is possible to separate the interests of Earth from the interests of this biosphere with us in it. By correlative necessity of entwined interests, I mean whether Berry had no other choice but to produce apparently anthropocentric principles due to an inseparability of our and Earth's interests. This would be the position if, due to the interdependence of Earth, the biosphere and us, anything in Earth's own interests necessarily correlates with the interests of this biosphere and of our human species. If our mutual interdependence with Earth made Earth's interests dependent on our interests, that would make protecting Earth's own independent interests necessarily seem to be anthropocentric and to be privileging this particular biosphere, even if that were not the purpose or intent. Therefore, one must ask whether Earth could plausibly be argued to have an interest in the preservation of this biosphere independent of humanity's own interests.

2 Possible paradigm two: Earth as a planet with a biosphere necessary for its survival

In examining Earth's Interests from Earth's imagined perspective, two issues are raised: whether Earth has an interest in being a planet with a biosphere, and whether there are non-anthropocentric reasons that Earth might have to value the preservation of this biosphere. Is there any convincing and truly non-anthropocentric viewpoint on either issue? If so, what might it or they be? The approach to these issues must be from Earth's perspective, qua planet Earth, rather than from our perspective of a species situated on Earth and embedded in this particular biosphere.

Given that Earth is a planet with a biosphere, on what basis would Earth care, if Earth could care, whether it retained its status as a planet with a biosphere? Humanity cares that it is such, as it is essential to our continued survival as a species. But that is anthropocentrism recast; what about Earth itself? To answer that question truly, one must consider it from the point of view of an Earth without a biosphere, or that of an Earth without this biosphere.

The necessary query is whether the biosphere serves any purpose for Earth's continued thriving qua Earth? Earth has previously existed without a biosphere, and Earth will continue to exist should this (or any) biosphere disappear. So, our concern is not with Earth, it is with the Earth having a biosphere, and having this particular biosphere. Would Earth as a planet have any interest in parallel with our interests in Earth having any or this biosphere?

Earth itself is seemingly doomed. In the normal course of affairs it will be destroyed in about three or four billion years when the sun goes Red Giant and envelops it, so it is an entity with a naturally

finite existence.²² Humanity's concern then is revealed not as preserving Earth, but preserving Earth for us for as long as possible. Does Earth have any interests in humanity's success? One could argue yes, that having a biosphere that is capable of supporting complex and intelligent life could serve a planet in two ways.

- (a) Earth's long term survival interest qua planet: is this biosphere special?

One argument is that the intelligent life, given time, might devise a way to save the planet from its inevitable mortality and destruction, through gradually shifting orbits further from the gradual overheating of the sun and such, to protect Earth's physical integrity as well as to assure it remains in the habitable zone.²³ It is hardly conceivable now, but we are an intelligent species that only recently arrived on the scene and there are millions of years' leeway for us to develop before the problem becomes acute. In this view, Earth might have an interest in our continued thriving or, even if we go extinct, at least in the continued thriving of a biosphere that is capable of supporting complex life. The saving Earth from its ultimate fate of incineration perspective gives Earth (rather than us) an interest in a biosphere compatible with complex life, but not necessarily any interest in maintaining this particular biosphere or in maintaining the continued existence of humanity, as a particularly technologically promising species.

The atmosphere and climate in the past have varied wildly.²⁴ Earth's natural initial atmosphere was one per cent oxygen, when cyanobacteria developed the ability to do photosynthesis. A waste by-product of cyanobacteria's photosynthesis was oxygen and eventually these waste oxygen emissions built up, after Earth's natural oxygen sinks (iron and sea water) were saturated. The continued waste build up in the atmosphere oxygenated the air to a level of about 15 per cent, and then 20 per cent, causing the near total extinction of the anaerobic life forms (of which cyanobacteria is one), which were dominate until that time. The oxygenation also resulted in a great reduction of greenhouse gases (methane) resulting in about a 150,000,000 year glaciation. This was climate change in extreme, but in an opposite direction from what we see today. This is perhaps the first great change of the biosphere caused by one species' unabated emissions causing atmospheric change. Thus claims that we are

22 See generally Brian Cox *Wonders of the Solar System* (Harper Design, London, 2013).

23 Scientists are already seriously considering potential solutions to this problem; see Fraser Cain "Will Earth Survive When the Sun Becomes A Red Giant" (31 January 2008) Universe Today <www.universetoday.com>.

24 For the discussion in the three paragraphs of this section see generally: Donald Canfield *Oxygen: A Four Billion Year History* (Princeton University Press, Princeton, 2014); Charles Langmuir *How to build a habitable planet: the story of Earth from Big Bang to Humankind* (Princeton University Press, Princeton, 2012); John Chambers and Jacqueline Mitton *From Dust to Life: The Origin and Evolution of Our Solar System* (Princeton University Press, Princeton, 2013); Lawrence Och and Graham Shields-Zhou "The Neoproterozoic oxygenation event: Environmental perturbations and biogeochemical cycling" (2012) 110 *Earth-Science Reviews* 26.

somehow unique in being a species that may drastically alter its own biosphere to its own great detriment are overstated; there is a precedent, and Earth continued on qua Earth.

The next biospherically-triggered atmospheric revolution occurred when plants developed a tissue called lignin which strengthened their structural stability. Lignin was a new organic material that existent carbon digesting microbes could not digest. As such the carbon dioxide being taken from the atmosphere by the plants through photosynthesis could not be digested, to be recycled and returned to the atmosphere to maintain the balance ratio between oxygen and carbon dioxide. The result was runaway oxygenation, where oxygen went from 21 per cent of the atmosphere (about where it is now) to 35 per cent causing the Carboniferous era of gigantism in plants and insects to come into being. Thus a new biosphere was triggered by developments in the plant kingdom.

Fortunately microbes developed the capacity to metabolise lignin just in time and to start to replace the carbon dioxide and restore the balance, because had the atmosphere reached 40 per cent oxygen, the Earth's biosphere would have spontaneously combusted into a giant conflagration. The millions of years of undigested carbon lignin laid down became significant quantities of our coal deposits, the burning of which is the major source of our current carbon dioxide emission problem. Earth has therefore experienced great biologically driven changes in atmosphere and biosphere before, without perishing long term qua Earth, so why would it be in Earth's (rather than our) interests to maintain this particular biosphere?

(b) Earth's short term survival interest qua planet: this biosphere is a bit special.

There are two other plausible reasons which give Earth an interest in the continuing functioning of this particular biosphere and this particular technologically clever species which are independent of humanity's self-regarding interests. Both have to do with extra-terrestrial objects striking the Earth.

Serious development is underway to protect the planet should it be threatened by an asteroid strike.²⁵ Most asteroid strikes would only harm our biosphere, the one we know and are a part of, and so would be of no concern to Earth, qua planet. But there is the potential for an Earth-itself destroying asteroid strike, just as it is argued to have been nearly destroyed when allegedly struck by something so massive that the result was so cataclysmic enough debris material was created to form our Moon.²⁶ Whether such an event ever happened is still open to debate, but that it could happen is not denied. The longer periods of biosphere stability and the higher likelihood of life intelligent enough to protect Earth from such a collision gives Earth a precautionary interest in biosphere stability. Perhaps, since

25 This includes plans by the United Nations to coordinate planetary asteroid defence: Clara Moskowitz "United Nations to Adopt Asteroid Defense Plan" *Scientific American* (online ed, New York, 28 October 2013). The asteroid defence plans have been driven in large part by a coalition of former astronauts and cosmonauts, and by former Apollo astronaut Rusty Schweickart in particular: William E Burrows *The Asteroid Threat: Defending Our Planet from Deadly Near Earth Objects* (Prometheus, New York, 2014)

26 Dana McKenzie *The Big Splat, or How our Moon Came to Be* (Wiley, New York, 2003).

humanity seems technologically adept, it also provides Earth with at least a weak interest in the preservation of this biosphere and this technologically advancing species, rather than only in some biosphere that can support intelligent life.

However, Earth very likely would have plenty of time to develop another clever saviour species should this biosphere and this clever species disappear, as the mature solar system has likely swept out most if not all planet destroying asteroids aeons ago.²⁷ Earth conceivably has only to worry about some rogue planet ejected by some event in another star system, that is, the likelihood of an object striking Earth, which would be massive enough to be planet-destroying or to annihilate the possibility of the regeneration of a replacement biosphere, is very small. This does however provide an interest here for Earth to maintain this particular biosphere with us in it, but it is not a strong interest.

Therefore I suggest that Earth qua planet has two interests which are served by a biosphere which is capable of supporting complex life: a better shot at both short and long term survival qua planet. Those are reasons I can accept as non-anthropocentric. Such an interest, in such a biosphere, could weakly be translated to Earth, qua planet, having an independent interest in protecting the biosphere at hand, as it has already produced complex life which might be able to perform those protective functions. But, Earth has time, aeons to regenerate and recreate intelligent life; therefore its independent interests in this biosphere do exist, but may not be particularly compelling.

3 *Possible paradigm three: Earth with this biosphere as consequentially morally considerate*

Can there be a story which provides Earth (and not just us) with a stronger interest in maintaining this biosphere, when it has cycled through other biospheres? Perhaps a biosphere as a generator of creatures clever enough to devise ways to protect their home planet from annihilation in the long (a few billion years) or shorter (hundreds of millions years) term is in Earth's interests; but what strong interest does Earth have in this biosphere? What makes this biosphere exceptional besides that it is the one that sustains us and our fellow current species?

As noted, Berry's principles five and 10 go to exceptionalism. Principle five privileges this biosphere and principle 10 privileges humanity as special. Exceptionalism of any kind is always to be viewed with scepticism, because it is usually a cover for self-interest. After all, Earth Jurisprudence is about trying to get us to get over privileging ourselves as exceptional, most important or first among equals in living and interacting with this biosphere. What could justify any exceptionalism to make this biosphere important and independently morally considerate, other than it is our own, we are attached to it, and our species is dependent on it?

Berry's 10 principles brush by this, simply assuming that this biosphere has special considerateness, but then falls into Natural Law and spirituality talk rather than attempting a reasoned

27 Chambers and Mitton, above n 24.

analysis to show us why, other than it being our one, that it is deserving of special efforts for its preservation. Somehow the maintenance of our biosphere needs to be privileged as important for Earth itself, rather than merely serving as one of a series of Earth biospheres, neither more or less worthy of preservation than the last. Biospheres have come and gone. Other than anthropocentrism, is ours to be specially maintained for the duration rather than cycling through as did its predecessors?

Berry's invocation of the intrinsic and assumed value of this biosphere through axiomatic assertions of rights of beings and of the biosphere to be, and to be in balance, imports all the Natural Law type weaknesses discussed above. The principles place an ultimate reliance on metaphysically based truth claims as to why your natural law viewpoint is more defensible than all the natural law viewpoints you disagree with, but do not give us a story which could transcend both anthropocentrism and metaphysics yet still privilege Earth's interest in the preservation of this particular biosphere. Remember, he is talking about a natural law, existential rights and moral considerateness, not physics, so the claims can neither be proven nor refuted, even through careful reasoning. His claims, as all claims based on universal morality, may ultimately be true, but they are also necessarily articles of faith. For example, our current moral intuition that people are intrinsically morally equal and should be treated as such is an intrinsically unprovable radical choice. Extending a form of equal moral considerateness to, for example, species, species' rights and ecosystems is a similar sort of radical choice. These are fundamental moral principles to which we adhere for perhaps consequential or other reasons, but we cannot prove them one way or the other.²⁸

While a number of Berry's 10 principles would be consistent with some of the views of other Natural Law scholars such as Finnis,²⁹ that does not make them right or convincing. What made the emergence of Universal Human Rights (the current instantiation of Natural Law) possible was the global catastrophe of World War Two and the Holocaust, the rape of Nanking and other atrocities in the Pacific, and the devastation of the atomic bombing of Japan.³⁰ People saw the compelling need to act as if there were a universal moral law which valued the dignity of each human being, whether such a law existed or not. They were convinced not by a rational proof of any universal moral or metaphysical reality, such as Plato's realm of ideals, but by confrontation with the undeniable and unacceptable factual horrors which arose from not so acting.³¹ In essence, Universal Human Rights were accepted through the operation of a belated consequentialist embracement of a moral

28 See generally: Bernstein, above n 17; Berlin, above n 18.

29 Berry's principles, especially the tenth, are consistent with John Finnis's conception of practical reasonableness and self-evident good. By appealing to self-evidence Finnis was enabled to assert the what, but spared the necessity of engaging in reasoned justification as to the why, just as Berry has done with his principles. See Finnis, above n 20.

30 Micheline Ishay *The History of Human Rights: From Ancient Times to the Globalization Era* (University of California Press Ltd, Berkeley, 2004) at 217.

31 At 218.

precautionary principle. Perhaps the beginnings of the consequences of our injecting carbon dioxide into the atmosphere will generate enough catastrophe and horror that a consensus can arise to act as if this biosphere had some superior claim to moral considerateness than previous or emergent biospheres, simply because it is ours and our survival depends upon it. But that would again be an acting as if from the anthropocentric perspective. Does this Biosphere have any non-anthropocentric claim to Earth's particular concern? Maybe.

4 Possible paradigm four: Earth with this biosphere contributes to a larger evolutionary project

Perhaps from perspective of Levels, Earth qua Earth has a particular interest in the maintenance of this biosphere. By Levels I mean levels of organisation of being or reality. If the particular biosphere is intrinsically linked and participating in some greater emergent project, perhaps that would give Earth independent and strong interests in its protection. This draws on the Gaia principle or idea, but also on the idea that this particular biosphere and our participation in it matters to the further development of Gaia as an emergent supra level of being. I will attempt to explain through the analogy of the levels of being in reality and what emerges from their organisation.

A family of subatomic particles, quarks, make up atomic particles.³² They interact with each other and through the nuclear force are the building blocks of atomic particles, such as protons and neutrons, but they are orders of magnitude smaller than those larger entities which they create and which would not otherwise exist. Quarks are a primary level of being. Quarks cannot experience the atom which emerges from the patterned interactions of quarks, but the atom cannot exist without those patterned interactions of quarks (and electrons, another fundamental particle). Atoms are a higher and derivative level of being, dependent on the interactive organisation of quarks. Quarks are at a level of being at which larger atoms and their structures are irrelevant and inaccessible. For a quark, the interactive world is made up of quarks.

The atoms, emergent from quarks interacting with each other in patterned ways, are internally mostly space and energy. Atoms interact with other atoms in patterned ways and in doing so they can link together to form molecules. Atoms cannot experience the larger order level of being of the molecule; they can only interact with other atoms together, and emergent from those patterned interactions are elaborate networks of atoms, giving rise to the higher order of magnitude or level of being: complex molecules. Atoms simply interacting with atoms give rise to the much more complex level of being, the molecule, but without atoms there could be no molecules.

32 An accessible guide to the discussion of quarks and atoms is James Trefil *From Atoms to Quarks: An Introduction to the Strange World of Particle Physics* (Anchor Publishing, New York, 1994).

Molecules are another level of reality, a composite of the atoms by which they are composed, made of atoms but at a different level of organisation.³³ Molecules are a linking level, some very simple and small, some very large and complex. Molecules depend on links between atoms, as atoms depend on the links between subatomic particles. Molecules serve as the link between the atomic and the living cells, which are emergent from the linking together and interactions of complex molecules. The interactions of molecules, mediated by atoms, make the stuff of cells, proteins, DNA and mitochondria, but molecules themselves have no cellness. They and their linkages and interactions result in a cell, but the cell exists on a vastly different scale or level of being. Cells represent a level of being emergent from the structures and energies created by the interactions of those entities in the levels of being well below them, invisible to them, just as the cell is invisible to the quarks from which it emerges.

Cells are made of molecules,³⁴ but molecules have no cell-making purpose; they are just interacting with each other as molecules, with those interactions making proteins and many things essential to the functioning of cells. The level of being of a cell (or even of a bacteria) is inaccessible to molecules, but is dependent upon and emerges from the interaction of myriad molecules, linking and interacting together. Cells also come together, interact together, to make multiple cellular entities such as ourselves, fungi or trees, all of which are cells acting together through connections and networks. However, cells have no access to our level of being at the multicellular level; as far as cells are concerned reality consists of communities of cells, differently organised, but cells working together as cells dependent on proper functioning of the nested levels of being out of which they emerge. Our own cells are created, live, multiply, fight, ail and die, all seemingly without knowing that they are creating something with a separate consciousness and will.

While our consciousness emerges from the multicellular community³⁵ which is created by them, their sort of consciousness, as even cells are aware of their environment, seems unable to transcend their level of being to the consciousness of the more complex level of being to which their communal activity and cooperation has given rise. It would seem that to what their collective cell community gives emergence transcends their capacity of knowing. Why, other than some sort of unlikely exceptionalism would the progression of levels of organisation and being stop at our particular multicellular level? If interacting entities at all the nested levels of being below us give rise to some

33 For discussion of the atomic foundation of molecular structures, including a brief survey of the basics of physical chemistry, see Michael Hornby and Josephine Peach *Foundations of Organic Chemistry* (Oxford University Press, New York, 1993).

34 For discussion of molecular foundation of cells see Bruce Alberts and others *Molecular Biology of the Cell* (4th ed, Garland Science, New York, 2002).

35 See Roger Penrose *The Emperor's New Mind: Concerning Computers, Minds and The Laws of Physics* (Oxford University Press, Oxford, 1989); and Roger Penrose *Shadows of the Mind: A Search for the Missing Science of Consciousness* (Oxford University Press, Oxford, 1994) for discussion on the mysterious emergence of consciousness from multicellular interactions.

supra level of beings which are interactive in their own right with other emergent beings at similar supra level, why would it stop at our multicellular level of being? Only exceptionalism would make patterned and regular interactions between beings that level of interacting somehow incapable of being the basis for the emergence of some next upper level of being, will and complexity. That next level of being would be as dependent on the ongoing patterned interactions of multicellular life as we are dependent on the continuing patterned interactions of the quarks, atoms, molecules and cells from which our level of conscious being is emergent. Why should it stop here? Because we cannot access it? Cells can't access us, but we still exist. Quarks can't access atoms, but atoms exist.

It could be possible that the pattern of interactions at our level of the biosphere is giving rise to an independent something, whose existence and dynamism takes place at a different level or scale, which is both as dependent on our level and as inaccessible to our level as our level of existence is emergent from and inaccessible to entities at the cellular level, as that level of being is emergent and inaccessible to the level below it and so on. It may not be likely that some supra-level of being is emergent from our level patterns of interactions, it almost by definition could not be proven, but it, is at least imaginable.³⁶

We know that we are part of a community of interacting beings at our level, in this biosphere that encompasses and depends on nested levels of smaller scale interacting entities. We can fairly suppose that those nested levels of being have, respectively, no capacity of awareness of the supra level of organised reality to which they give rise. Perhaps the Gaia³⁷ style myth that Berry was trying to anchor would be better anchored by considering the possibility, even the likelihood, that entities of our level interacting in the biosphere may give rise, or may now be giving rise, to a further level of organisation, a further development against entropy, to a something which is itself an entity in its own right. That level of being would perhaps be due a moral considerateness if such would make sense at a level beyond our own. This is not exactly the Gaia principle, but not exactly different. If the phenomena of nested levels starting from quarks³⁸ and on which atoms, molecules, unicellular and we, as multicellular beings, depend for our being holds (either in myth or reality, we might never know), that would give a reason, beyond that of our own self-interest, to cherish this particular biosphere and its emergent potential as some further level of organised being.

This idea can capture the imagination that perhaps we, as a species, are through also being extremely responsive, interactive (like quarks, atoms, molecules and cells) and excellent network builders (like atoms, molecules and cells), building extensive interacting physical, informational,

36 Imagining that also avoids the all too human hubris of somehow privileging our level of being as the ultimate level.

37 The principle that the Earth's web of interacting systems form a type of complex super-system which sustains Earth's fitness for life: James Lovelock *Gaia, a new look at life on Earth* (Oxford University Press, New York, 2000).

38 If not from something yet more minute from which quarks are emergent.

light, radio and interplanetary networks, will give rise to yet another level of independent and interacting being. Perhaps we and our biosphere are participants in the emergence or maintenance of yet another level of coherent entity, just as the interactions and networks of the nested levels below give rise to, but can never know or experience, our level of being. We may never know whether that conjecture might be true, but we do know here and now that we are emergent from nested levels of interacting entities and that exceptionalism is unusual.

Thus it is possible that something besides us, something perhaps unique and ultimately aware, depends on our continued thriving, interacting, building linked networks, developing and persisting. Using the precautionary principle, this very possibility could give us reason to preserve the biosphere and to continue networking, just in case it is important for the emergence of something at the next level of being. Perhaps extensive patterned interactions between multicellular life (or some of it) can give rise to something with the potential to be a foundation for a level of being beyond itself, whether it be some Earth uber-consciousness or something else. This gives a (precautionary) moral mandate to maintain this biosphere in a way that does not rely on a universal claim to moral truth.

Our cells may malfunction in their own biosphere (our bodies) and in the process destroy their own community, as well as what is emergent from that community; that is, us and our consciousness. That happens when cells, for whatever reason, are not properly fulfilling their essential roles in the multicellular community of which they are members. Likewise, we may conduct ourselves in a way that destroys this biosphere, thereby destroying whatever it is that may be emergent from our biosphere's networked ways of living and being. To do so would be to malfunction as a species, truly earning our nickname of being a sort of Earth cancer or illness which the Gaia biosphere ought to wipe out, for to endanger our continued flourishing and network building might be to destroy something much greater than ourselves. If there was even a remote chance that our development as a highly interactive network building species was contributing essential building blocks for another more complex and independently functioning level of being and complexity, I for one would want that to continue, even if it forever remained merely a possibility and a mystery. In this story, humanity plays an important part, but a supporting part. It may be anthropocentrism, but anthropocentrism lite.

B Shifting Paradigms

1 Earth: Which story will best shift the paradigm?

Earth is a planet whose otherwise finite lifespan we, as a clever species dependent on this biosphere, might in several ways extend (Paradigm Two). Or, it is a planet with a biosphere that is supporting hyper-interactive networking and network building species that may, through those interactive linking activities, be giving rise to some further level of complex being (Paradigm Four). Both of those approaches give some guidance as to what one might consider to be Earth's unique interests or perspective and give a story or myth that is not primarily anthropocentric from which to develop an Earth-centric paradigm shift. Those could be available stories if the necessary paradigm shift depended on a non-anthropocentric story. But are they either convincing or satisfactory?

If we can find no satisfactory story, mythical or factual, that would give Earth an independent interest in the preservation of this biosphere with us in it, would it be more effective to effect a paradigm shift in how we live in the world and biosphere to acknowledge that the fundamental concern of Earth Jurisprudence is the maintenance of this biosphere for our own benefit, as it is our biosphere, the one to which we are adapted and the one in which we evolved (extending Paradigm Three)? Or will the necessary paradigm shift be more effectively brought about by acting and myth making as if it were really Earth we were concerned about (Paradigm One)? As again, what particularly worries me about the current conception of Earth-centredness, besides its anthropocentrism, is its uncanny resemblance to a recasting of Natural Law. In an age of realism, post-modern relativism, self-regarding individualism and deep distrust of claims to moral universalism (even if based on the universe), will something so Natural Law flavoured have the sticking power, the convincing power needed, to effect a paradigm shift worldwide?

Or, perhaps we should just unembarrassedly embrace that maintaining the health of this biosphere, with its complex web of physical and species interactions, is fundamentally in our species enlightened self-interest and not worry about creating a myth of non-anthropocentrism. For example, we could instead extend Paradigm Three and work from accessible facts and from horror. Accessible, demonstrable facts, effective sharing of information and horror³⁹ have been major players in past paradigm shifts, scientific and political. As all paradigm shifts reflect moving from one story about the world to another, perhaps there is no need to go beyond these to tell a compelling and convincing story. Perhaps effecting the necessary paradigm shift would be better served not by creating a myth or story on which to anchor a new normative paradigm, but by effective use of information in the prevailing paradigm of self-regarding anthropocentrism, as perhaps there is no more effective story than that of humanity's own survival.

2 *Changing our ways*

The underlying enterprise of the alternative paradigm proposed by Earth Jurisprudence is to achieve a shift in how humans and law perceive and interact with the rest of the biosphere. I have argued that the enterprise ends up being fairly squarely anthropocentric, through attachment to this very biosphere (and to the very species it supports) which is profoundly important to us and to the other current species, but which is likely of very little importance to Earth itself in the broad swathe of the planet's lifetime. We need to change our ways not for Earth's sake, but for our own sakes. That being said, I am conscious that we need to consider what would be the most effective way of bringing

39 The inhumanity of the Slave Trade, the cruelty of the Holocaust, the devastation of Hiroshima and Nagasaki all lead to profound shifts in paradigms and ultimately in international and much domestic law. See generally Ishay, above n 30, at chapters 4–5; Paul Lauren *The Evolution of International Human Rights: Visions Seen* (University of Pennsylvania Press, Philadelphia, 2003) at ch 2; and Joseph Cirincione *Bomb Scare: The History and Future of Nuclear Weapons* (Columbia University Press, New York, 2008).

about the needed shifts in perception and actions; that is, what would be the most effective way of bringing about the needed paradigm shift about how we interact with our biosphere and our planet.

The Berry principle-based path is a path similar to that advocated by Plato when discussing his ideal Republic. Because the Berry principles are Natural Law like, they are essentially propounding a metaphysical myth. The purpose of a Platonic Noble Lie or myth is to create a story, a good story, a convincing myth, as the justificatory foundation of the political order under which people are governed.⁴⁰ The myth is to facilitate people accepting the legitimacy of the way things are managed and the legitimacy of their allotted tasks in the Republic, by virtue of the precious metal within, with each precious metal destined to fulfil a certain role: bronze for the ordinary citizen, silver for the protective classes and gold for the ruling classes.⁴¹ Plato's myth was inspired as a strategy to manage the vagaries of human nature, and to avoid the follies of ill-disciplined, self-interested, democratic polities. It was to enable societies to make the best and most rational use of available talents in a way that preserved order, dignity and self-respect. Plato also had a special place in his Republic for education, such that the character and talent of young citizens could be properly divined and people properly trained for their roles, thus avoiding mismatches and discontent, and nurturing talent.⁴² Plato's role for his myth was not truth, but to render people manageable and amenable to acting for the greater good of the whole (as he perceived it). He considered that approximately two generations would be needed for the myth to become rooted as the new common sense or hegemony. He did not count on the gold philosophers necessarily believing the myth,⁴³ but to act as if they did.⁴⁴ Plato wanted this rationale pursuit of a community's best interest as he had witnessed the difficulties an ill-disciplined and ill-educated democracy brought to considered pursuit of the public good. Plato's Noble Lie was essential to facilitate an enlightened totalitarianism for the long-term greater good. He did not intend to work through democratic persuasion. However, as mentioned, Plato also put great stock in education as essential to the long term success of his Republic.

In our circumstances, we too are faced with the destructive tendencies of ill-disciplined, perhaps captured, democratic processes and a determined resistance to educating citizens into the necessities

40 Plato, above n 6, at 181.

41 At 182.

42 At 182.

43 Although Plato has Socrates say that he hopes that they would: at 181.

44 Lon Fuller discusses Vaihinger's philosophy of "As If". Vaihinger examines the phenomenon of many fields coming to right answers through acting as if known fictions were true examines the utility of acting "as if". The failure, however, to drop the known fiction in the final deciding is the "original sin of human reasoning": Lon Fuller *Legal Fictions* (Stanford University Press, Redwood City, 1967) at 94–118, quotation at 118. Fuller points out that the same holds true for law and legal or jurisprudential fictions. One danger for Earth Jurisprudence might be if it truly believed it was Earth-centric, rather than merely acted as if, as that might blind it to potential pathologies emerging from its hidden anthropocentric agenda.

for the continued thriving of our biosphere.⁴⁵ Will a new myth or Noble Lie such as Berry's Natural Law infused principles achieve the purposes at hand, which are similar to Plato's purposes? That is, can they convince a populace and a political system to act cooperatively and to accept the carefully considered advice and direction of those who are in the position of the philosopher kings: of those who are trained and educated in the preservation of the biosphere? Can a myth and philosopher kings be useful without a totalitarian republic within which they can operate? Would Plato's problem with the ill-discipline and catastrophic misses of the public interest which doomed Athenian style democratic governance have been better resolved through his simple focus on education? We face the same problem he did, in that the necessary education was opposed by the demos who were so in need of that education (leading to the tragedy of Socrates, who Plato has speak to us through the Republic). Without a totalitarian Republic and with many democratic interests opposing the needed education as to the reality of the peril of the biosphere, is creating a stand-alone myth likely to succeed, even in two generations time?

To answer that question, one could examine the factors seemingly in play in past paradigm shifts of our understanding of reality and our place in reality. Perhaps considering two rather dramatic paradigm shifts in the relatively recent past can be instructive as to how to best achieve the paradigm shift now needed in the time available. Examination might cast light on what necessary confluence of factors precipitated those shifts. Knowing that all things legal work appallingly slowly and that time here is of the essence for us and the biosphere we know, it might also illuminate where and how law can best contribute. Two paradigm shifts will be considered briefly, as they are instructive in a helpful way: the Enlightenment⁴⁶ and the post-World War Two development of internationally recognised and legally enforceable Universal Human Rights (essentially rehabilitating aspects of natural law).

45 See generally Naomi Klein *This Changes Everything: Capitalism v The Climate* (Simon & Schuster, New York, 2014).

46 The Enlightenment seems particularly apt, as it developed concurrently with the development of the coal-burning industrial revolution that led us into this predicament. Ironically, as the industrial revolution accelerated humanity's unearthing and burning of the coal put down in the Carboniferous Era, John Priestly was discovering photosynthesis and the role of plants in taking carbon dioxide (then called dead air) out of the atmosphere and putting Oxygen (called living air) into the atmosphere. He and Ben Franklin, astounded at the time, realised that animal life and plant life were necessarily mutually interdependent. They had known animal life used up the live air, that the supply of live air in any particular quantity of air was finite and that animal life would die in the remaining dead air after the live air was depleted. What they had not known was that plant life was key to rejuvenating dead air back into live air and hence to sustaining our oxygen-based life forms on Earth. So, at the same time that the biosphere's atmospheric oxygen to carbon dioxide balancing act was coming under anthropic attack, its chemical basis and dynamics were also becoming understood. This work provided the scientific foundation for the understanding (but not word) of life on earth as necessarily reliant on a mutually interdependent ecosystem or biosphere. See Steven Johnson *The Invention of Air: A story of science, faith, revolution and the birth of America* (Riverhead Books, New York, 2009); and Canfield, above n 24.

(a) The Enlightenment paradigm shift

The Enlightenment was a revolutionary paradigm shift in how the world and our place in it was understood. While having very early roots in the Renaissance, the Enlightenment of the 1600–1800s shifted our understandings of the physical world, the political world, the moral world and the economic world. What factors enabled that shift to succeed? An explorer of history, Steven Johnson argues that some of the most important factors in that time of knowledge and norm creation were structural in nature, and those are the sorts of things we might find most interesting in attempting to facilitate another deep paradigm shift in our understandings of our place in the world.⁴⁷

In exploring Joseph Priestly's enlightenment journey, Johnson concomitantly explores the factors that enabled the Enlightenment to succeed.⁴⁸ He enumerates a confluence of factors which came together to facilitate the success of the Enlightenment project. Some were seemingly prosaic, such as the arrival of coffee culture to Europe and Britain that created physical and mental space for the exchange and development of ideas. Coffee and coffee houses replaced alcohol as the preferred daily breakfast, lunch and dinner drink.⁴⁹ Caffeine is also known as a mental stimulant, so European thinkers and scientists went from a baseline of slight drunkenness to one of enhanced mental acuity.⁵⁰ One wonders whether the internet is serving as a societal mental stimulant or judgment clouding intoxicant. If this is an important factor, it is essential to consider what can be done to enhance the one and combat the other.

Other factors Johnson noticed were the availability of time to think and explore ideas⁵¹ combined with greatly enhanced information flow,⁵² information networking through coffee house culture, learned societies and the like, as well as through printing and expanding literacy. Interdisciplinary and

47 Johnson, above n 45.

48 Joseph Priestly is credited with, among numerous other things, the discovery of photosynthesis, the discovery of oxygen, work in electricity and electricity education, the recognition of the interdependence of the ecosystem, the invention of carbonated water and the founding of the Unitarian Church. See Johnson, above n 46.

49 At 58–59.

50 At 58–59. We might consider limiting the legally appropriate use of SSRI's, which might be our era's widespread mild intoxicants gently befogging people's mental acuity.

51 At 53 and 78–82. This has implications not only for the current time poverty in academia, driven by government policy and funding. We might consider the need to amend labour and minimum wage laws, issues not often to the ecological fore, to make sure people have the time and energy to consider their welfare (a friendly biosphere) beyond their immediate daily survival needs. An exhausted populace is not one likely to demand change.

52 At 56–57.

multidisciplinary work was the norm, so problems were looked at in varied contexts,⁵³ which both helped promote useful refinement and to avoid unforeseen consequences.

Technological advances also made the necessary science actually doable and the resultant scientific successes made the emerging Enlightenment story, of humanity's ability to achieve a better world for all through rational informed human action accessible and compelling.⁵⁴ The Enlightenment also coincided with reconceptualising political legitimacy as being tied to both consent and promoting progress for the populace,⁵⁵ which further bolstered the Enlightenment story of rationality and science leading to an increased human ability to understand, manipulate and control both the natural and social worlds in ways that would enhance human flourishing. While the Enlightenment story was backed with undeniable technological progress and innovative political ideas, perhaps the most critical factor Johnson noticed in its acceptance as the new paradigm was that those in positions of economic and political power derived significant advantages from the new scientific understandings. The scientific advances could be used to enrich the capital classes through better production processes and they could be used to better wage war and to more effectively project a State's power. As a result, governments and the establishment nurtured and encouraged the new Enlightenment paradigm in a way we are not seeing for the development of a new meta-paradigm of ecological interdependence. There may be a pragmatic lesson to be drawn here, that to achieve an effective and timely shift to the ecological interdependence paradigm, it may be necessary to provide advantage to those to whom one would rather not.

(b) The post-World War Two Universal Human Rights paradigm shift

A more recent paradigm shift may provide more insights on what factors have led to successful deep changes in how we view our place in the world. The Universal Declaration of Human Rights of 1948 represents a concerted effort to change the entire world's understanding of what it meant to be human and what constraints on the power and duties of States and the entire international community arose from the "inherent dignity and ... equal and inalienable rights of all members of the human family".⁵⁶ This was a paradigm shift driven not by the optimism and hope of the Enlightenment, but by a period of unacceptable horror and the widespread discrediting of competing paradigms, naturalist or positivist.⁵⁷ There was anger and guilt, as well as powerful competing geopolitical players and ideologies, but a theme was who and which ideology would best promote achieving human dignity

⁵³ At 58.

⁵⁴ We might reconsider further redefining charitable purposes to lower transaction costs for storytelling and mobilisation.

⁵⁵ Anthony Arblaster *Democracy* (2nd ed, Bookland Publishing Company, Markham ON, 1997) chs 3–4.

⁵⁶ *Universal Declaration of Human Rights* GA Res 217A, A/Res/801 (1948), preamble.

⁵⁷ See generally Ishay, above n 30, at ch 4.

internationally. It was also a discourse of hopefulness,⁵⁸ a hopefulness that universal rights obligations on all states could be effectively created and enforced by the international community at large. The discourse was no longer about whether there were or ought to be protection and recognition of universal human rights, but as to the content and best promoter of those rights. Being a rights promoter and protector, in one fashion or another, became a factor in the discourse of global legitimacy.⁵⁹ Respect for rights within states also became identified as important for maintaining global peace and legitimacy, and avoiding internal civil wars which threaten the stability of all, again giving the powerful motivation to promote the bedding in of the paradigm of rights protections. The story that emerges (not the detail of jockeying to maintain geopolitical and economic advantage) is one of a shared horror leading to a paradigm based on respect and hope. I wonder if that is the story that would be most useful to the Earth project.

3 *Lessons for paradigm shifters*

One problem neither the Enlightenment nor the Universal Human Rights paradigm shifts faced was deniability. It was not until the Holocaust and the horror of other World War Two atrocities including the atomic bombing became wholly undeniable that the Universal Human Rights paradigm shift became inevitable. Enlightenment science, providing tangible technological marvels, undeniably worked. Lack of an effective paradigm of respect for universal human rights had undeniably accompanied horrific levels of atrocities.

Yet, humanity survives by denial:⁶⁰ denial of our inevitable mortality helps keep us sane and continually invested in the human enterprise; denial is a fundamental human survival and coping mechanism.⁶¹ Denial is rife as a 'problem exacerbator', from Mount Vesuvius, through the lead up to World War Two through to the long rumbling Ebola outbreak in West Africa; humans tend to deny problems that are just too horrible and too difficult to face. And denial, as we well know, by those with an economic vested interest in such denial, is one of the big problems facing the Earth project.⁶²

58 "Never again" reflects that hopefulness: at 218–243. Strides were being made in areas of minority, religious, gender and children's rights.

59 Lauren, above n 39, at chs 6–8.

60 Fuller, above n 44, at ch 3: simplifying fictions denying the complexity of reality is essential for human rationality and thought. See also David Nyberg *The Varnished Truth: Truth Telling and Deceiving in Ordinary Life* (University of Chicago Press, Chicago, 1993) at ch 5: denial and self-deception are necessary for a functioning self.

61 See Daniel J Siegel *The Developing Mind: How Relationships and the Brain Interact to Shape Who We Are* (2nd ed, Guilford Press, New York, 2012).

62 See James Hoggan and Richard Littlemore *Climate Cover-Up: The Crusade to Deny Global Warming* (Greystone Books, Vancouver, 2009).

This limited survey hints that paradigm shifts draw on factors from all levels, from the neurochemical through the social, the informational, the technological, the scientific, the political, the economic⁶³ and through a compelling story.⁶⁴ Do we have a story? Which story is most compelling, more likely to galvanize the paradigm shift in a timely fashion? Is our best story the one of a gentle shifting of human understanding of the metaphysical rights of the biosphere or is it one of human survival being threatened by greed and lust for power? Coal, nitrogen, pesticides, herbicides and habitat loss are the primary villains of the latter story, with States failing to act in their citizens' interests due to political corruption and capture by corporate interests.⁶⁵ If humanity is fundamentally a self-interested species, would a story that appealed directly to its self interest in survival do better?

With time short, a story that is compelling from within the existing paradigm might not be the most beautiful story, but it might be the most effective story. A story of corruption of political legitimacy by those benefitting financially from destroying the balance of this biosphere has advantages. It is true and not a Noble Lie needing generations to take hold. It raises anger which, if properly harnessed, is galvanising and energising. It is a very accessible story; it does not require people to reimagine their basic world view. It has villains and a good story needs a villain. It requires politicians to engage, to attempt to refute the story, to show that they are neither captured nor corrupted by those financial and political interests driving the unbalancing of this, our, biosphere. It appeals to the human tendency of territoriality, defending our biosphere. It is a story that speaks to humanity as it is and not as we would wish it to be, so it is a story that can be widely heard and understood.

III CONCLUSION

Earth, like Cronus, eats its children as it cycles through species and biospheres. Earth's only interest in us is what we can do for Earth in the long run which, in all likelihood, is probably not much. If we are harmful, Gaia will not protect us and Earth will eat us too. If not, Gaia will protect us, as she protected Zeus. Earth will let us live. The degradation of the biosphere is our problem, not Earth's problem. Earth will likely be fine with or without the current biosphere and with or without us. In the extreme, some other biosphere and species could meet Earth's independent or emergent interests, as they are properly understood.

To consider our existing jurisprudence from an Earth Jurisprudence, an allegedly Earth-centric perspective, was the initial intention that lead to this project. After examining the fundamental tenets of Earth Jurisprudence and developing an understanding of a truly Earth-centric perspective, one would predict that Earth, in considering our laws, our statutes and our judgements, would yawn.

63 Johnson, above n 46, at 51.

64 At 36.

65 Law might consider reinstating limited life times, limited capital and limited purposes for corporations, working within the existing legal paradigms to fetter some of the institutional sources behind biosphere degradation, expanding the focus beyond the degradation itself to the drivers of that degradation.

Complex life will persist, one way or another and, odds are, Earth has time to wait. We do not. That is why it is so important we develop and use the most compelling story and make sure people have the time and space to hear it, now. While Earth Jurisprudence provides a beautiful, good and ostensibly morally virtuous story, it might not be the most effective story at this point given the currently dire state of our natural environment. I suggest that we need to tell and re-tell the current horrors of greed, corruption and ecological destruction in order to galvanise people to fight for the survival of "Earth, Our Home".⁶⁶

66 Earth Charter Commission "The Earth Charter" Earth Charter International <www.earthcharterinaction.org>, preamble. See also Berry, above n 2.

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