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The Ecological Roots of Ethics and Religion

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Abstract

In the face of environmental crisis we urgently need agreement, across cultures and nations, on the moral significance of the biosphere. Environmental philosophers have tried to *reason* their way towards such moral accord by devising *arguments* for environmental ethics. But arguments crumple in the face of people’s established moral convictions. Moral ‘truth’ is not a product of reason; rather it is hatched inside stories, the kind of primal stories that have been the province of myth and religion. Historically, such stories have been inescapably culturally specific and relative. Is it possible in the modern world to imagine a *common* story, one that could emanate in a global moral commitment to our increasingly stricken natural world? Could science for instance serve as such a universal story? This is doubtful. Science may be a universal form of knowledge but it is not a story because stories are inherently normative, and science is normatively neutral. Yet a universal story, one which can be seen to subtend all religions and all ethics, and is in fact the very ground of meaning per se, is currently coming into view. It is a story which has been backgrounded throughout the history of civilization but is coming to light again in face of the planetary crisis that is now in full swing. It is none other than the life-story of the Earth.

The need for moral agreement

In this era of climate change when geophysical upheavals of a global nature are set to sweep the planet, won’t the need for agreements that transcend the strict proportionalities of national interest be greater than ever before? Different nations of course have different degrees of vulnerability to environmental disruption and different degrees of economic wherewithal to mitigate or manage it. Those with the greatest economic resources happen also, with some exceptions, to be those least vulnerable, at least in the short to medium term. (Australia is one of the exceptions.) As long as self-interest rules the day then, won’t nations with the most to contribute to climate change mitigation tend to be the very ones to hold back, and won’t international agreements thereby be pre-empted or fatally weakened, with dire consequences in the longer term for all?

Can this scenario be avoided? If national interest continues to prevail, perhaps not. An alternative basis for concerted action may be required. What could provide such a basis? Only, perhaps, morality. Only if our reasons for acting are moral and not merely self-interested might our efforts become unconditional. Only when nations agree that de-stabilizing the planetary climate system is morally catastrophic and that our moral responsibility to mitigate and repair the damage is overwhelming might our response become proportional to the challenge. But how can such moral agreement be obtained in a multicultural world of rampantly competing ideologies in which different moral ‘truths’ define different moral constituencies? Is it possible to imagine an international society morally united in its commitment to the integrity of the biosphere?

Environmental philosophers have tried to reason their way to such a moral accord via a universal ethic of nature.¹ Trying to set contingent cultural premises aside and arguing only from the presumed moral significance of the human, philosophers often adopt an ‘expanding circle’ model of moral reasoning.² In accordance with this model we reason outwards from our assumption of the moral significance of our immediate circle – whether kin, community or race - to encompass wider circles of being – the ‘others’ that make up our society, excluded groups, humanity as a whole, and, ultimately, the realm of nature at large. Environmental philosophers try to devise universal criteria of moral considerability that enable them to bring the non-human, specifically, into this circle of moral concern.³ But apart from the questionability of

¹ By this I mean that environmental philosophers, in the last three decades of the 20th century, sought to provide, strictly by argument, criteria for moral considerability that would extend to non-human elements of nature. The task was set out in early papers, such as Richard Routley’s ‘Is There a Need for New, an Environmental Ethic?’ (Routley 1973), Arne Naess’ ‘The Shallow and the Deep, Long-Range Ecology Movement’ (Naess 1973) and John Rodman’s ‘Four Forms of Ecological Consciousness Reconsidered’ (Rodman 1983) and in books such as Holmes Rolston III, *Philosophy Gone Wild* (1986). This early work was then followed up in books and articles far too numerous to mention. For samplings of this discourse the reader can refer to some of the many anthologies of environmental ethics that appeared from the 1990’s onwards eg Schmidtz and Willott 2001.

² This ‘expanding circle’ model of moral argument was adopted very early by advocates of animal ethics such as Peter Singer, who extended the arguments against racism and sexism to define a further form of moral discrimination, viz ‘speciesism’. Speciesism was defined by making sentience rather than reason the criterion for moral considerability. (Singer 1975) (A later book of Singer’s was actually entitled *The Expanding Circle*; see Singer 1981.) The expanding circle model was also adopted by environmental philosophers for the purpose of bringing not merely animals but other elements of the life-world into the circle of moral concern. Different philosophers proposed different criteria that pitched the outer circumference of the circle at different points on the spectrum of life. Some ecological philosophers, such as John Rodman, critiqued such ‘moral extensionism’, on the grounds that it presupposed the moral priority of the human, admitting non-human elements into the moral circle only insofar as those elements measured up to a human-derived yardstick. (Rodman 1983) Moral extensionism was regarded by such critics as having failed to depart from the mind-set of anthropocentrism, despite the clear intent of extensionists to do so.

³ Examples of such criteria include (1) the having of interests (Feinberg 1974; Johnson 1991) (2) having a good of one’s own or being a ‘teleological centre of life’ (Taylor, 1986) (3) being a systemic whole (Rolston 1988) (4) intentionality (Plumwood 1993)(5) conativity (author

positing such universals, this form of argument really already founders at the very first post, because it cannot answer the preliminary question, ‘why be moral?’ That is to say, reason alone cannot show us why we *should* be moral - why we should widen the circle of our natural sympathy for kith and kin to bring ‘others’ within the sweep of these good or sympathetic intentions. Philosophers may attempt to justify morality by arguing that the moral course is the course of enlightened self-interest – that it is always in our long term interest to acknowledge and observe the moral entitlements of others.⁴ But in circumstances in which we can, so to speak, genuinely *get away with murder*, ‘murder’ might indeed be the rational course. And while - following a different kind of moral argument - we might acknowledge that others are as entitled, rationally speaking, to the same consideration we expect for ourselves,⁵ it is not *irrational* – though it may be immoral – for us to put our own self-interest before the entitlements of others.⁶ So if we cannot, in the final analysis, reason our way to morality per se, there seems little hope that we can reason our way to a universal ethic of nature.

Moral truth is not the product of reason but is hatched inside stories

The moral accord we need in the face of global environmental crisis then will surely never be produced merely by reason divested of its cultural premises. Such moral ‘truth’ as we have is rather hatched inside *stories*, specifically stories about the nature of the universe, the whys and wherefores of Creation. It is such stories - always

1991) (6) contributing to the stability, beauty and integrity of the ecosystem (this is an adaptation of Leopold 1949)

⁴ Social contract theorists from Hobbes to Rawls have put forward different variants of this argument for morality – that it is in our long term self interest to limit our own freedom to harm others in order to induce a like limitation of their freedom to hurt us.

⁵ I am thinking here of the Kantian approach that construes morality in terms of the categorical imperative, where the categorical imperative is in turn construed as a rational imperative. According to this line of argument, others are rationally as entitled as I to moral consideration insofar as they are like me in morally relevant respects – the same respects that entitle me to moral consideration. This is an approach, in other words, which tries to establish a strictly logical foundation for the impartiality that is core to morality.

⁶ It is not *irrational* to put our own self-interest before the interests of others, even if the objective entitlement of others to equal moral consideration can be logically demonstrated. This is because any such logical demonstration overlooks the special relation we as organisms have to our own selves. As the subject of a self-realizing system (ie as the subject of the organism that I am), I am responsible for the maintenance of myself in a unique and unnegotiable way – no-one else can eat for me or rest for me or exercise for me; biologically speaking, my responsibility for my own self-maintenance is my own responsibility and indeed my primary responsibility. Hence although my attributes may entitle me to no greater moral consideration than others, my special relation to my own self may entail that it is not irrational for me to put my own interests first. In doing so I may not be acting morally but I will certainly be acting rationally.

Later in the paper I shall have occasion to re-work, to a degree, this type of rebuttal of the Kantian line of argument, since I shall be arguing that ‘do unto others’ (which equates broadly to the Categorical Imperative) is built into the biological fabric of the earth, of which individual organisms are part, though to extract this moral imperative requires not merely logic but a narrative premise – a cosmological story which is already essentially normative in its import and hence in its implications.

normative in their implications - which provide the premises for reason. And such stories about the nature of the cosmos have historically constituted the founding narratives for *religions*. Such stories of origins – which we generally call myths – represent the world as emanating from various sources and as in the service of various ends. Depending on these sources and ends, the world may be viewed as providential, designed with our amenity in view, or as a vale of tears, which it behoves us to escape, or as something intermediate between these two. Different cosmological stories lead to different religions and different religions in turn define different moral universes. Inside different moral universes the paths of morality may lead in different directions. They may involve transcending the earthly sphere, for example, or finding redemption within it. Is it possible, in face of this variation, to imagine a *common* story of origins, a story that could give rise to a fundamental moral accord?

Can science serve as a common story?

In the West we have science as the cosmological core of our cultures. Science is sometimes described as story – as ‘grand narrative’ – by those, such as postmodernists and poststructuralists, who wish to dismiss its claims to universality and to privileged epistemological status. (Lyotard 1984) By characterizing it as grand narrative, such theorists mean to put science back in its place, as one cultural perspective amongst others, one moreover with colonizing intent insofar as it seeks to displace and invalidate other perspectives. Other philosophers, such as Alasdair MacIntyre, allow, contra postmodernists, that science can in principle provide an objective account of the nature of things, but they insist that it can do so only insofar as its theories do indeed include a narrative element. (MacIntyre 1977) By *narrative* MacIntyre means a qualitative and intuitive account of the way things are in addition to a mathematical calculus and a predictive formalism. So, for example, Newtonian science was successful not only because it provided a schedule of equations that could predict the outcomes of specific measurements, but because it furnished a way of picturing the world - as a manifold of billiard-ball-like particles in motion. A successful theory, according to MacIntyre, should not only depict the world in such an intuitive fashion but should at the same time show how the theory in question explains what earlier theories were unable to explain. So, Einstein’s General Theory of Relativity counts as a successful theory not only because it provides a schedule of equations and predictive outcomes together with an intuitive picture of the universe as dynamic and unfolding spacetime, but because it also shows how unexplained aspects of Newtonianism, such as gravitation, can be explained in the new scenario: gravitation is not merely ad hoc action at a distance but involves the curvature of spacetime. Bodies fall towards denser bodies because denser bodies curve spacetime in their vicinity.⁷

Another theorist who has argued that science can be construed as story is ‘geologist’, Thomas Berry. For Berry science is narrative not only in the sense that it includes intuitive ‘pictures’ of the universe in addition to mathematical formalizations, but also in the sense that it details a dramatic unfolding: he retells the scientific history of the universe, including the earth, in vivid and poetic terms, emphasizing its creativity and

⁷ For a discussion of MacIntyre on this question, see Gare 2007. MacIntyre was of course not the first to require that new theories should explanatorily subsume old theories in this way; this was a standard feature of paradigm shift in the Kuhnian schema.

the emergence of subjectivity or mind in the course of evolution. (Berry and Swimme 1994)

But *can* science really be appropriately construed as story? Despite the arguments of theorists such as MacIntyre and Berry, this claim can, I think, be questioned. The aspiration of science is merely to tell us how things are in the world, and to do so as objectively as possible; it is not to tell us how things should be. From the viewpoint of science alone, nothing matters, there is no end towards which things are striving, no standard according to which things can succeed or fail. There are no triumphs built into the scheme of things, no disappointments. The universe unfolds in accordance with blind causal or probabilistic laws, not in accordance with normative meanings. For this reason I would be reluctant to describe science as story.⁸

For story, I would suggest, is inherently normative: it is driven by tacit goals and expectations as to how things ought ideally to unfold. Its normativity arguably derives from the basic structure of life itself: as a form, story recapitulates the structure of an individual life - beginning, middle, end. The organism is born, strives against radical uncertainty to perpetuate its life, to postpone its death, to attain the happy-ever-after that is its inherent (if not always conscious) wish-fulfilment, all its activities inclining towards the goal of self-realization.⁹ But death, after all, is inevitable and sooner or later, whatever the organism does or does not do, death brings the story to an end. The middle of the story is fraught with intense suspense as the organism struggles to carve out a limited space for its existence. It is this striving, this purpose, this normativity, which draws otherwise random events into the patterns of coherence – of *meaning* - that mark out the terrain of story. Death is in this sense the condition for story. It is the un-negotiable fact of death together with our absolute resistance to this fact that gives our life, and hence story, its unifying trajectory, the trajectory that forms the axis of meaning around which events, actions, characters, goals and causes are organized. In seeking to stave off death for as long as possible, organisms provide not only a criterion of salience and an axis of continuity but an undercurrent of suspense that gives characteristic shape to story.

It is via this striving for existence – what I would call its *conativity* – that the organism, as individual, supplies the mattering that brings meaning into the world. Life itself, with its aspiration and uncertainty, is then, according to this view, the prototype of story and it is story, as a reflective activity at the very root of human thought, that organizes experience into meaningful pattern and sequence and thereby carves out a space of meaning in which we can think. Story, let me repeat, can do this only because there is at its core an essential normativity, a mattering, which derives ultimately from the self-mattering of life itself: the individual, born into the world, struggles against the odds, in the face of death, to self-actualize. Without that axis of self-mattering around which life organizes itself, there would be no way of drawing

⁸ In the final version of this paper, which appears in *JSRCN* 5, 3, 2011, I distinguish between narrative and story, defining narrative in terms of the organization of material into a coherent account and story in its more familiar sense of plot and story-line. It can then be allowed that science is narrative even though it does not qualify as story.

⁹ The view of self-realization as the defining characteristic of living systems has been in currency at least since Spinoza's *Ethics* in the 17th century and is reflected in the contemporary idea of autopoietic systems. (To strive, in this context, need not imply self-conscious effort.) See Mathews 1991.

the otherwise random facts of experience into coherence, into pattern, thereby creating the epistemological space in which conceptual thought and eventually science can constellate.¹⁰

Additional aspects of story may be identified which help to account for its immensely generative role in culture. Borrowing from Paul Ricoeur, we might neatly identify three ‘moments of mimesis’, or phases in the structuring of narrative: prefiguration, configuration and refiguration. (Ricoeur 1983) Life itself, Ricoeur agrees, *prefigures* narrative, inasmuch as narrative follows the basic structure of lived time, of the unfolding of experience through time into the perennial uncertainty of the future. *Configuration*, the second phase, involves *emplotment*, the gathering together of certain events, characters, causes, actions into a larger action or temporal unity.¹¹ *Refiguration*, the third phase, pertains to the reception of narrative by its listeners. Stories open listeners up to ‘other worlds’, worlds organized from other perspectives. They thereby induce in listeners a certain reflexivity with respect to the listeners’ own perspectives, enabling them to reshape and revise those perspectives – *refiguring* their own worlds in the light of others’ perspectives. By helping listeners to adapt themselves to the perspectives of others in this way, stories play an essential role in the process of *socialization*.¹²

Clearly these are all important aspects or phases of the structure of story, and the first aspect – story as a kind of re-play of the experience of lived time – resonates strongly with the account I have given of story as recapitulating the basic structure of life. But I wish to emphasize here the role of mortality as the strongly resisted limit which gives story not only its essential form – beginning middle end – but its engine, the intense mattering that generates the suspense that drives narrative. We are ‘hooked’ by story because story, via its form, taps into the irremediable suspense at the heart of our existential condition. In engaging with a story we can experience this suspense vicariously, and thereby, to a small extent, release the tension occasioned by it, where such release functions cathartically for listeners. This explains, I think, why we remain captive to good stories for as long as they are being told but generally lose interest as soon as the ending is known – we ‘close the book’ on stories as soon as they are finished, the tension having been discharged.

Story then, according to the present account, is essentially normative. The self-mattering of the listener is invested in the protagonists, who act out, on behalf of the

¹⁰ I am much indebted here – and in the paper as a whole - to Craig San Roque for his profound insight, developed via an analysis of the role of Dreaming stories in Aboriginal cultures, into the way in which concepts originate in the ceremonial storying of landscape. See San Roque, 2006.

¹¹ In my analysis of story, life itself already prefigures such configuration, since the organization of the organism’s experience around its resistance to death and its attempt to preserve its own existence already ‘configures’ that experience, drawing it into a themed and patterned unity and continuity that confers a sense of subjectivity as opposed to the mere flux of random moments of experience.

¹² MacIntyre also emphasizes this aspect of story, explaining how it is through stories that we learn who we are - what it is to be a child or a parent, for instance; stories provide the scripts for our social existence. (MacIntyre 1984)

listener, the contingencies that self-mattering inevitably encounters in an uncertain world.

Relative to this account of story, science, even reinforced with intuitive pictures of reality such as the billiard ball model of Newtonianism, is not a story. For science is, by its own self-definition, not normative – it is resolutely normatively neutral. With its strict eschewing of normativity – or, as we might put it, its principled observance of the fact/value distinction - science does not enact the fundamental condition for meaning, but depends on story to do so.¹³ Story in this sense has epistemological priority over science.

This is not however the way science represents the matter in modern societies. Science claims priority for itself as bearer of the truth about the nature of reality, and relegates stories – where I am speaking here of primal stories, cosmological stories – to secondary status, as belonging to the nursery phase of human thought.

It seems difficult, on the face of it, to argue with such demotion of story. The proof of the epistemological pudding, after all, is in the eating, and science delivers a very impressive pudding indeed, namely a gargantuan technological capability to administer reality. This capability is one to which we all implicitly assent, as we are utterly dependent on it in practice in our daily lives - for the cars, computers, aspirin, contraception, refrigeration and all the rest of the vast paraphernalia we currently take for granted in negotiating the details of everyday existence. This *de facto* assent to science, even on the part of people who profess alternative epistemologies and ontologies, confers on science a universality that alternative accounts of reality lack. People more or less have to assent to science, whether they approve of its cosmology or not, because it ‘works’. In face of this universality, the cultural relativity of the old creation stories becomes undeniable. These stories cannot command universal assent because they speak to and from a range of different cultural experiences. Here in Australia, for example, we have many Dreaming stories of rainbow serpents that would not translate well into, say, the Arctic. The robed gods of Olympus would not be at home on the prairies of native America. Even the Hebrew Creator-God, who has after all travelled remarkably well, seems too removed, too static, too *arid*, for the roiling dragon-energies of the tropical, unstable mountains of southern China, which spawn a seething tangle of cantankerous bulging-eyed deities and warring mythical beasts. So although the old stories remain precious lodestars for cultural self-determination and for the actualization of cultural identity and difference, there is plainly no such story that could become a common story across all cultures, binding all societies into moral accord and thereby galvanizing them in the face of impending environmental collapse.

To the extent that science has succeeded in demoting story as a way of knowing, it has in fact implicitly, through its commitment to normative neutrality, left us rudderless, no longer part of any meaningful order. It has constructed its account of reality within the space of meaning carved out by story, but has then ‘invalidated’ the normativity that is both intrinsic to story and the condition for meaning per se. Self-

¹³ This is a thesis also argued by Arran Gare in Gare 2007, though he argues it in a very different way and with very different ends in view. Gare’s article nonetheless provided several helpful pointers for the present paper.

value is acknowledged as a given of our own experience as individual organisms, but is not referenced to any larger value that can be taken as intrinsic to the fabric of reality. To the extent that we have lost the old stories and become entrapped in this condition of meaninglessness to which science consigns us, we find ourselves without moral responsibility to the cosmos. Towards our world then there seems little alternative but to act pre-morally, out of rudimentary self-interest. The consequences are visible all around us in the unravelling of 'environment'.

So how to restore normativity, and hence moral import, to the cosmos, after science has so fundamentally shifted the ground, relativising the old stories without providing a new one to put in their place?

A common story is coming into view

Environmental crisis is, as it happens, providing its own remedy. For in the very process of falling apart, nature is, it seems, revealing the pattern that held it together. And what should this pattern turn out to be but, again, the pattern that defines story, in this case story in its larger outlines. In this hour of our greatest moral need, a new story is coming into view. It is, simply, the story of the earth, of the biosphere. The biosphere is the template for the larger story in which intersecting tributary stories take shape. Each individual life acts out its own small drama – its coming into being, its striving against uncertainty, and, at the end of all the striving and suspense, the inevitable but never-predictable denouement, death. These tributary plots unfold within a larger proto-story, likewise a story of striving against the forces of entropy to perpetuate the conditions for self-existence, but in this case a striving enacted at the level of the greater whole, the biosphere. The biosphere, like the individual, is born and with exquisite orchestration, against uncertainty, perpetuates and increases the conditions for life.

What has made the life of the biosphere recognizable as a story at this particular historical juncture is our realization that it can die. 'Nature' as it turns out is not merely a given, a background that can be taken for granted, an eternal object for science, but is rather itself a protagonist, indeed the primary protagonist, in the primary drama, currently striving, against a thousand cuts, to maintain itself in existence. The biosphere, like individual organisms, is mortal, and it is the possibility of its demise that gathers the myriad actions of its manifold members into a 'unified action' that confers on it the structure of story.

But this is not all. Not only does the biosphere turn out to be the larger, second-tier template for story. Not only does it draw otherwise random events into patterns of coherence, thereby creating meaning, as individual stories do. The patterns of coherence it creates are inherently if incipiently *moral*. Final extinction is perpetually postponed by way of an almost infinitely complex attunement of all beings to the needs of others. All beings desire what other beings need them to desire. Honey bees desire nectar, and in the process of getting it pollinate the flowers who supply it. Bettongs desire truffles, and in the process of digging for them aerate the forest soils. Emus desire zamia nuts, and in the process of digesting them prepare them for germination. Although individuals do, in their striving for self-actualization, also inflict suffering on one another, via predation and parasitism for instance, at the end of the day everyone in this proto-story serves others in the process of serving themselves. The proto-story is simultaneously a proto-ethics. Meaning is at its root

not only narrative and normative but proto-moral: *do-unto-others is hatched within the story of the earth.*

This pre-established harmony of desires – for which environmental philosopher Warwick Fox coins the elegant term, *responsive cohesion* (Fox 2006) - is only *proto-ethical* because in the biosphere it has resulted from natural selection rather than conscious choice. Nevertheless, it does provide a clear template for ethics. As such a template it provides the touchstone for all religion. All religion is animated by the impulse to create meaning via story and by an intuition of the essentially normative and ethical character of story: stories tell us how to live, and the ‘moral’ of story is indeed moral: we live by enabling others to live. *The spiritual truth at the heart of religion is thus an earth-truth. We live, whether as individuals or as species, by desiring what others need us to desire.* This is a truth consistent with science, since it is about the organization of the biosphere. But it is not reducible to science, because it is inherently normative and in being so creates the conditions for meaning within which alone science can articulate itself.

A sense of responsibility towards the cosmos, or at any rate the biological cosmos – let’s call it the biocosm - is not so much the result of an ‘expanding circle’ then, a process that begins with self and expands out, inch by reluctant inch, to others, but is rather the original context of our existence. We are born into a biocosm which is already ‘moral’, in the sense that it is already constituted by the requirement of do-unto-others, and it is within this context that we carve out a space for self, a space of relative independence. From the present point of view, the ‘expanding circle’ model of morality inverts the proper vector of moral consciousness: far from morality emerging from self-interest, self-interest itself emerges from a prior condition of morality.

The earth-truth that underpins this prior morality is moreover already one that belongs to us all. It is not culturally relative; it can be recognized and named from within the epistemological framework of each and every culture. It is becoming visible now because it has been so sorely breached. We have not observed the proto-ethic. (Or at any rate, those of us who function within the conditions of modernity have not done so.) We have not desired what the biosphere needs us to desire. So the conditions for life are not being perpetuated. The honey bees are leaving. Legions of other species are joining them. There are vast fire storms, flooding seas and wild phantasms on the horizon. Mere self-interest, which is all that is left of value in the cosmos bequeathed to us by science, is a withered stalk supporting us. Isn’t it time we collectively remembered the larger story that re-inserts the individual into its proper onto-ethical setting?

I want to consider how this larger story might be told, but before doing so, let me recapitulate the argument so far. Meaning at the rawest level enters the world through mattering: things have meaning only insofar as they matter, and they matter only to living things, since only living things are selectively invested in existence. In this sense meaning is not purely representational, as semantics assumes (‘snow is white’ is true if and only if snow is white), but is also normative: the ‘whiteness’ of ‘snow’ will be recognizable to us only if it impinges on us in some way that matters to us. For meaning at this rawest level to evolve eventually into the architectonic of conceptual thought, the elements of meaning must become knitted together and complexly inter-

related within a larger epistemological unity. Such a unity becomes available to us in two tiers. It is present firstly in the overall shape and inner normative momentum of our individual lives - beginning, suspenseful and uncertain middle staked out against the odds by striving, followed by end – and secondly in the complex and proto-ethical meshing of individual lives into a greater striving, a striving towards a greater life, namely that of the biosphere. The essential structure of life at both these levels is storied, so it is in the epistemological unity afforded by story that experience is primordially organized: story provides the epistemological space within which meaning can become organized into the complex architectonic of conceptual thought. The full template for story, and hence for conceptual thought, is the individual-in-its-moral-earth-matrix, and this is the template that has traditionally been followed, or half-remembered, in the founding stories of religions.

In the tiniest of nutshells then, the argument is that story is the original container of meaning, the original container in which the elements of experience are organized into conceptual thought. And the original template for story is the individual life within the proto-moral fabric of the larger, living biosphere. As holes begin to appear in that fabric, as species begin to drop out and relationships unravel, the conditions for meaning, for thinking, likewise begin to unravel. *At the edge of environmental collapse, we begin to recognize that we are at the edge of the collapse of our very meaning systems, the irreducibly normative systems that give shape and structure to all our thinking.*

How to tell the Earth Story

Now, suppose we grant all this, and furthermore that the Earth Story belongs to us all, that it ties us into a larger moral fabric from which we cannot dissociate ourselves. How is this story to be told? How can it be fleshed out in actual stories that capture our imagination and hold us in suspense, compelling our allegiance in a way that philosophy, even with its best and most persuasive defences of morality, cannot do? I would suggest that the Earth Story may be construed not as something that can be told entire from a single perspective, but more as an open-ended Song Cycle, immense in scale and complexity, a vast Lore that can be approached from a multitude of different standpoints, different locations. It is a cycle of intersecting and interleaving life-histories, those of the myriad beings whose uncertain strivings intricately make up the currently ever more vulnerable biosphere.

If I might be forgiven a personal aside here, I might mention that the sense of Earth Story as the root of ethics and ultimately of religion arose particularly vividly for me while I was investigating the natural history of the honey bee, in the context of the current collapse of honey bee populations around the world. (Mathews 2011) The more deeply I entered into the biography of the honey bee – through entomology, natural history, literature and observation – the more entranced I became. Science provided detail and accuracy, but it was impossible not to start thinking and writing of the object of my study as Miss Honey Bee. I became enthralled with her extraordinary life and her keystone relation to her world. The story of Miss Honeybee was as epic, archetypal and colourful as any myth: Miss Honeybee labours with others to build and defend Bee City, the grand and architecturally flawless hub of bee existence; she journeys out into the bright and perfumed ‘pure land’ of petals every day to collect golden treasure, pollen; she drudges in the dark, industrial (yet sweet-smelling) mills inside the hive to manufacture honey, wax, propolis, royal jelly. In other apartments

the infant princesses lie, like sleeping beauties in their beds, awaiting the day when they will rise and fight one another, to the very death, to claim the throne. In yet another part of the palace a small coterie of idle, playboy princes also await that day, when they will be introduced to the young femmes fatales, the princesses; only one of the princes will win the hand of the new Queen; the rest will be summarily executed by palace guards. When the triumphant Queen ascends the throne, the old Queen will, without a moment's hesitation, abandon the City to her, leading the whole population forth into exile. Miss Every Bee will suddenly find herself, despite all her previous ingenuity and conscientious labour, amongst a homeless, ragged and vulnerable people, in search of a new and promised land.....

Scientific investigation has afforded much of the detail of this story, but in this instance science seems to have opened up rather than closed down the drama and mystery. The best entomologists in the field, such as E.O. Wilson and Bert Holldobler, admit this. (Wilson and Holldobler 2009: 64-66, 169-178) The individual honey bee, they concede (presumably overturning the most basic assumptions of their colleagues in neuro-science), is conscious. She makes judgments, decisions. Diminutive as she is, she strives against uncertainty; she tries, she perseveres, she succeeds or fails. She is anything but a bundle of blind reflexes. The hive itself, they admit in guarded scientific parlance, possesses a 'distributed intelligence'. Unlike natural historians of an earlier, more expansive era, such as Maurice Maeterlinck, author of the classic, *Life of the Bee*, Wilson and Holldobler down-play and disguise the mystery, even as they concede it. Maeterlinck, by contrast, celebrated it: the Spirit of the Hive, he called it, drawing unabashed on his considerable poetic talents to evoke it. (Maeterlinck 1928)

The honey bee is surely not exceptional in being a locus of mind and mystery in the living world. When we lift the lid on the biosphere as a whole, such mystery is surely what we can expect to find. The more intricately we enter into this almost infinitely layered system of cross-referencing lives and the more faithfully we observe its inner lore, the more removed we become from a naïve and reductive empiricism: aspiration, purpose, ingenuity, inventiveness, eccentricity, unfathomable desire – sheer *soap opera* (which might well be entitled 'neighbours!') - is to be found everywhere. This is indeed a realm of mind, but mind sculpted to the particularities of specific embodiments in specific locations: we cannot expect to discover such mind until we do indeed plumb the specificities of these embodiments. Science then is key, but it is only key as long as it acknowledges that the door it is opening is an entry into story, into normativity, and that the *story* of the biosphere thus cannot be fully told in the neutral language of science. For its depiction the biosphere requires, in addition, story-language, ultimately mythical language, language that can speak from within the questing subjectivities that lie behind the 'objective' appearances. Such language will by its nature differ from culture to culture and accrete different associations in different societies, even while revealing, from different bioregional standpoints, different aspects of a larger truth.

Observation in the scientific mode is moreover not the only key; aspects of the inner lore of nature, of the private life of species, may also be revealed via our own interactions with those species. Their capacity to engage with us and respond to our interventions, benign or otherwise, may be as significant as behaviour observed in 'natural' settings. Different human constituencies will experience different kinds of

encounter with different species, revealing different aspects of those species. Here in Australia, for example, wildlife shelter operators, nursing joeys every day, might discover aspects of the emotional and family life of kangaroos that could never be discovered by certified macropod experts. In Thailand, to take another example, mahouts may offer insights into elephant psychology that would be unavailable to ethologists in the field. This inclusion of ourselves in the stories of species is becoming increasingly relevant as so many species currently find the natural conditions for their survival contracting if not vanishing, with entry into human environments their only recourse. It is, in other words, crucial, for the purpose of telling the Earth Story, that we also locate ourselves in the natural histories and quests that we uncover, to put together a richer account of the inner life and struggle of our planet.

I am suggesting then that it is through the astonishing and as yet little known biographies of our myriad fellow species¹⁴ that we can begin to tell the story of the earth – to *myth* the biosphere. Telling these stories will, little by little, impress into our collective consciousness the great earth-truth that underlies all our lesser religious and cultural stories, the earth-truth that is ultimately a moral, or proto-moral, truth: we live by enabling others to live. This is a normative as well as a descriptive truth. The stories can be told in many different narrative tongues, from many different cultural and bioregional perspectives, yet still emanate in moral accord, provided each sub-story is woven within the tapestry of the larger story, a story which, like a classic Song Cycle, can never be fully articulated though it can be endlessly elaborated and reviewed, the essential architectonic of the story as a whole present in every detail though never exhausted in the compilation of those details.

It will take our best poets along with our best scientists and natural historians to compose, generation by generation, the great Song Cycle that could unite, at the level of moral imagination, multiple cultures and societies. And it will take our best artists and animateurs to perform this Song Cycle, to cast its spell on the peoples of the earth, through art, music, festival, ceremony, parades – all the usual poetic resources of religion.

This is a Song-Making that has of course already begun. In my own home state of Victoria, Australia, new, relatively mainstream bioregional festivals are drawing people together in celebration of iconic local species. The popular Kingfisher Festival, of more than ten years standing, provides an outstanding model. Each year an elder from the local Indigenous (Wurundjeri) clan is asked to select a Dreaming story to provide a core for the performance. The story translates the local ecology into a terrain of the imagination, presenting many of the local species and landforms as *dramatis personae*, while also sometimes including other multicultural themes of local relevance. A creative team of community artists and animateurs then designs a performance around the Dreaming story, recruiting and training children from local schools for key roles. (Over the years a large proportion of Melbourne's primary schools have participated in the Festival.) Other local arts and community groups are also invited to take part. Performers impersonate different elements of the ecology, dressing up as water nymphs, frogs, dragonflies, possums, gumnut fairies, herons,

¹⁴ E. O. Wilson calls Earth the unknown planet, so little do we know about the other species with whom we share it. See Wilson 2006.

firetails, crows – whatever is required by the story and the creek-side environs in which the performance is acted out. There is also a little regular dance, the “kingfisher boogie”, that imitates the characteristic wiggle and call of the kingfisher, and that has by now been taught to school children all over Melbourne. During the festival the kingfisher boogie is performed en masse by the “audience”. A troupe of Wurundjeri dancers usually opens the proceedings, and a Wurundjeri elder acts as narrator and Master of Ceremonies. The “ceremonies” always end with the literal return of the Kingfisher, a very large and beautiful puppet model of the bird that is brought out each year (like the dragon in a Chinese procession). (The Sacred Kingfisher has ancestral breeding grounds on the Merri Creek, where the festival is held, but had disappeared for decades, due to industrialization and development. When the creek became revegetated as a result of community efforts however, the kingfisher reappeared. Hence the Welcome Back.)

Another nearby municipal council has held bioregional festivals for a number of years with varying themes and protagonists, including Grebes and Growling Grass Frogs, Reeds and River Redgums, Black Shoulder Kite, Yabbies, Wrens and Ripples, Willie Wagtail, Dragonflies and Damselflies, Golden Head Weaving Warbler and Wetland, Blue Tongue Lizard and Chocolate Lily, and Blue Wrens, Bells and Devils. To the north of Melbourne the Lake Bolac Eel Festival has annually celebrated the ecology of Lake Bolac with lively concerts of Indigenous music. As I write I myself am involved in preparations for a Mallee Fowl Festival in Central Victoria. The endangered Mallee Fowl, indigenous to the area, is unique in the bird-world inasmuch as it incubates its eggs not by sitting on them but by building a very large mound, made of leaf litter and soil, carefully constructed to maintain, by internal decomposition processes, the correct thermal conditions for incubation. Mallee Fowl chicks have to dig their way up from deep underground when they hatch, by which time the parents have already departed, leaving the chicks to fend for themselves from the very start. This ingenious and nail-bitingly suspenseful process symbolizes the uniqueness of our native wildlife but also its vulnerability to multiple threats, including land clearing and feral animals, such as foxes and cats. The Mallee Fowl story is a dramatic motif for imagining both the original ecology of the mallee-lands and what is needed to restore balance and peace to those lands. Other motifs from the cultural history of the area, such as gold digging, will also be woven into the performance, with possibly some reference to the ravaging droughts and recent floods that have already announced to us in no uncertain terms the advent of climate change. The aim will be to create living myths of regeneration, rooted in the ecology and cultural and Indigenous history of place and vested primarily in those who are the future custodians of the place and who will carry the community into the future - the children. To start with children however is inevitably also to draw in the rest of the community.

Although such bioregional festivals each tell a different tale, the tales they tell all contribute to the Earth Story, in the sense that they each reveal different aspects of a common ecological architectonic. This architectonic manifests in different species, and different arrangements amongst species, at different locations, and the species and their relations are revealed differently through the various cultural practices that may be current in each of the bioregions. But each of these local stories, viewed through the lens of each of these cultural practices, nevertheless contributes to a consistent greater Story.

Will this greater Story, this infinitely cumulative Song Cycle, we may wonder, take the place of the old religions? Will it constitute a new religion?

It seems unnecessary, at the present stage, to answer this question. As we enter the new era of climate change, mass extinctions and ecological collapse that is currently re-drawing the entire biospherical and geophysical backdrop against which the project of religion originally took shape, the very notion of religion, and possibly even of science, is up for review. An appropriate response to this crisis may simply be to begin the work of storying, storying not merely the stricken ecology but the distressed inner life of the planet, piece by piece, locale by locale, species by species, relationship by relationship, without worrying too much at this juncture how these new stories square with religion. It may be a matter of just letting the stories grow up side by side with the old religions, wherever those religions are still in force. Perhaps we can adopt a relaxed syncretism in this connection, comparable to the syncretism that China practised in relation to Daoism, Confucianism and Buddhism for many centuries, allowing religious natural selection to call forth the hybrids and creative adaptations needed at different moments by different historical configurations. We need not give up our Christianity or our Hinduism or our atheism as we begin to evoke – and invoke - in art and poetry and particularly in festival, the colourful threads and multitudinous, many-bodied cast of characters that the Earth Story is now making visible to us. Perhaps, as we begin to experience the invocational effects of creating - and particularly performing – such stories,¹⁵ we can let the efficacy of those stories themselves determine for us what will count as sacred henceforth, what of the old can be referenced to the new and what of the old might simply quietly wither away of its own accord as it ceases to be relevant in the face of a changing earth terrain - an earth terrain that is likely henceforth to be rapidly and unpredictably rearranging our entire register of relevancies.

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¹⁵ For the invocational power of story and its *ontopoetic* efficacy in calling up a response, and hence in drawing forth the sacred, see Author 2010.

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