

Art as destruction: an inquiry into creation

towards the future
farewell to the Holocene
like apes, deaf, dumb, blind

transforming hubris
alchemy to industry
then to extinction

strata of plastic
and radioactive sludge
the Anthropocene

[insert image 4.1 here]

Introduction

‘Destruction and creation’, ‘creative destruction’, create and destroy; there are differences between these terms and this essay inquires into those differences, the ‘pattern which connects’¹ them, and how they inform our understanding of time and existence. The present situation, or now, is what some people wish to sustain, considering it to be the norm, or status quo. Some call upon past times as being a ‘Golden Age’, while others long for change in the future. We may consider the ‘Anthropocene’ as a term to frame this discourse².

In the science of complex systems, a dynamic form of equilibrium is called a strange attractor. The difference between an attractor and a strange attractor is that an attractor represents a state to which a system finally settles, while a strange attractor represents some kind of trajectory upon which a system runs from situation to situation without ever settling down. This may also be understood as the pattern of evolution in natural and social systems. So, how does the epoch of the Anthropocene fit these states of being and becoming?

Here, the art is to see, make and present those patterns, with the aim of trying to reconcile the evolutionary paradox of creation and destruction. That art is not so much about arts practices, as to how we learn to be the ecosystems within which we live. We are the waters that flow and the minerals eroded from rocks. Our bodily structure, material, functions and processes have evolved from the interactions of air, water and land. How we interact with these phenomena is our art, our practice and our culture. This process may be considered as central to defining our present epoch, the concept of the Anthropocene and our way forward, or ‘futures prospect’.

‘Context is all’³

The 1992 Rio World Earth Summit changed my whole arts practice and my life. I realized that, as a human being, I needed to address the most pressing issues of our time, Climate Change and the Sixth Extinction of species⁴. The question was and still is, ‘how can I do this as an artist when the discourse has been captured by science, politics and economics?’ I resolved to find out how an ‘ecological arts practice’ might do this and serendipitously I read *Lila: an inquiry into morals*, by Robert Pirsig. One

of the insights I learned from this book, which continues to be a personal mantra, is that: ‘The most moral act of all is the creation of space for life to move onwards.’⁵.

The ‘creation of space’ gave me, and then my students, permission to play, creating opportunities for things to emerge, rather than making objects to occupy those spaces. The wish for ‘life to move onwards’ is derived from the Sanskrit word, ‘*Rta*’, from which we get the word ‘art’, via the Greek word, *erete*. *Rta* means, ‘the dynamic process by which the whole cosmos continues to be created, virtuously’⁶. It refers to the right way of doing and being in accord with evolution, and also refers to right-handedness and righteousness. The phrase, ‘The Art of...’, continues to denote doing anything with excellence. And, as Gregory Bateson suggested:

The question is not only ethical in the conventional sense, it is also an ecological question. The means by which one man influences another are a part of the ecology of ideas in their relationship, and part of the larger ecological system within which that relationship exists.⁷

The dance of creation *and* destruction

Regarding the concept of evolution, despite popular belief, Charles Darwin did not originally write about ‘survival of the fittest’. He did later concede that this is one of many evolutionary strategies that contribute to ‘natural selection’⁸. There are at least four other strategies and processes of evolution that our society rarely mention and destruction is a vital creative force within each of them. Drawing on the work of Lynn Margulis, James Lovelock, Ilya Prigogine and Maturana and Varela, Fritjof Capra argues that ‘... complexity as an inherent characteristic of all living systems’ is beginning to be recognized, ‘...mutation and natural selection are still acknowledged as important aspects of biological evolution, the central focus is on creativity, on life’s constant reaching out into novelty’⁹. However, ‘...many more variations are produced than can possibly survive...’¹⁰. ‘(O)ur focus is shifting from evolution to co-evolution – an ongoing dance that proceeds through a subtle interplay of competition and cooperation, creation and mutual adaptation’¹¹.

The main focus of this essay is the concept of ‘creative destruction’. My premise is based on the idea of ‘*Rta*’ mentioned above, and Shiva Nataraja’s dance of destruction and creation, known as ‘*Tandava*’. The Vedic concept of *Rta* was an ethical pursuit that had little to do with form or function, *per se*, but was about human integrity of intention – the means of celebrating the sacred emergent processes of our existence, and excellence was to do with aesthetics as the experiential fulfillment of life.

Tandava, acknowledges the cyclical process of extinctions, each followed by the diverse profusion of novel life. Notably depicted in Chola bronzes that embody this act as a divine process, Shiva’s dance conjures similarities with the concept of ‘ecological resilience’ (mentioned below), that considers destruction to be a necessary function.

Ethically, all is good, providing the sequence continues as a dynamic process, ‘far from equilibrium’¹². However, the system collapses if equilibrium or stasis are reached. Of course, in the grand scheme of things, the collapse of a state of being will

flip to another, albeit a different state of becoming. Change, transformation, transition and revolution follow this emergent pattern of evolution *create-destroy-evolve*, and so on. Over time, all life obeys this principle and to provide for this order. Other than stasis, a proliferation of creativity may also cause destruction. Biologically, cancer is a good example of cells over-producing, but in a healthy body, or as French thinker, Edgar Morin writes: ‘We live from the death of our cells. And this process of permanent regeneration, almost of permanent rejuvenilization, is the process of life’.¹³

In a social context the term, ‘creative destruction’, resonates with Joseph Schumpeter’s theory of economic innovation, based on Marx and Engels’ critique of Capitalism’s process of boom and bust, as it undermines the value of wealth and the labour that created it¹⁴. Likewise, Sombart’s 1913 critique of the economics of war, ‘Krieg und Kapitalismus’, and the Russian anarchist, Mikhail Bakunin, in his call to actively destroy the existing social and political order. Each understood the insatiable demise of previous industrial regimes to make way for the new. While contemporary neoliberalism celebrates this aspect, Friedrich Nietzsche used the mythological character, Dionysus, to characterize modern society as both ‘destructive creativity’ and ‘creatively destructive’¹⁵. Meanwhile, Shiva Nataraja continues to beat his two-sided drum of evolutionary destruction and creation.

[insert image 4.2 here]

Antediluvian storytelling

‘Living things depend on water, but water does not depend on living things. It has a life of its own.’¹⁶

One of the most common, archetypal creation myths is that of a great flood that causes a mass extinction of species and creates the potential for regeneration. Depending on the culture of the storyteller, different morals are accentuated.

The Renaissance concern for apocalyptic visions, and Leonardo da Vinci's (1452–1519) late drawings of the Deluge seem to express this Dantesque preoccupation - water becomes a frightening phenomenon in violent climatic conditions. But Leonardo’s aesthetic, was to envision these apparently catastrophic events as the spectacularly exciting stuff of life. This description illustrates his imagination, as much as his lifetime study of water that could equally find a lyrical likeness between a vortex and the curls of a young girl’s hair:

And the ruins of a mountain fall into the depth of a valley, creating a shore for the swollen waters of its river, which having already burst its banks, will rush onwards with monstrous waves, the greatest of which will strike and destroy the walls of the cities and farmhouses in the valley. And the ruins of the high buildings in these cities will throw up immense dust that rises like smoke or wreathed clouds against the falling rain. But the engorged waters will cascade around the pool that contains them, striking in eddying whirlpools against different obstacles, throwing up muddy foam as they leap into the air before falling back and then again being dashed into the air. And the whirling waves that flow from the site of percussion are impelled across other eddies going in opposite direction, and afterward their recoil will be tossed up into the air,

without dashing off from the surface...The crests of the waves of the sea tumble down to their bases, whirling and falling with friction above the bubbles on their side.¹⁷

In 1985 I travelled to Calcutta with the playwright and theatre director, Habib Tanvir and his Naya Theatre Company, an ensemble of Indian folk performers and musicians. We visited the spice market, where a *phart* storyteller prepared his performance area amid the bustling crowds. From a tightly packed cotton sack, the storyteller pulled out paper scrolls, on which he had painted sequences of images. Squatting on the floor, he presented these to the eight-deep audience, while swaying to the chant of his story. Each scroll was unwound as the performance progressed, like an hypnotic, animated cartoon storyboard. The final story seemed rather familiar... a man and his family lived in a village where the other villagers cleared trees and killed animals. The man and the villagers argued and he was banished, so he took his family to a hill and they built a boat. The monsoons came, but the rains did not stop. The man gathered his family and as many animals as he could into the boat and the villagers were drowned as the waters rose. The final image, however, depicted this Bengali Noah, his family and animals being air-lifted to safety by helicopter!

This archetypal parable found contemporary resonance in both the technology of the helicopter and the catastrophic floods. Habib Tanvir was a strong campaigner against the deforestation of the Himalayan foothills, warning of increased flooding from the Ganges, the loss of wildlife habitat and the threat to local culture – concerns that few heeded at the time, as international corporate interests plundered natural resources. Like the storyteller, Tanvir and The Naya Theatre turned ancient tales into contemporary narratives. Many, like that of The Flood focused on the need for destruction as a cleansing agent to make the space for future creativity and a better world.

The same year, American ecological artists, Helen Mayer Harrison and Newton Harrison last exhibited '*The Lagoon Cycle*'¹⁸ at the Johnson Museum, Cornell University, Ithaca, NY, before it was acquired and archived by Centre Pompidou, Paris. The last image of this work, the '*Seventh Lagoon: The Fire Cycle. The Water Cycle*', was a world map depicting the sea level rise consequences of global warming, when all polar ice has melted. Twenty-four years later, the Harrisons' '*Force Majeure*'¹⁹ (2009), recaptured the absurd horror of their foresight imaginings with particular studies from '*Greenhouse Britain: Losing Ground Gaining Wisdom*' (2008), '*Tibet the High Ground*' (2009) and other works. However repulsive it may seem, destruction as a creative force is an ecological necessity and an essential transformative factor; and like water, this has been central to much of the Harrisons' work.

Two years later, *The Brundtland Report*, '*Our Common Future*'²⁰, was published by the United Nations, making global warming and the concept of Sustainable Development known to a wider public.

The word, 'storying', the making and telling of stories, was first coined by the poet friend of William Wordsworth, Samuel Taylor Coleridge. It appropriately came to my attention while working on an ecological arts commission in Cockerham, England;

Wordsworth's birthplace. The commissioned project was financially supported by the Heritage Lottery Fund and managed by the Rivers Meet community cooperative to reflect on the impact of recent floods and to enhance the promontory beside which the rivers Cocker and Derwent form their confluence. The title of the project, taken from a landscape architect's drawing of the site was 'VIEWPOINT' (2017-2018).

The first six months of the project was spent asking questions, listening to people's responses and processing their tales, anecdotes, fears, hopes and aspirations for living with their rivers into the future. This created a form of storying or 'dialogue'²¹. The contributors came from different communities, disciplines, social sectors and generations. Many had been directly affected by the floods of 2009 and 2015. Most considered the rivers to be a beautiful natural resource and as a frightening natural phenomenon. As an artist, I tried to understand the full story of the confluence in the context of its geomorphology, hydrology, cultural history and industrial heritage. Then, sympathetically I tried to shift peoples understanding of their rivers by making new stories that focused on climate futures, futures heritage and 'capable futures'²². A mix of art forms were deployed, including a heritage storying event, a Rivers Lantern Parade, the invention of the mythological 'Cockerfish' and poetic texts placed on a configuration of locally sourced rocks installed on the site.

The whole process was an attempt to reconnect the townsfolk of Cockermouth to the realities of their fluvial futures, thereby dispelling the myths of denial and cognitive dissonance that had become a major source of psychosocial and personal stress. In this way disaster may give way to grounded hope through a culture of foresight planning, preparation, training and vigilance, beyond that offered by the disparate relief agencies and environmental organizations. However, this meant that strongly held belief systems, particularly those of the aging population, needed to be destroyed, so that the 'problems give way to capabilities'²³. The conclusion of the VIEWPOINT project was intended to be the beginning of a changing prospect.

[insert image here] #3

Yield, give way to gain

As the culture of consumerism denies its proliferation of waste, the economics of industrial development ignores its growth and profits from the extraction of finite resources, so the production of Art in our society often anaesthetizes ethics. From a geological perspective, Climate Change and the Sixth Extinction may define the Anthropocene as the preponderance of destruction in pursuit of wealth and power.

Coming to terms with ecological collapse through Climate Change, the extinction of species and their Armageddon consequences represent, not only the most horrific physical scenarios, but existential consequences as well²⁴. In the Lake District market town of Cockermouth (UK), elderly people are said to have died from the floods that took place three years earlier; persistent spells of rain evoke unbearable stress at the prospect of new flooding. When we consider the enormity of the collective transformative challenges that face us, we may start to understand the potential psychosocial impacts that await us. Far from being sustainable, such trauma represents another dimension of devastation as the trajectory of global warming and

the Sixth Extinction become the ‘new normal’.

The word ‘resilience’ has joined the ubiquitous green terminology of corporate and populist society, but there are specific understandings that may still be useful. There are two main definitions of resilience, each emphasizing a different aspect of stability. ‘Engineering resilience’, reflects efficiency, the other, persistence, or the difference between constancy and change, predictability and unpredictability. However, efficiency, control, constancy and predictability are core attributes for fail-safe design and optimal performance, but are only appropriate for systems of low uncertainty. For real world, dynamic, evolving systems, however, they can be counterproductive where variability and novelty result in high uncertainty. The second definition, ‘ecosystem resilience, focuses on persistence, adaptability, variability, and unpredictability – qualities embraced by those with an evolutionary or change perspective. These attributes are at the heart of designing for ‘capable futures’.

Despite compelling societal myths to the contrary, the world and most things in it are beyond our control. We must learn to expect the unexpected, the uncertain and indeterminate. To do so, is to prepare for these eventualities and be ecologically resilient. Such adaptation is derived from understanding ecosystem dynamics. As a device for deliberation, it focuses attention on processes of destruction and reorganization, which are often neglected in favor of growth and conservation. By linking systems the concepts of organization, resilience, and dynamics, we gain a more complete view of these processes. And, as a fundamental way of understanding complex systems from cells to ecosystems to societies, an adaptive cycle alternates between long periods of accumulation and transformation of resources (destruction), and shorter periods that create opportunities for innovation (creation). The editors of ‘*Panarchy: Understanding Transformations in Human and Natural Systems*’, Gunderson & Holling write:

‘That interplay between stabilizing and destabilizing properties is at the heart of present issues of development and the environment – global change, biodiversity loss, ecosystem restoration, and sustainable development.

Exclusive emphasis on ... engineering resilience, reinforces the dangerous myth that the variability of natural systems can be effectively controlled, that the consequences are predictable, and that sustained maximum production is an attainable and sustainable goal... The very success of limiting variability of a target leads to the unperceived shrinkage of stability domains. As ecosystem resilience is lost, the system becomes more vulnerable to external shocks that previously could be absorbed.’²⁵

Perhaps, there is yet another form of resilience – ‘yield’, or give way to gain? To acknowledge and accept apocalyptic inevitability may be liberating? This is not to give in, but to ‘give way’ to change. The Harrisons refer to this as, ‘turning the face of disaster to the face of opportunity’. Herein lies an ecologically savvy way forward and means of moving on from destruction. During the production of their work ‘*Greenhouse Britain: Losing Ground, Gaining Wisdom*’, The Harrisons insisted on using the metaphor, ‘graceful withdrawal’, rather than the government agency’s term, ‘managed retreat’, from rising sea levels. This wasn’t just a nice way of saying the

same thing, it was a shift in attitude. Such active acceptance of the situation became a way to move beyond denial or dread to being enabled. Such disruptions in how we engage our world can lead to revolution as they shatter norms and belief systems held to be true and real.

In their most recent collection of works, the concept of '*The Force Majeure*', enables us to resolve inevitability and indeterminacy in such a way that active hope replaces sentimental or false optimism. The last chilling stanza of their poetic text, '*Manifesto for the 21st Century*' captures this:

So we at the Centre conclude
That the counterforces are available
That can in some measure mitigate a possible 6th mass extinction
But unless created over the next fifty years or much less
Civil society in many places will experience perturbation, then collapse
Keeping company with ecosystems²⁶

[insert image 4.4 here]

Provocative outlook

As Joseph Beuys wrote, '... to provoke is to evoke...' ²⁷, but what can we learn from this?

As one of the ethical issues prompted by the concept of the Anthropocene, our society's insistence on Neo-Darwinian 'survival of the fittest' reveals a competitive mono-cultural dogma supported by 'scientism'. This normative form of colonial thinking corrupts and constrains our understanding of evolution, thereby reducing our ability to engage the ecological perturbations we are beginning to experience. Distracted by careerist pursuits and knowledge as industry, few educational and research institutions are able to engage fully with the most important transformational challenges of our time. Apart from exemplary exceptions, it may be argued that neoliberal economics has erased much meaningful art and science from society across the globe.

Tim O'Riordan, Emeritus *Professor* of Environmental Sciences at the University of East Anglia, stated:

We're dealing with very powerful, vested interests that are trying to resist change, and also fundamental principles around human rights, social justice and the long term care for future generations ... We have to be more systematic when looking at the social implications for future generations: the way in which technology can be altered; wealth redistribution and whether values allow for this to be possible or not; or whether people will resist and try to hold together the *status quo*, to their own detriment, and not just to the significant detriment of future generations.²⁸

To do this, O'Riordan talks of a 'new science' that drops the pretense of definitive knowledge in favor of:

Understanding evolution's basis as fundamentally co-operative rather than competitive moves us into a worldview of interconnection, a perspective that is not only ecological but also challenges the way we run our societies, and specifically our economies.²⁹

May such an understanding be equally applied to the arts? Indeed, the arts, supported by science may still be better equipped not as the communicators of science, but as the storytellers of new cultures for futures inquiry.

[insert image 4.5 here]

Auto-destructive art

Through manifestos and artworks the Bavarian artist, Gustav Metzger (1926-2017) developed '**Auto-Destructive Art**' (ADA) to denounce the Nazism that exterminated his family in the Holocaust. Latterly, however, he extended this art-philosophy to the part played by the carbon industries in Climate Change, Art sponsorship and the extinction of species. John Latham/Barbara Stevini, Jean Tinguely, Yoko Ono, Pete Townsend, Keith Moon and others have also focused on the potential for art to destroy and incorporated destruction into the creation of their art.

ADA continues to inspire artists, including myself, to disconnect from traditional art genres in order to bring attention to important worldly issues. Inspired by the vast number of sycamore seeds in the gardens of Whitworth Art Gallery, Manchester, my impromptu work, '*Yet another futile act*', (2016) questioned the absurdity of redundancy in nature, society and culture:

- How do redundant seeds help the trees to propagate and what other benefits do they provide?
- How are redundant sycamore seeds connected to the art institution that supports them?
- Given the exponential growth of the human species, to the detriment of all others, how might this 'imbalance' be addressed?
- Given that much art is inspired by 'nature', how may nature benefit from art?

Of course, these questions have vexed and inspired humans for millennia, stimulating rational inquiry and belief systems beyond the natural world. However, much of this creative discourse, or ecological dialogue seems to be curtailed by the limits of the Anthropocene as a finite epoch of human activity. Have the logic of the sciences (knowledge) and the imagination of the arts (creativity) met their final frontier (nature)?

In 2001 a friend asked; 'David, you can't possibly believe that it's our role as artists to save the planet?' I replied: 'As human beings we have become responsible for our future existence on the planet. As an artist, I can only bring my practice to bare.'

Time, transitions, foresight and futures

The shift from the term 'Holocene', denoting the post-glacial geological epoch to the concept of 'the Anthropocene', to specify human activity does, itself, raise questions about where we are now, where have come from and where we may go. These age-old inquiries into the nature of time, the human condition and the future are now predicated on this existential paradigm shift - the anthropogenic force of creativity from the Industrial Revolution to today and the assertion that human brainpower and technology will continue to shape the future for the foreseeable future.

Royal Dutch Shell oil executive, Pierre Wack (1922-1997), is considered by some to be the founder of commercial scenarios planning. He developed resilient future-facing business strategies for the Anglo-Dutch oil giant that withstood two unforeseen oil shocks during the 1970s. However, he also oversaw the environmental devastation of the Niger Delta and the cultural annihilation of the Ogoni people as consequences of oil extraction. One may, therefore, wonder about the ethics of his and Shell's concerns for controlling the future. Despite these creative/destructive paradoxes, Shell continues to successfully deploy scenarios planning for its long-term future strategies. Meanwhile, activist arts company, Platform London continue their actions to bring Shell to account, demanding reparations for their 'ecocide'³⁰ and the murder of the writer Ken Saro-Wiwa in 1995.

Foresight and forecast, divination and prophecy, divining and prospecting have been central concerns throughout human existence. From the 30,000 to 32,000 year old paintings in the Chauvet Cave in France to the Oracle of Delphi, the I Ching to the runes, horse racing to the insurance industry, meteorology to the stock markets, the dice roll, the roulette wheel spins and the gypsy gazes into her crystal ball, prediction plays a vital role in human psyche. In competition and conflict such preoccupations have focused the minds of chess Grandmaster, Garry Kasparov to 'Master Sun', Sun Tzu's, '*The Art of War*' (500 BC), to Karl Marx's, '*Das Kapital*' (1867), to Secretary of State, Donald Rumsfeld:

Reports that say that something hasn't happened are always interesting to me, because as we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns -- the ones we don't know we don't know. And if one looks throughout the history of our country and other free countries, it is the latter category that tend to be the difficult ones.³¹

Indeed, the 'future is not given'³², so uncertainty and indeterminacy will always contribute to the fate of evolution, or 'ecology of action'³³. Our explorations will only ever be part of the journey and our explanations will only ever be part of the story.

Kant's *dyad* (thesis- antithesis) constructs not so much a dichotomy from creation to destruction, but a transition, similar to the Strange Attractor mentioned in the Introduction. Here the pivotal antonyms provide transformational resolutions in biological, political and physical progression of evolution or natural order, similar to that stated earlier: *create-destroy-evolve*.

<u>Life web - Capra³⁴</u>	<u>Dialectic - Fichte³⁵</u>	<u>Complexity – Moran³⁶</u>
Structure (material)	Thesis	Order
Process (method)	Antithesis	Disorder
Pattern (form)	Synthesis	Organization

This series of similarly identified sequences proposed by notable thinkers suggest evolutionary emergence as futures beyond human comprehension and control. Indeed, the unintended consequences of our actions may bring serendipitous benefits, disastrous drawbacks, or perversely backfire to cause the opposite effect to that intended. Creative destruction then provides the point of change; the transition from one state to another, and some cultures embrace this enigma. On the East coast of Taiwan, indigenous people actually praise typhoons, as typhoons clear away a person's accumulation of belongings and debris to bring new belongings from others. Historically, the *Ouroboros*, a snake or dragon that eats its own tail, appears in Ancient Egyptian sources, where it represents the formless disorder that surrounds the orderly world and is involved in that world's periodic renewal. The *Ouroboros* has been said to have a meaning of infinity or wholeness – “one is the all”. In the age-old image of the *Ouroboros* lies the thought of devouring oneself and regenerating oneself as a circulatory process.

Like the Taoist *Taijitu* (Yin-Yang symbol), the *Ouroboros* is a dramatic symbol for the integration and assimilation of opposites. This 'feed-back' process represents immortality, since it is said of the *Ouroboros* that he slays himself and brings himself to life, fertilizes himself and gives birth to himself. He signifies the One, who proceeds from the reconciliation of opposites, and it therefore constitutes the secret of the *prima material*, the supposed basic stuff of everything. Might creative destruction actually constitute the process of life?

[insert image here] #6

Paradoxical prospects

In Hong Kong, in 2011, I learned from the man who designed the weather for the 2008 Beijing Olympics a way to understand this conundrum. At the end of our meeting he left me with a kind of ‘*koan*’ that took some time for me to resolve... maybe. He explained that if a Chinese person finds out that someone has recently died in their hotel room, they will demand to be moved immediately, as the room is considered haunted by the specter of very bad *Feng Shui*. So, how is it that each new Emperor would live in the Forbidden City, the most correct *Feng Shui* place in the world, given that the entire retinue of the previous dynasty had been systematically exterminated?

I can only think that it has something to do with the brutal, but ethical correctness of creative destruction. *How* such transitions are enacted, becomes the question for us to learn the art of ecological resilience and living well with all others. Indeed, how the Anthropocene may be played out, beyond the endgame. In this, we may finally resolve the paradox of destruction and creation, as the paradox of art, or life as the art

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for Art and Sustainability in the Anthropocene

of paradox. And the question is not if this is the Anthropocene and all it implies, but
'what can we learn from our Anthropocene?'

on the other side
across, between and beyond
capable futures

art of emergence
only part of the story
metapoiesis

time to move onwards
the most moral act of all
making space for life

¹ Gregory Bateson. *Mind and Nature: A Necessary Unity*. (New Jersey: Hampton Press, 2002). 7

² Paul J. Crutzen, *Have we entered the Anthropocene?* 2010. IGBP.net
<http://www.igbp.net/news/opinion/opinion/haveweenteredtheanthropocene.5.d8b4c3c12bf3be638a8000578.html> Retrieved 2017-11-28

³ Edgar Morin, "Restricted Complexity, General Complexity." 2006.
<http://cogprints.org/5217/1/Morin.pdf> (Retrieved 27.02.18), 10.

⁴ Richard E. Leakey & Roger Lewin. *The Sixth Extinction: Biodiversity and its Survival*. (London: Phoenix, 1996). p. 245

⁵ Robert Maynard Pirsig, *Lila: An Inquiry Into Morals*. (London: Black Swan, 1993), 407

⁶ David Haley, *March 2001: Reflections on the Future – "O brave new world": a change in the weather*. In A. Remesar. A., ed. *Waterfronts of Art I, art for Social Change*, University of Barcelona, CER POLIS, Spain, 2001. www.ub.es/escult/1.htm and CD ROM pp. 97-112

⁷ Gregory Bateson, *Steps to an Ecology of Mind* (Chicago: University of Chicago Press, 1972), 512.

⁸ Charles Darwin, C. *Origin of Species*. (London: Book Club Associates, 1979)

⁹ Fritjof Capra, *The Web of Life: A New Synthesis of Mind and Matter*. (London: HarperCollins, 1997). 217.

¹⁰ Ibid. Capra, p. 222

¹¹ Ibid.

¹² Ibid. Capra, p. 221

¹³ Ibid. E. Morin, p.12

¹⁴ Karl Marx, and Friedrich Engels, *Manifesto of the Communist Party*, 1848.
<https://www.marxists.org/archive/marx/works/download/pdf/Manifesto.pdf> (Accessed August 26, 2017)

¹⁵ Malcom Bradbury and James McFarlane, *Modernism: A Guide to European Literature 1890-1930*. (Hamondsworth: Penguin, 1976), 446.

¹⁶ E.C. Pielou, *Fresh Water*, (Chicago: University of Chicago Press, 1998), x.

¹⁷ Carmen C. Bambach, ed., quoting da Vinci, L., Winsor RL 12665r; Richter 1970, vol. 1 pp. 355 – 56, no. 609, *Leonardo Da Vinci Master Draftsman*, (New York: The Metropolitan Museum of Art, 2003), 630.

¹⁸ Helen Mayer Harrison. & Newton Harrison. *The Harrison Studio; The Lagoon Cycle* (1974-1984), 2018. <http://theharrisonstudio.net/the-lagoon-cycle-1974-1984-2>. Accessed March 3, 2018.

- <http://theharrisonstudio.net/the-lagoon-cycle-1974-1984-2> Accessed February 18, 2018
- ¹⁹ Helen Mayer Harrison & Newton Harrison, (2008b) *Manifesto for the 21st Century*
<http://theharrisonstudio.net/the-force-majeure-works-2008-2009-2> Accessed February 15, 2018
- ²⁰ Brundtland Commission, *Our Common Future*. United Nations World Commission on Environment and Development, 1987.
- ²¹ D. Bohm, D. Factor and P. Garrett, P. *Dialogue, A Proposal* . 1991
http://www.david-bohm.net/dialogue/dialogue_proposal.html (Accessed 23 February 2018)
- ²² David Haley, (2008). *The Limits of Sustainability: The Art of Ecology*. Chapter in S. Kagan and V. Kirchberg, eds. *Sustainability: a new frontier for the arts and cultures*. Frankfurt, Germany: VAS-Verlag, 2008), 203.
- ²³ Eduardo Paolozzi, *Lost Magic Kingdoms and Six Paper Moons from Nahuatl*, (London: British Museum Publications, 1985), 7.
- ²⁴ Jared Diamond, *Collapse*. (London: Penguin, 2005).
- ²⁵ Lance H. Gunderson & C.S. Holling, (Eds.) *Panarchy: Understanding Transformations in Human and Natural Systems*. (Washington, D.C.: Island Press, 2002), 28.
- ²⁶ Helen Mayer Harrison & Newton Harrison. (2008b) *Manifesto for the 21st Century*
<http://theharrisonstudio.net/the-force-majeure-works-2008-2009-2> (Accessed 15 February 2018).
- ²⁷ Joseph Beuys, *Energy Plan For the Western Man*. (New York: Four Walls Eight Windows, 1990), 86.
- ²⁸ Maddy Harland, *10 Years To Save The Planet? With Professor Tim O’Riordan*. *Permaculture Magazine* 2015 <https://www.permaculture.co.uk/articles/10-years-save-planet-professor-tim-o%E2%80%99riordan>
- ²⁹ Ibid. Harland.
- ³⁰ Polly Higgins, *Eradicating Ecocide: Exposing the corporate and political practices destroying the planet and proposing the laws needed to eradicate ecocide*. (London: Shephard- Walwyn, 2010).
- ³¹ David Rumsfeld, US Department of Defense, News Transcript
<http://archive.defense.gov/Transcripts/Transcript.aspx?TranscriptID=26362002> Accessed February 19, 2018
- ³² Ilya Prigogine, I. *Is Future Given?* (London: World Scientific Publishing Co. Ltd., 2003).
- ³³ Ibid. E. Morin, 21
- ³⁴ Ibid, F. Capra, 156
- ³⁵ Johann Gottlieb Fichte, (1993) Thesis, antithesis, synthesis.
https://en.wikipedia.org/wiki/Thesis,_antithesis,_synthesis (Accessed 27.02.18)
- ³⁶ Ibid. E. Morin, 3