

# Paradigm Explorer



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Creativity and  
Imagination



The Scientific &  
Medical Network

# 2019 NETWORK CALENDAR

September 27-30	<i>Beyond the Brain – a Paradigm Shift in Science?</i> Mayne Island Resort with David Lorimer, hosted by Diana Clift
November 1-3	<i>Beyond the Brain 2019</i> , University of Westminster. – see <a href="http://www.beyondthebrain.org">www.beyondthebrain.org</a> and enclosed leaflet.
November 30	<i>Evolving Consciousness: Spiritual Sight and the Meaning of Alienated Times</i> , Colet House. Speakers TBC, sponsored by the Fetzer Institute
2020	
March 21-22	<i>Mirror of the Present – an Oracular Seminar about the I Ching</i> , with Shantena Augusto Sabbatini and Cruz Manas Sabatini, London. See website for further details.
April 17-19	<i>Mystics and Scientists 43</i> , Horsley Park. <i>Connecting with the Deep Wisdom of Nature - Communicating with Animals and Plants</i> . Speakers TBC, Rupert Sheldrake confirmed.
May 16	Day with Dr Larry and Barbie Dossey, to include presentations on One Mind and Florence Nightingale bicentenary – London.

## LONDON - CLAUDIA NIELSEN – 0207 431 1177 or preferably email [claudia@pnielsen.uk](mailto:claudia@pnielsen.uk)

We meet at 38 Denning Rd NW3 1SU at 7 for a 7:30pm start. Nearest tube station is *Hampstead* (Northern Line) or *Hampstead Heath* (Overground). Cost is £10 for members and £12 for guests. Please confirm attendance so I can anticipate numbers. Friends and non-members are always welcome.

For more comprehensive information on presentations (to include synopsis and biographies) plus summaries of past ones, go to the *London Group* page of the SMN site at [www.scimednet.org](http://www.scimednet.org).

Please note that sometimes talks have to be rescheduled and information is sent via email so even if you are not in London but would like to be kept informed of changes, please send me an email and I will put your address on the circulation list.

OCTOBER	Monday 7th	PROF RICHARD SILBERSTEIN – Bioelectric fields, where biology and reincarnation intersect
NOVEMBER	Monday 11th	DIANA DURHAM – Coherent Self, Coherent World: Synthesising Myth, Metaphysics & Bohm's Implicate Order
JANUARY 2020	Monday 13th	RUPERT SHELDRAKE PhD – Ways to Go Beyond: And Why They Work



**Evolving Consciousness:  
Spiritual Experience in a Secular Age**

Saturday 30<sup>th</sup> November 2019  
Colet House, 151 Talgarth Road, London W14 9DA

Jules Cashford, Pippa Evans, Prof Simon Conway Morris FRS, Malcolm Guite, Prof Ursula King, Gary Lachman, David Lorimer, Prof Richard Tamas, Dr Mark Vernon

The Scientific & Medical Network

The Scientific and Medical Network with  
The Academy for the Advancement of  
Postmaterialist Sciences (AAPS),  
The Alef Trust and Watkins Books presents:



Evelyn Hansen Ken Wilber (via videolink) Stephen Braude Marjorie Woollacott Steve Taylor Amanda Feilding

**Beyond the Brain 2019**  
Further Reaches of  
Consciousness Research



Rupert Sheldrake Fabio Garcia Steve Taylor Betty Kovacs Seth Newman Chris Roe

Hogg Lecture Theatre, University of Westminster,  
35 Marylebone Road, London, NW1 5LS

2<sup>nd</sup>, 3<sup>rd</sup> November 2019  
Pre-conference workshop: 1<sup>st</sup> November 2019

The Scientific & Medical Network [www.beyondthebrain.org](http://www.beyondthebrain.org)

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## Notice to Contributors

All proposed contributions should be sent to the Editor by email as a Word and/or PDF file.

For further guidelines please email: [dl@scimednet.org](mailto:dl@scimednet.org)

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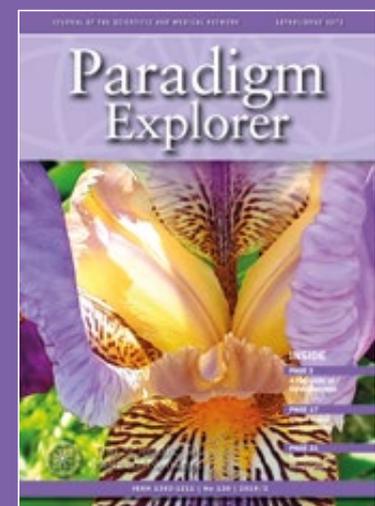


Photo: Natalie Tobert



# ‘Life is Short, and Art Long’

*From Dr Paul Filmore, Chairman chairman@scimednet.org  
Forum: Editorial (Please comment via the members’ website)*

In this edition of Paradigm Explorer there are a number of articles which discuss different models of human evolution. Exploring evolution highlights the brevity of our individual lives, as Hippocrates observed in the aphorism ‘Life is short, and Art long’ (reversed in the more familiar Latin version of the original Greek: ‘Ars longa, vita brevis’). Indeed, with any exploration of human evolution, we may come to question the present human condition, and to see what insights may be gained from such a study. This questing can be at a theoretical level, but it may have little value for our individual lives unless related to our present condition, challenges and responsibilities.

*Life is short, and Art long; the crisis fleeting; experience perilous, and decision difficult.*

*The physician must not only be prepared to do what is right himself, but also to make the patient, the attendants, and externals cooperate.*

<https://en.wikiquote.org/wiki/Hippocrates>

With this in mind, I would like to bring you, rather tongue-in-cheek, into what might be regarded as a modern myth, not quite of the profundity of Homer’s Odyssey, but still using the symbol of a journey. I refer to the film ‘Mr Bean’s Holiday’.

Here is a film that is rare: one that is safe to watch in its entirety without underlying agenda or emotional confusion. Mr Bean (Rowan Atkinson) is someone who finds it difficult to fit in with everyday life, and so stays nervously on the side-lines, saying very little, while

exhibiting slightly unconventional reactions. In case you want to watch the film, I will try not to detract from the experience by giving away too many details of the plot.

Within the first few seconds of the film, our British summer is beautifully evoked (rain). Enter Mr Bean, full of expectation, trying to win a holiday to the sunny South of France. He sees a video clip of the sea and beach at Cannes, and from that moment is captured by this vision. Needless to say, Mr Bean wins the competition and sets out for Cannes, recording his journey (odyssey) through the lens of a video camera.

As one might expect, Mr Bean has a number of challenges en route, which most of us would find simple to navigate, but these lead him into comic difficulties. He has, however, his abiding vision, rendered into a simple hand drawn map, and with his compass, he keeps on course whenever life events distract him from his purpose.

And along the way, there are indeed many distracting situations. Although life is a challenge to Mr Bean personally, when he sees other people under threat - a young boy being menaced by a drunk, a young woman apparently in danger of her life - he ignores his own safety and life direction (his vision), to go to their aid. Other situations - being hungry, penniless and having lost his passport - challenge him too. Of particular poignancy is the moment when he busks by miming to an operatic aria (sung by a soprano), capturing the hearts of a market place audience.

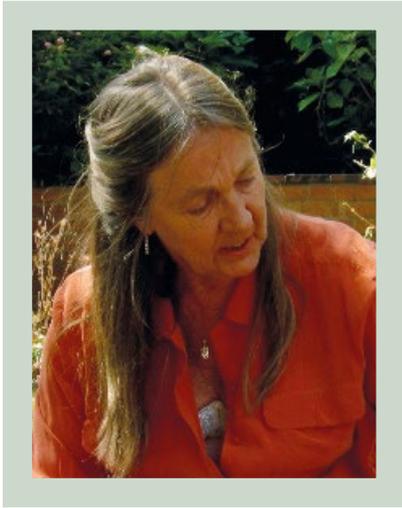
Perhaps it is Mr Bean’s pure heart that shines through, overriding his inadequacies and inhibited speech, bringing us to trust him. In the film, those who trust him are well

rewarded: the boy is reunited with his father; the young woman, an aspiring actress, finds fame. Although Mr Bean gives without thought of the consequences to himself, the universe still supports him, in numerous little ways, to reach his goal (the beach in his initial vision). Perhaps most symbolic is a scene near the end of the film when, supposedly by chance, vehicles line up briefly to provide safe passage for the totally unaware Mr Bean, focussed solely on his goal, to reach the beach, fulfilling his mission and ending his odyssey. In the final scene on the beach, we see the great number of people that Mr Bean’s seemingly unexceptional life, in this journey, has touched, and how they are moved to celebrate what he has brought to them, by singing along with him.

I expect at this point you have seen the allegory, but are wondering what this has to do with an editorial?

A number of the main articles in this edition mention ‘spiritual flow’; the flow in all our lives. These articles often take a theoretical approach to mapping the subject, but it is also the way we interpret the given maps within our own lives that is important. If a particular map does not seem to touch us in some way, or give us questions to answer, then we can move on, read another article, explore a different map. We hope that all articles published in Paradigm Explorer have the potential to stimulate such questing.

If you are moved to respond to this editorial or inspired to write an article for consideration by Paradigm Explorer, then please contact the SMN. As with the endearing, socially inept Mr Bean, we all have something to contribute!



# A Hierarchy of Consciousness from Atom to Cosmos

*Marilyn Monk*

Before I begin let me confess that the study of consciousness is not my field. I am a molecular biologist. In over 60 years of my research of life at the subcellular and cellular level, I have been concerned with DNA replication and repair, cell signalling, epigenetics and regulation of gene expression in development, Lamarckian inheritance, regenerative medicine, early diagnosis of genetic disease and embryo/cancer genes. So why now consciousness?

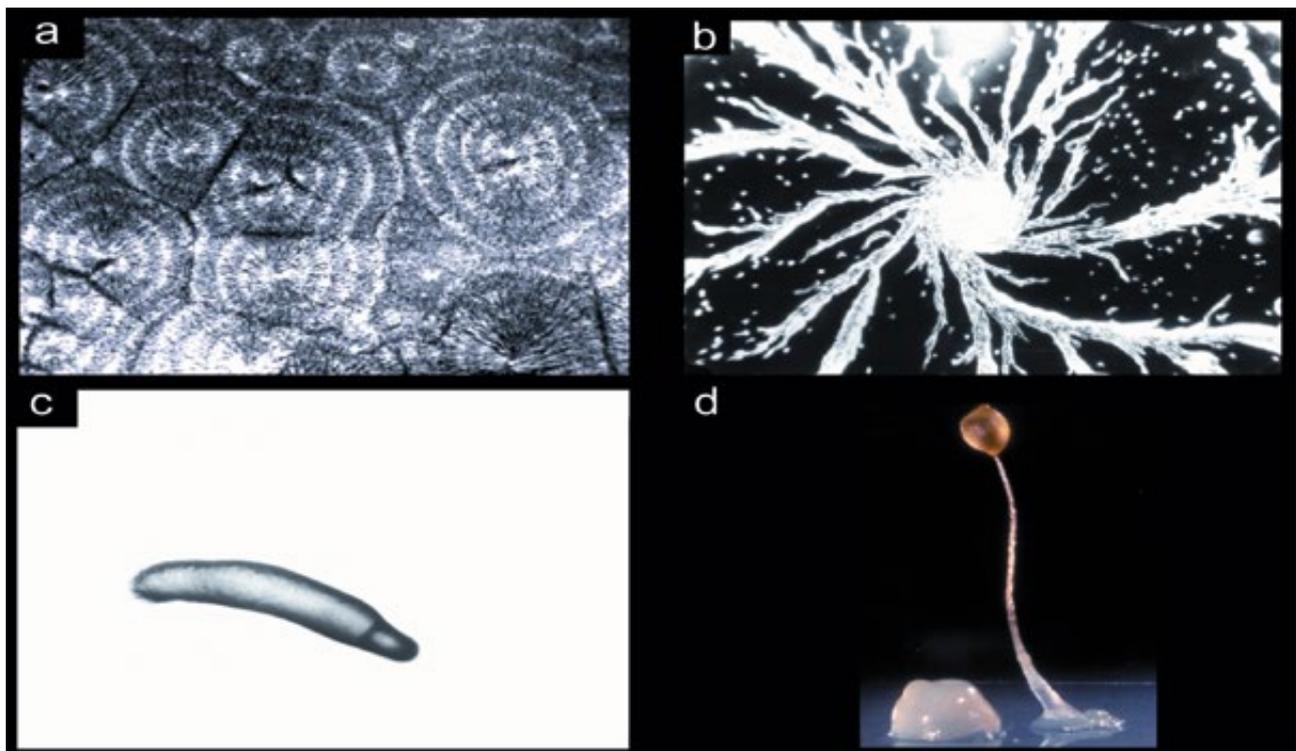
Over the last year I have found presentations of consciousness studies very confusing. Is consciousness in the brain (as Francis Crick expounded), or not just in the brain but pervading all existence (as in panpsychism)? Does consciousness use material mechanisms in its operation or is it non-material? Is consciousness a human phenomenon or is all life, and perhaps non-life too, conscious? So, first of all, I asked myself where is consciousness for me? Experimentally, I know in everyday activities I have consciousness. But then, in times of meditative experiences of wonder and beauty, when I am aware of being aware, I feel strongly that consciousness has me. As one who has always happily embraced paradox I think both are true. But

is the mechanism of consciousness in either sense material? I decided to start with the definition of consciousness from the Oxford Living Dictionary, which is “*The state of being aware of and responsive to one’s surroundings*’.

People who talk about consciousness studies are mainly concerned with human consciousness and may use definitions that are human centred - indeed, the Cambridge Dictionary definition of consciousness is “*The state of understanding and realizing something*”. Certainly that has been the main focus since Descartes who confined consciousness and mind to humans, but more recently there has been much debate about consciousness in animals - even in plants - and I have observed in my research, and in my love for all creatures on this earth, that all life is aware and responsive to surroundings. The term ‘aware’ is certainly more of a human concept and may be taken to include a huge range of consequences of awareness - sensations, feelings, self reflection, memory and imagination and so on. But, as a biologist, when I consider the simple definition - aware of and responsive to surroundings - I see that consciousness extends outside of the human realm, though in

lower life forms, or even non-life forms, we see awareness more simply as detecting and sensing surrounding environment.

Consistent with my usual approach to scientific exploration, I began without investigation of the vast literature on the topic of consciousness. In this way I hoped to avoid being overwhelmed by the myriad of ways of thinking about the topic. During my early studies I was mentored by a wise scientist (Professor Bob Pritchard), and then later by my spiritual teacher (Rajneesh or Osho), to approach my work of exploration with an open mind. Bob said to me don’t read the literature before you begin - you will be indoctrinated and think it has all been done already. Similarly, Rajneesh said to me that there should be no *a priori* hypotheses, no preconceived ideas guiding my research. So I decided to start thinking about consciousness at the level of the atoms, molecules, cells and tissues of my laboratory research and found myself working my way up from the micro- to the macro-cosmos, looking for the mechanisms of consciousness (sensing environment and responding to change) at each level of increasing complexity.



**Figure 1.** Aggregation, movement and fruiting body of *Dictyostelium* after the amoebae detect they have run out of food. a) Amoebae in the field emit a signal of cAMP triggered by starvation and those with the highest periodicity form territories with amoebae relaying the signal outward and making a movement step inward towards the source. b) As they approach the centre, amoebae are attracted to each others' cAMP signal and the streams form spirals. c) The slug, measuring several centimetres, has receptors that detect heat and light, and so can detect, and move the distance, to the soil surface. d) At the surface the slug transforms into a fruiting body. A third of the amoebae in the slug sacrifice their lives to form stalk to bear the spores aloft (Alcantara and Monk, *J gen Microbiol* 81;321-334, 1974).

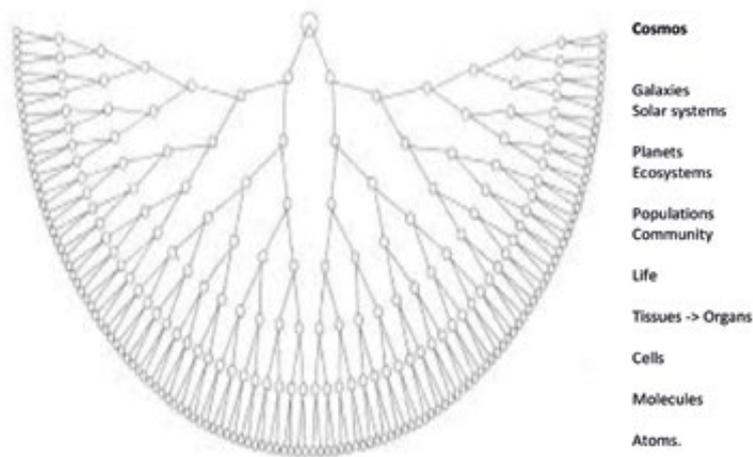
My starting rules for this analysis were views I had already - specifically, that everything is interconnected and everything is in service to its own higher order structure. These principles came from influences in Edinburgh University in the early 70s; Henry Kacser taught the concept of interconnectedness as metabolic flux in the metabolome - the intricate interconnected biochemical pathways within a cell - and Conrad Waddington taught the concept of service as epigenetic programming of different cells in the body to serve their higher order structure - the tissues and the organs. My scientific approach was to look for material mechanisms of consciousness at each level. And, indeed, I found that material mechanisms were known at all levels, with a few exceptions

that might require a greater knowledge of quantum theory and entanglement. Surprisingly, with such a materialist approach throughout, I ended up with a model encompassing a sense of belonging, meaning and purpose throughout evolution.

Just starting with consciousness as a state of being aware (or sensitive) and responsive to surroundings, it is clear to me that my experience that I have consciousness relies on my senses of sight, hearing, touch, smell and taste. I also get messages from my body to my brain if I am hungry or tired or in pain, and messages from my brain to my body for different emotions I experience. And indeed messages from within the environment of my self as I am conscious of my mental functions of memory, imagination and the machinations of mind. These are

functions of human brain/body communication and a lot (but not all) is known about material mechanisms involving transmission of signals between body and brain via informational molecules binding to special cell receptors. However, it is evident to me that all forms of life have consciousness but at different levels of sophistication and with very different range of consequences of their consciousness. A worm is conscious - it detects and responds to changes in its environment. A bacterium can detect a gradient of sugar involving special receptors on its surface and responds by transferring the information to its means of movement - its flagellae - to swim towards a food source.

As an example of consciousness in a lower life form we can look at an area of my own research in



**Figure 2.** A diagrammatic representation (an ancestry model, published by Gregoire 2014, which I have inverted) of an interconnected hierarchy of increasing complexity. This is a binary model for simplicity - the number of atoms making a molecule, or molecules making a cell, and so on, is greater than two. It also shows a path of increasing complexity going through animal life forms familiar to the author (my own expertise is at the level of molecules and cells and differentiating tissues). Clearly there are many other intermediate life forms between the atom and mammals which are not included here. A similar hierarchy could be created for non-life - e.g., starting with grains of sand - or for flora rather than fauna.

the early 70s, namely, how slime mould amoebae (*Dictyostelium discoideum*) become aware of changes in their environment, and how they respond. Aggregation of the individual free-living amoebae into a multicellular structure is triggered by their awareness that they have run out of food. The individual amoebae detect the change in environment (starvation) and start to emit a signal (pulses of cyclic AMP), which diffuses out into the territory (see Figure 1). The fastest signalling amoebae establish and take control of the territories. Amoebae in a territory, detecting the gradient of cyclic AMP, make movement steps towards the source and emit their own signal to attract amoebae further out to join the aggregation. So the signal is relayed out and bands of amoebae move inwards. They move towards each other as they come closer to the centre to make amazing spirals looking like galaxies. The aggregate formed in the centre of the territory forms a multicellular slug capable of movement over a greater distance

than the individual amoebae could manage. The slug develops phototactic and thermotactic receptors at its tip so that it moves towards the light and heat at the soil surface where it forms a fruiting body. A third of the amoebae in the slug sacrifice their lives to create a stalk which bears the spores aloft so that they will be distributed to better feeding grounds. I worked on the material mechanisms and parameters of aggregation in the early 70s and it was amazing to understand how really clever this organism can be when triggered by the need to move to new pastures. It is a good example of a lower organism sensing and responding to environment at several levels and the material mechanisms are known.

This example demonstrates also how consciousness can operate at the level of whole populations of individuals. What about lower and higher levels of complexity - atoms, molecules, cells and tissues, or ecosystems, solar systems and galaxies? Does it make sense

to say that the mechanisms of consciousness are still material throughout?

In the following model of a hierarchy of consciousness, I propose that mechanisms at all levels of complexity depend on interconnectedness of the parts serving their higher order structure. A model of interconnectedness applied to increasing orders of complexity is shown in Figure 2. This is illustrated as a binary interconnected model for simplicity and to link all parts at all levels of increasing complexity into one unified structure. Analysis of this hierarchy of interconnectedness will show that, at each level, the parts are in service to their higher order structure - the electrons to the atom, the atoms to the molecule, the molecule to the cell, and so on. The parts in service at each level are conscious in that they detect and respond to their environment. In fact, service of parts to their whole is essential for survival of the whole in evolution. The mechanisms are material at all levels as we will now examine - starting with the atom.

Atoms consist of a balanced number of neutrons and positively charged protons in the nucleus and negatively charged electrons in their orbits - e.g., a carbon atom has six electrons and six protons, an oxygen atom has eight protons and eight electrons. When the balance of protons, neutrons and electrons is disturbed, the atom decays. The components or parts of the atom are in service to their higher order structure - the atom.

Next, we have the molecules which consist of several atoms joined together by covalent bonds formed by a sharing of electrons in their outer orbits. The stability of molecules is variable depending on the strength of bonding between the atoms and the possibility, or not, of their bonding with another atom or molecule. One could say that the atoms are in service to the molecule and the mechanisms by which they bond and form the molecule are understood.

Molecules interact in an interconnected way to form cells. There are approximately 3000 biochemical pathways, with their associated enzymes and cofactors, interconnected in every cell. This is called the metabolome. As students in the 60s and 70s we would have a Boehringer chart attached to a door or wall somewhere as a sort of biochemical bible. I developed many single cell enzyme assays to monitor gene transcription changes in early embryonic development from studying my Boehringer chart. Interconnectedness means that a change in any biochemical pathway affects all the pathways in the cell. The interconnected changes in all pathways is called metabolic flux, which can be observed by mass spectrometry. For instance one can distinguish a starvation metabolome, from an addiction metabolome, from a sugar eating metabolome, and so on. Metabolic flux shows the interconnected pathways detecting and responding to a changing environment - our definition of consciousness. The molecules are serving their higher order structure - the cell.

Referring back to Figure 2 we see that the next items in increasing levels of complexity are tissues and organs. In the case of humans, all cells in the body have the same 20,000 genes. The differentiation into over 100 different cell types in the body is directed by signalling from the different environments of the cells in the developing foetus to programme their genes to be on or off, up-regulated or down-regulated. The programming is by epigenetic mechanisms - modifications superimposed on the DNA of the genes to regulate their expression. In computer language the genes are the hardware and the programming is the software. The cells detect information from their environment in the developing foetus and respond by differentiating into cells with the required function (bone, muscle, blood, skin, nerve, and so on). In this sense they are conscious and serving the tissues and organs of the body. Maybe even more incredible is that all mammalian embryos

have 90 per cent of their genes in common yet differential epigenetic programming from the species-specific environments of ovary, testis and uterus, determines the differential development of species. The material mechanisms of service of cells to tissue and organs is the same throughout life so at this level of complexity we could list a bee, a frog, a fish, or a bird, and of course other mammals. I do not specify 'human' here as this might divert the reader to start to think about the huge range of consequences of consciousness that emanate from the human brain and the human mind.

We have been looking so far at two rules - interconnectedness within and between levels of increasing complexity and service of parts to their higher order structure at each level. It is time to observe two further rules. The third rule is that, even though the parts are in service to their higher order structure at each level, the parts do not know what they are serving. However, if they do not serve correctly the higher order structure will not survive. The fourth rule is that the whole is looking after its parts at each level. Perhaps this is more easily seen at our own level in the hierarchy - our organs do not know who or what they are serving but we look after our organs.

Referring back to Figure 2, we see the next level I have included is populations. Populations of different species can form a higher order structure - for example the beehive, or the Portuguese Man O' War jelly fish. Here we have a colony of organisms working together for the sake of the greater whole. One can see this too in simultaneous movement in flocks of birds and shoals of fish - all moving as one. And indeed in humans sharing a common event - like football crowds moving as one in response to events on the pitch. I do not know the mechanisms of communication between individuals in flocks and shoals and football crowds. However, the material mechanisms of service are known in other populations of individuals in service, e.g., in the beehive. The

genes of different worker bees - nurse, farmer, forager, warrior - are epigenetically programmed to differentiate them to perform their specific tasks. If they do not serve their higher order structure, the beehive will die and so will the bees. Anarchic behaviour in worker bees causes destruction of the beehive. Throughout we see that service of parts to their higher order structure through consciousness - aware of their environment and responsive to change via interconnectedness - ensures material survival at every order of complexity. One could argue that consciousness is primary and that matter is derivative from consciousness? Indeed, evolution can be seen as a model of interconnectedness and service ensuring harmonious survival at each level of complexity.

The next level of complexity I have included in my hierarchy is the ecosystem. An ecosystem is an interconnected biological community of interacting organisms and their physical environment. It will have the right pastures for the herbivores, the correct herbivore to predator ratio, it will have rivers (and maybe ocean) and mountains and forests. The parts are in harmonious interconnected service to the whole for survival of the ecosystem. The mechanisms are known. As we know, if the forests are destroyed, if a river is diverted, if the top predator is removed (e.g., the wolves in Yellowstone Park) - these disturbances can unbalance the whole system leading to death and destruction of the ecosystem.

And the case is the same with the next level - our solar system. Although we trust that our planet earth will safely look after us in the future, a glimpse at the past is not so re-assuring as it contains inhospitable ice ages and a meteor that wiped out the dinosaurs. And now our planet is threatened by climate change, and the melting of the ice caps, or possibly a solar flare. Indeed only this year in June, Nature published a report that 'astronomers may have spotted a distant star spitting out a giant flare that packed 100,000 times more energy than any seen from Earth's

sun'. (Argiroffi. Nature Astronomy 3:742-749, August 2019). This is 'the first clear detection of a remote star emitting a kind of eruption known as a coronal mass ejection that were until now only seen from our sun. Such explosions may wreak havoc on surrounding worlds.'

We have reached our galaxy and the cosmos, and we can summarise the preceding arguments in the following key points:

1. A view of a hierarchy of interconnectedness through, and within, levels of increasing complexity from atom to cosmos.
2. At each level the parts are conscious - aware of, or detecting, or sensing, their surrounding environment, and responsive to change - in service to their higher order structure. The material mechanisms of service are established and known.
3. The parts do not know what they are serving.
4. The higher order structures are caring for their parts.

Some important consequences flow from the above model:

- a. Interconnectedness means that reverberation (or flux) can move through whole system top down or bottom up or middle out. For example, a solar flare might disrupt ecosystems, scattering populations to new environments, leading to cellular adaptation and reprogramming of genes. Or the human race could become extinct leading to recovery of ecosystems.
- b. Flux through the system leads to events that do not seem to have a material mechanism because consciousness - awareness and response to change in surroundings - is happening across several levels of complexity. This leads me to wonder whether aspects of the paranormal might be explained in this way - certainly in space (e.g., remote viewing). However, it is not so clear to me how paranormal events happen across

time. Here, connections made between individual aspects in the interconnected system due to flux must be recorded in some way and recoverable later. What could be the mechanism of recording previous events in time and re-membering?

- c. Service of parts to their higher order structure to which they belong is essential for survival at all levels of complexity, and ensures development in evolution. However, it is important to note that this is not an imperative because it is essential that there is turnover - the replacement of the old with the new. Extinction is equal to creation - for all species that exist on earth today an equal number have become extinct. The rule is that death equals birth. One wonders whether birth and death apply to our whole cosmos.
- d. This scheme of things establishes consciousness as the unity of everything, and the belonging to the unity of all things in service to their higher order structures. It suggests that matter is derivative from consciousness. It fits with my experience that I have consciousness at my particular level of the hierarchy and that consciousness has me though my interconnection to everything else. It celebrates *belonging*, and *meaning*, and *purpose*, for everything on planet earth and beyond. My scientific approach is material - an understanding of the material mechanisms throughout and perhaps showing how aspects of the paranormal might be understood. My current scheme based on interconnectedness and service shows that consciousness is all pervasive and its material mechanisms at each level of complexity are known.
- e. There are still many mysteries however. We do not have an understanding of mechanisms of memory through time (e.g., telepathy) And, importantly, we do not know the nature of interconnectedness itself. What is the nature of the

interconnecting lines in Figure 2? Could interconnectedness be non-material? Could interconnectedness be the all-powerful non-existent 'inbetween' of things. Like love. What is the material nature of love between the lover and beloved - where is it? Is this greatest power in existence non-material?

- f. And finally - this whole scheme looks like love itself. Service is love. Unconditional service in humans is an evolutionary selectable in that it activates the pleasure centres of the brain and, beyond that, unconditional love for all beings and every thing works to support the flourishing of all. Anarchy, abandonment, neglect and abuse lead to loss or - in this scheme - extinction.

So now, do we draw a line at the top of this hierarchy? Remembering that parts cannot know who or what is being served at all levels, and that the higher order structures are looking after their parts, we cannot know the next higher order structure beyond cosmos. It is plausible to argue that beyond this entire scheme of all that exists, beyond cosmos, there may be a yet higher power caring for everything.

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*Professor Marilyn Monk is Emeritus Professor of Molecular Embryology at University College London. She researched life at a subcellular level - at the level of molecules - and at a cellular level. Her work as a laboratory scientist over 60 years has been involved with DNA replication and repair, with the genetics of bacteria and their viruses, with amoeboid cell signalling and aggregation, with single cell molecular biology and preimplantation diagnosis, with deprogramming in development to stem cells and regenerative medicine, with gene transcription and its epigenetic regulation in embryonic development, and with embryofcancer genes towards development of a prophylactic cancer vaccine.*

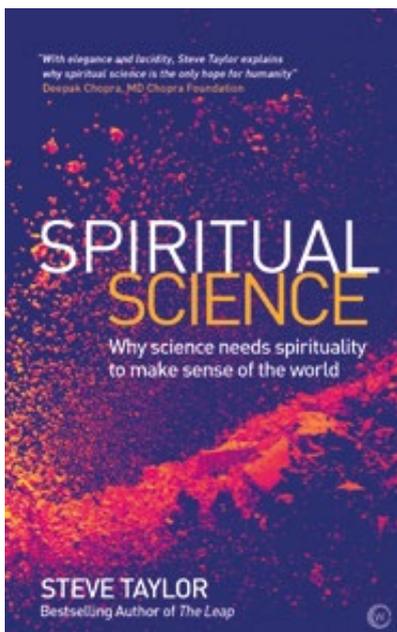
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# Beyond Neo-Darwinism - An Alternative View of Evolution

Steve Taylor PhD

*This article is adapted from Steve's recent book Spiritual Science.*



Towards the end of his life, Charles Darwin came to regret that he had placed so much emphasis on natural selection in his theory of evolution. Although he still believed that natural selection was the *main* way in which variety had arisen in evolution, he harboured serious doubts that it was the *only* way. He didn't believe that natural selection was sufficient to account for the variety of life forms on Earth, and the seeming ease with which they arise.

Darwin's doubts about the power of natural selection have never been fully resolved. Numerous observers have pointed out that it seems implausible that such a staggeringly positive and creative process could be generated purely by a negative phenomenon such as natural selection, acting on random mutations (which occasionally bring about changes that benefit living beings). It has been estimated that mutations only occur at a rate of about one per several million cells in every generation. However, since only a tiny number create beneficial traits which give a survival advantage, some scientists have doubted that, in the words of Fritjof

Capra, 'This frequency [is] sufficient to explain the evolution of the great diversity of life forms.'<sup>(1)</sup>

This isn't just because mutations happen so rarely, but also because, in order to create significant changes (including the generation of new species) long series of beneficial mutations have to occur in sequence. Mutations have to be cumulative, perfectly matched to previous mutations, and occurring at the right place and time. So with every 'matched' mutation, the odds against its random occurrence increase massively. In the words of the eminent French zoologist Pierre-Paul Grasse, mutations only 'occur incoherently. They are not complementary to one another, nor are they cumulative in successive generations toward a given direction.'<sup>(2)</sup>

This lack of plausibility is highlighted by a mismatch between the frequency of random mutations and the development of adaptive traits. According to the contemporary American biologist Michael Skinner, rates of random DNA sequence mutation are far too slow to account for the development of phenotypes.

As he puts it, ‘genetic mutation rates for complex organisms such as humans are dramatically lower than the frequency of change for a host of traits, from adjustments in metabolism to resistance to disease. The rapid emergence of trait variety is difficult to explain just through classic genetics and neo-Darwinian theory.’<sup>(3)</sup>

Another issue is that, in some circumstances, the emergence of “selectable” (or advantageous) functions requires two or more mutations to happen simultaneously. Some molecular systems depend on many interdependent parts, which would have to arise and converge at the same moment - so in these cases, a single mutation obviously wouldn’t be sufficient. Although once controversial, this theory of “irreducible complexity” (originally put forward by the Intelligent Design advocate Michael Behe) was scientifically validated in 2014, when a team of researchers studied how the malaria parasite develops resistance to the anti-malarial drug chloroquine. Resistance to chloroquine arises far less frequently than to other drugs, and Michael Behe hypothesised that this was because it depended on more than one mutation in a particular malarial protein (called PfCRT). The researchers verified this, finding that two specific, simultaneous mutations were needed for the protein to transport chloroquine.<sup>(4)</sup> This is important because the chances of two such complimentary and simultaneous mutations occurring randomly is beyond the bounds of mathematical probability. This obviously infers that mutations happen in a non-random way. Behe believes that this shows evidence of Intelligent Design, but I believe that this is unwarranted (especially since allowing two simultaneous mutations that decrease human resistance to malaria doesn’t say much for the benevolence of God!). As I will suggest later - when we consider the idea of non-random mutations in more detail - we should perhaps we should think in terms of an inherent creative and dynamic tendency in living systems,

including a tendency to move towards greater complexity.

Another problematic issue is explaining how natural selection can give rise to *new* structures and features, and especially new species. The standard view is that random mutations slowly create more and more variety over millions of years, and eventually these differences build up into distinct, new species. But it may not be quite as simple as this. As Pierre Paul Grasse pointed out, mutations only cause trivial changes. They are equivalent to ‘a typing error made in copying a text’ with very little ‘constructive capacity’ or innovation, so that they cannot create complex organs or body parts.<sup>(5)</sup> There are invisible boundaries between species which mutations cannot cross, so that they can cause variation but never true evolution. Or as the contemporary evolutionary theorists, Gerd Müller and Stuart Newman, have put it, the Neo-Darwinian paradigm ‘has no theory of the generative,’<sup>(6)</sup> and consequently is unable to solve the problems of phenotypic complexity (such as the anatomical and structural features of living beings) and phenotypic novelty (that is, the development of new life forms). In other words, the central tenet of Neo-Darwinism – that natural selection has the creative power to generate novelty – is dubious.

You could frame this issue in terms of the distinction between *micro*- and *macro*-evolution. There is no doubt that mutations can cause changes *within* species - that is, they can cause variation on a micro level. But *macro*-evolution - the emergence of different species - is much more problematic. The gradual, incremental mutations that supposedly link different species to one another have never been observed or properly explained.

This links to the concept of ‘punctuated equilibrium,’ based on fossil evidence showing that evolution works through stops and starts, with periods of stasis for millions of years and then sudden bursts of change – which can be as short as 1,000 years – which give rise to new species. This doesn’t fit

well with the idea of incremental random mutations, since these would surely occur fairly evenly. There would be no reason why some periods would see more change than others.

There is also the problem that favourable mutations would soon be lost by interbreeding with non-mutated members of a species. Darwin himself saw this as the biggest problem of his theory, and Neo-Darwinists have never convincingly solved it. It’s easy to see how this ‘crossing’ might be avoided with animals - they might just physically move away from the species, for instance - but not with the vegetable kingdom.

### The Third Way in evolution

Because of issues like these, it is certainly not just religious-minded theorists - such as advocates of Intelligent Design - who express doubts about Neo-Darwinism. Many mainstream biologists and evolutionary theorists now believe that the standard model of evolution needs to be overhauled. In recent years a large group of eminent scientists – including James Shapiro, Dennis Noble, Eva Jablonka and Evelyn Fox Keller – have formed a ‘Third Way in Evolution’ movement, aimed at developing an alternative to both creationism and Neo-Darwinism. (Sometimes this is referred to as the “extended evolutionary synthesis”). The “Third Way” theorists reject the idea that random mutations are the main source of variation in evolution, and argue that natural selection has ‘been elevated into a unique creative force that solves all the difficult evolutionary problems without a real empirical basis.’<sup>(7)</sup> They believe that Neo-Darwinism ignores ‘much contemporary molecular evidence’ and that the idea that hereditary variation arises accidentally is based on unsupported assumptions. They – like Darwin himself - believe that the scope of natural selection is limited, and that evolution must other important mechanisms such as processes such as symbiogenesis, horizontal DNA transfer, the action of mobile DNA and epigenetic

modifications. As Gerd Muller has written in a recent paper, “a rising number of publications argue for a major revision or even a replacement of the standard theory of evolution, indicating that this cannot be dismissed as a minority view but rather is a widespread feeling amongst scientists and philosophers alike.”<sup>(8)</sup>

Epigenetics is particularly significant, since it contravenes the Neo-Darwinian principle that the genome is independent of environmental influences. Epigenetics shows that environmental factors - particularly experiences of stress, trauma and deprivation - can cause genetic changes, which may then be inherited by descendants. Environmental factors may ‘switch on’ genes, which remain active in future generations. This suggests that the much maligned French biologist Lamarck – who suggested that evolution proceeds through the ‘inheritance of acquired characteristics’ – may not have been wrong. The biologist Michael Skinner - quoted at the beginning of this paper - believes that epigenetic factors can account for the mismatch between the frequency of random mutations and the development of phenotypes, since they can massively increase variation in a population. In this way, Skinner suggests that we need a synthesis of Neo-Darwinism with a ‘Neo-Lamarckism.’<sup>(9)</sup>

### A ‘Panspiritist’ view of evolution

As the Third Way movement suggests, rejecting the standard materialist explanation doesn’t mean we have to accept a religious interpretation. I am certainly not doubting the fact that evolution *has occurred*, and advocating creationism.

An alternative is to suggest that evolution is not a random and accidental process, but has an *impetus* behind it, a tendency to move towards increased complexity and increased awareness. In other words, evolution is a *teleological* process - that is, it moves in a certain direction, with a certain purpose. At the same time, this impetus means that living systems

have an inherently dynamic quality, which enables them to respond to challenges with creative flexibility.

My view here is based on a philosophy I have developed called ‘panspiritism,’ the basic idea of which is that the primary reality of the universe is a fundamental consciousness (or spirit) which gives rise to material forms and living beings, and pervades them. (More details in my new book *Spiritual Science*. (10)) I believe that fundamental consciousness (or spirit) has an innate dynamic quality. Once spirit becomes canalised into material structures, and makes them alive, it impels those structures to become complex and highly organised, so that they can support more advanced forms of mentation, greater degrees of sentience, and more intensified and expansive forms of awareness.

An important point to consider is that evolution has an *inner* dimension. Neo-Darwinists usually see evolution only in its outward, physical expression. But evolution doesn’t just bring increasingly physical complexity. As living beings become more physically complex and more highly organised, they also develop more inwardness, a greater degree of inner life. They become more sentient, with a more intense awareness.

In this sense, at the same time as being the one of the most physically complex species on this planet, human beings are probably one of the most intensely aware and sentient species. (I’m being careful to say ‘one of’ because some species of whales and dolphins have more brain cells than us, and may be at least *as* conscious as us.) It appears that we have a more intricate and expansive awareness of reality than most other animals.

I’m certainly not the first person to put forward a ‘panspiritist’ philosophy, or a spiritual view of evolution. Many philosophers have suggested that evolution is a purposeful process of the unfolding and intensification of consciousness, including the German philosophers Hegel and Fichte, the French philosophers

Bergson and Teilhard de Chardin and the Indian philosopher Sri Aurobindo, and the contemporary American philosophers Ken Wilber and Michael Murphy. Teilhard de Chardin saw evolution as a process of the ‘spiritualisation’ of matter, progressing towards an ‘Omega Point’ which is the culmination of the whole evolutionary process. Here matter becomes wholly infused with spiritual energy and all phenomena, including human beings, attain oneness. Teilhard de Chardin believed that the increasing interconnection of the human race was a part of this evolutionary process, and was creating a new domain of reality (the *noosphere*) which would unite our species into a single interthinking group. (Teilhard de Chardin died in 1955, so it’s interesting to ponder what he would have made of the age of the Internet, and all of the increasing interconnection it has brought about. No doubt he would see it as part of the formation of the *noosphere*.)

There is also a parallel with the concept of *emergence*. Systems theorists suggest that natural systems and organisms have an innate tendency to move toward greater order and complexity, generating structures which are more than the sum of their parts. Biologists such as Robert Reid and Stuart Kauffman have applied the concept of emergence to evolution, as an alternative to the Neo-Darwinist model. According to this view, order and complexity are not created by genetic mutations, but by self-organisation and the emergent properties of systems. While Robert Reid was doubtful about *any* role for natural selection in evolution, Stuart Kauffman believes that this spontaneous tendency to order works alongside natural selection.

However, the idea that new levels of order spontaneously emerge from lower levels seems magical, not dissimilar to the ‘magic’ by which some materialists believe that consciousness arose (and arises) out of complex material structures, such as animal brains. According to the panspiritist view of evolution, the tendency of systems to move



*The Pyrenees - David Lorimer, June 2019*

towards greater levels of order and complexity stems from spirit itself, which generates greater complexity in order to support its intensification. The dynamic quality of living systems is an expression of the dynamism of spirit itself.

### Adaptative mutation - non-random mutations?

The innate tendency of spirit (as manifested in living beings) to move towards greater complexity perhaps also explains why evolution often appears to operate with a strange degree of *creativity*.

The paleontologist Simon Conway Morris has written of ‘The uncanny ability of evolution to navigate to the appropriate solution.’<sup>(11)</sup> One example of this is the way that life forms sometimes adapt to changes in their environment with a rapidity that would be impossible through random genetic mutations. The technical term for this is ‘adaptive mutation.’ In these cases, mutations sometimes occur in a *specific response* to environmental challenges or stresses, such as changes in temperature, nutrients or population size. For example, research has found that if a strain of bacteria is unable to process lactose, and then placed in a lactose rich medium, 20% of its cells will quickly mutate into a Lac+

form, so that they become able to process the lactose. The mutations become part of the bacteria’s genetic code, and are inherited by following generations.<sup>(12)</sup> In adaptive mutation, it’s almost as if the mutations aren’t random at all, but are somehow being ‘directed’ to react to the situation in the appropriate way, exactly when they are required.

One suggested explanation for adaptive mutation comes from the relatively new field of ‘quantum biology.’ Quantum biology attempts to explain mysterious biological phenomena in terms of principles of quantum physics such as superposition and entanglement. Applied to the example above, a quantum explanation would be that the genome of the bacteria exists in a state of ‘superposition.’ That is, it doesn’t exist in any one particular state, but in a myriad of possible states, some of them mutated and others non-mutated. But when certain circumstances arise, the genome ‘collapses’ into the appropriate mutated state.<sup>(13)</sup>

However, adaptive mutation could simply be an expression of the same creativity that allows life forms to move towards greater complexity and consciousness (and that allows living systems to generate new

levels of order and complexity). This creativity gives life forms the *flexibility* to respond to challenges. In the above example, bacteria clearly aren’t developing into a more complex and conscious form, but the same creative principle may be at work. There is a *dynamic* quality in living beings which enables them to develop in the appropriate way.

This also suggests that a panspiritist view of evolution doesn’t have to dispense with genetic mutations as an important factor. Mutations may still be the main *overt* way in which change occurs. The only difference is that, according to this view, beneficial mutations don’t happen (or at least don’t always happen) randomly. (The Intelligent Design theorist Michael Behe has put forward a similar concept of non-random mutation.) Mutations may be generated by the impetus of evolution, as a means of creating change. According to this theory, mutations occur as a part of the unfolding of the process of evolution, generating inevitable changes that lead to more complex and conscious forms.

### An alternative view of evolution

I believe we are at an important point in the history of our culture, where the materialist metaphysical

paradigm is beginning to recede, and post-materialist perspectives are beginning to flourish. The widespread questioning of - and the accumulating evidence against - Neo-Darwinism is a welcome sign of this shift. It is becoming more and more evident that (as with materialism itself) the Neo-Darwinian model of evolution is more akin to dogma than an evidence-based theory. As the eminent philosopher Thomas Nagel has written, Neo-Darwinism is a belief system, little more than 'a schema for explanation, supported by some examples.'<sup>(14)</sup>

One of the reasons why Neo-Darwinians are so reluctant to acknowledge the weaknesses of the theory is because they think it would open the door to creationism. But as we have seen, there is an alternative to both Neo-Darwinism and creationism. The spiritual view of evolution suggests that there is an impulse in *consciousness itself* to express itself more intensely within life forms, and to generate more complex forms of life in order to support greater intensities of awareness. There is no reason to try to explain evolution in terms of random mutations because

evolution is not a blind and random process. Mutations do not just occur randomly, but are caused by this dynamic creative tendency. This tendency may also explain what systems theorists identify as 'emergence' - the spontaneous arising of new levels of order and complexity in systems.

Evolution could be compared to the development of a human being from embryo to adulthood. Here development moves naturally and inevitably from the simplest state (when two cells which meet and merge) through levels of increasingly complexity, as cells split off and organise and start to form different parts of the body. The process unfolds along predetermined lines, following a kind of blueprint or mould which is specific to our species. I think the process of evolution is similar to this, but on a massively extended time frame, unfolding over hundreds of millions of years. Perhaps the only difference is that the direction of evolution may not be as fixed as the development of individuals - perhaps there is a simple *tendency* to move towards greater complexity and awareness which is broadly directional,

without being completely predetermined.

So in my view, to believe that the process of evolution is accidental is as illogical as interpreting human development from embryo to adulthood as a random process. The process of *ontogenetic* (or individual) development closely parallels the course of evolution itself over the past four billions years, moving from simple cellular structures to increasing complexity and specialisation - and this parallel includes the probability that both types of development are not random, but directional.

It will be interesting to see where this process takes us - and other living beings - in the future.

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# The Spiritual Side of Sports

*Rupert Sheldrake*

*This article is adapted from Rupert's new book **Ways to Go Beyond**. He will be speaking about it at **Beyond the Brain in November**.*

Most people do not think of sports as spiritual practices; sports seem supremely secular. Yet in modern secular societies, sports may be one of the most common ways in which people experience the self-transcendence that can come through being in the present. A meditator may find his mind wandering and only occasionally come back into a full sense of presence, but a football player in an important match is completely in the present, or else he is out of the game. Someone skiing downhill at sixty miles an hour has to be completely focussed, as does a surfer on a gigantic wave, or a free climber on a rock face with no ropes, or a hunter stalking a deer when the slightest noise or visible movement might cause the quarry to run away.

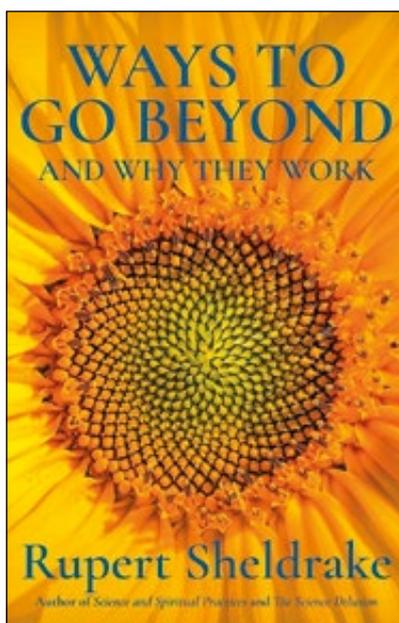
The philosopher David Papineau, himself a keen sportsman, has thought more about sports than most people, and summarized his conclusions with admirable clarity: the value of sporting achievement lies in 'the enjoyment of sheer physical skill'.<sup>1</sup> Humans hone their physical abilities and take delight in exercising them. This definition explains why many sports are not games, like skiing or shooting pheasants, while some sporting skills exist only within games, like topspin tennis backhands. Other sports are based on skills that already occur in everyday life, like running, jumping, rowing, shooting, lifting and throwing. Papineau concludes, 'These ordinary activities turn into sports whenever people start performing them for their own sake, and strive for excellence in their

exercise.'<sup>2</sup> And a wide range of other physical activities that are not part of everyday life can also turn into sports, like windsurfing and skydiving.

What about the role of competition? Some sports, especially spectator sports, are competitions, like wrestling and cricket. Papineau points out that competition plays an important part in sport because it enables people to measure themselves against others: 'To exercise a skill is to want to do something *well*, indeed as well as is feasible.'<sup>3</sup> But some sports are not directly competitive. Mountaineers may seek to scale a particularly difficult peak, but their achievement is not primarily in competition with other people, but a challenge to themselves.

## The pioneering work of Michael Murphy

Michael Murphy, who co-founded the Esalen Institute in California in 1962 and was a pioneer of the human potential movement, was among the first to point out that sports are one of the most common ways in the modern world in which people experience altered states of consciousness, and even mystical experiences. His novel *Golf in the Kingdom*, first published in 1972, was an international bestseller, and tells the story of a young man, Michael Murphy himself, who stopped in Scotland on the way from California to India. His life was changed when he played a round of golf with a mystical professional golfer called Shivas Irons, who explained:



The game requires us to join ourselves to the weather, to know the subtle energies that change each day upon the links and the subtle feelin's of those around us. It rewards us when we bring them all together, our bodies and our minds, our feelin's and our fantasies - rewards us when we do them and treats us badly when we don't. The game is a mighty teacher... The grace that comes from such a discipline, the extra feel in the hands, the extra strength and knowin', all those special powers ye've felt from time to time, begin to enter our lives.<sup>4</sup>

In real life, Murphy spent a year and a half at the ashram of Sri Aurobindo in Pondicherry, India, and was much influenced by Aurobindo's evolutionary philosophy, which emphasised not only the spiritual evolution of humanity, but also its physical evolution as part of what he called Integral Yoga. Murphy, himself a keen golfer and Marathon runner, came to see that sports are 'the yoga of the West', and his vision of human potential included the realization of new potentials through sports:

In no other field of human activity is there such a proliferation of specialized physiques. For as athletics have developed in the modern world, they have required an ever greater variety of skills and body structure to support them – whether it is the muscular frame of a 270-pound defensive tackle [in American football], the elastic joints of a gymnast, the prodigious cardiopulmonary system of a marathon runner, or the steady hand of an archer. Never before have there been so many experiments with the body's limits.<sup>5</sup>

In his book *The Psychic Side of Sports*, co-authored with Rhea White and published in 1978, he documented many experiences of sportspeople and athletes that suggested the existence of telepathy between team members, out-of-the-body experiences, extraordinary feats of strength, and altered states of consciousness. He showed that sports and religion have many features in common:

In most religious teachings it is said that no lasting realization can be achieved without many years of steady practice....

Many athletes make that kind of commitment to their sport, at least for a part of their lives. The spiritually evocative elements we have discussed – long-term commitment, sustained concentration, creativity, self-integration, being in sacred times and place, and stretching to the limits of one's capacity – are common to both sport and religious discipline. Those similarities between the two kinds of activity often lead to the same kinds of experience.<sup>6</sup>

Murphy's magnum opus is *The Future of the Body: Explorations into the Further Evolution of Human Nature*,<sup>7</sup> published in 1992, in which he brings together evidence from more than 3,000 studies on exceptional human abilities in body, mind and spirit. Unlike most academic and scientific studies of human evolution that confine their attention to intellectual abilities and the developments of technology, Murphy includes psychic, spiritual and bodily abilities, giving a broad overview of human evolutionary potentials.

Murphy has influenced the thinking of many people within the sports world, and has helped inspire a new organization called the Sports, Energy and Consciousness Group that brings together star football players, extreme skiers, tennis players, rowers, coaches, scientists, psychologists, meditators and athletes. The mission of this group is 'to accelerate the global evolution of human consciousness by providing transformational practices that translate the wisdom of sport's 'Ideal Performance State' into practical training methods that include, energetics, awakened states of consciousness, and the unification of body, mind, and spirit.'<sup>8</sup>

Eastern martial arts, which developed principally in India, China, Korea and Japan, are more explicitly related to spiritual practices and traditions than in most other cultures. In particular, they explicitly recognise the importance of the flow of energy, which in India is called *prana* and in China and Japan *chi* or *qi* or *ki*. By contrast many western athletes and sportspeople are taught by their coaches and trainers to think of their bodies as machines, following the standard scientific orthodoxy. Dave

Meggyesy, looking back on his time as a professional football player, reflected, 'I knew my body more thoroughly than most men are ever able to, but I had used it and thought of it as a machine, a thing that had to be well-oiled, well-fed, and well-taken-care-of, to do a specific job.'<sup>9</sup>

From the 1970s onwards, another line of research converged with Murphy's approach: the study of positive psychology.

### In the flow

Research by positive psychologists has shown that people's best moments are not when they are being passive, receptive or relaxed. Their most positive experiences usually occur when their body or mind is stretched to the limits in a voluntary effort to accomplish something difficult and worthwhile, summed up in the word 'flow'. To start with, these research studies looked at artists, athletes, musicians, chess masters and surgeons, because these were people who seemed to spend their time in activities that they enjoyed. Their most optimal experiences depended on a sense of mastery, or of participation, in a state of flow.<sup>10</sup> People enter flow states through many different kinds of activity, including playing music and dancing, but sports are one of the most common ways in which people find themselves in the flow. Three conditions have to be met to achieve the flow state or 'being in the zone':

1. The activity should have a clear set of goals, giving the task structure and direction.
2. The task must have clear, immediate feedback so that the performance can be adjusted to maintain the flow state.
3. There should be a good balance between the perceived challenges of the task at hand and the person's perceived skills. They must have a confidence in their ability to complete the task.<sup>11</sup>

Factors that inhibit the state of flow include apathy and boredom, which occur when the challenges are too low for a person's skill, and anxiety, which occurs when the challenges are too high.

Many traditional spiritual practices emphasise a need to be in the present, which can be achieved through meditation, for example,

or through singing, chanting, and dancing. But sports provide an extraordinarily effective way of being fully present. One of their great advantages is that they provide clear goals and feedback. A tennis player knows what she has to do: to return the ball into the opponent's court and every time she hits the ball she knows whether she had done well or not. A football team has a literally clear goal, namely to score more goals than the opposing team. In some other areas of human activity, like artistic creativity, the goals are less well defined or have to be defined by the artists themselves; the goals in sports are much clearer.

Sports also require a high degree of concentration. An avid rock climber, whose day job was as a professor of physics, said, 'It is as if my memory input has been cut off. All I can remember is the last 30 seconds, and all I can think ahead is the next five minutes.'<sup>12</sup> The racing driver Jochen Rindt said that when driving, 'You completely ignore everything and just concentrate. You forget about the whole world and you just....are part of the car and the track.... There is nothing like it.'<sup>13</sup> A professional swimmer said, 'When I've been happiest with my performance, I've sort of felt one with the water and my stroke and everything.'<sup>14</sup> The professional golfer Tony Jacklin said, 'When I'm in this state, this cocoon of concentration, I'm living fully in the present, not moving out of it. I'm aware of every inch of my swing.'<sup>15</sup>

Participants in many other sports give similar descriptions of states of flow using a range of words to describe this state, including 'in the zone', 'focussed', 'everything clicks', 'in the groove', 'tuned in', 'switched on', 'going really well', 'floating', and 'super alive'.<sup>16</sup>

In team games, players sometimes find themselves working together in ways that seem to go beyond luck, or coincidence. or picking up subtle sensory clues. They seem to be telepathic with each other. Michael Novak, a perceptive writer about sports, expressed it as follows:

When a collection of individuals first jells as a team, truly begins to react as a five-headed or eleven-headed unit rather than as an aggregate of five or eleven individuals, you can almost hear the click: a new kind of reality comes into existence at a new level of human development.... For those who have participated in a team that has known the click of communality, the experience is unforgettable, like that of having attained, for a while at least, a higher level of existence.<sup>17</sup>

Bonding between members of a group is of enormous importance in the armed forces, and military training programs are designed to inculcate team spirit. Real combat experience is even more effective.

The principles of group flow apply not only to teams themselves but also to their supporters or fans, who are often linked together by their shared emotions, as well as by chants, songs and collective movements like Mexican Waves. Players are often affected very positively by being bathed in an atmosphere of support. The sportscaster Jerry Remy noted that in home matches of the Boston Red Sox baseball team, the intensity of the fans' support 'not only boosts the Sox, but also intimidates the other players.'<sup>18</sup>

### The evolution of human potential through sport

As Michael Murphy pointed out, sports are the principal way in which human physical potentials are evolving in the modern world. They are doing so in several ways. First, through the continual breaking of records and improvements of performances. In 1954 Roger Bannister first ran a mile in under four minutes, and this is now a standard achievement for professional runners; the record is now 3 minutes 43 seconds. Many other sports records are continually broken both in athletic events and also in sports that rely on technologies, like motorcycle racing and skydiving.

Second, sports are evolving through a natural selection of techniques in mixed martial arts (MMA), in which practitioners of different martial arts are pitted against each other. Such contests occur under the aegis of the

Ultimate Fighting Championship or UFC, and in principle allow for the natural selection of different fighting methods and the evolution of new combinations of martial arts techniques. At the first Ultimate Fighting Championship in 1993 there were virtually no rules, just a prohibition against biting and eye gouging, and there were also no referee stoppages. As these fights proceeded there were scenes of increasing brutality, and in the eighth UFC the winner trapped his hapless opponent on the ground and proceeded to smash in his face with eight devastating elbow blows.<sup>19</sup> By 1996 there were widespread protests against MMA, which the US Senator John McCain described as 'human cock fighting'. In order to prevent a ban, new rules were introduced to make the sport more acceptable. So far, the result of this evolutionary process has been the predominance of boxing, kickboxing, wrestling, judo and jujitsu. These are the fighting techniques that have proved most effective when confronted with other martial arts.<sup>20</sup>

UFC has also evolved to become heavily commercial, with armies of trainers, managers, and sports psychologists.

Third, entirely new skills and experiences are continually being developed, like skydiving, snowboarding, windsurfing, hang-gliding and in-line skating. Each of these sports involves not only the evolution of skills and abilities, but also of the technologies that support them, with ever-more sophisticated designs and construction materials. Humans can now do things that their ancestors could only have dreamed of, like hang-gliding or sky-diving, plummeting through the air from a height of 12,000 feet. The range of human experiences is increasing dramatically, and most of this evolution is not impelled by utilitarian concerns. Nor is it taking place primarily for military reasons, or to make money. It is an expression of an exploratory urge, a creative impulse. Some of the competitive aspects of this sport may well be driven by motives that Charles Darwin would have recognised in his theory of sexual selection, namely competition between males for females. Triumphant figures

in these sports may well be more attractive to potential mates. But sexual competition alone cannot explain this gratuitous evolutionary creativity.

Finally, a greater understanding of the psychology of sports is itself helping to drive the evolutionary process. In highly competitive events, very small improvements in performance can give people an edge over their competitors, and some sports training programmes now include meditation, 'inner-game' visualization techniques and the deliberate cultivation of flow experiences because these can lead to the enhancement of performance.<sup>21</sup>

### The flow of the spirit

How can we understand the spiritual experiences that many people have when engaged in sports? Part of this effect depends on being in the present, rather than being taken out of it by worries, anxieties, regrets about the past and other kinds of rumination. Meditation can help in the achievement of a state of presence, but sports often do so quicker and more effectively. But they do so in a different way.

The spiritual experiences that occur during meditation are often described as being beyond time and space. They are not so much an awareness of change as an awareness of a timeless ground of being. By contrast, in sports people experience being in the flow, literally in a process of movement. This corresponds to a different aspect of spiritual reality. Some spiritual traditions, most notably the Christian and the Hindu, have three-fold models of spiritual reality: a ground of being; a principle of form; and a principle of energy and bliss. One Hindu version of this trinity is called *sat-chit-ananda*, being-consciousness-bliss. In the Christian Holy Trinity, the Father is the ground of being; the Son or *Logos* the source of form; and the Holy Spirit the principle of flow and energy. Whereas meditation can lead to an experience of connection with the ground of being, or *sat*, sports are more related to experiences of flow or spirit, or *ananda*, which are inherently blissful.

What about non-human animals? Do hawks soaring in the sky experience the thrill of speed? Do dolphins leaping through the bow

waves of boats experience joy in their freedom of movement? Do predators running at high speed while chasing their prey animals experience a sense of presence in the flow? Are they 'in the zone'?

I think that the answer to these questions is probably 'yes'. Non-human animals may well have experiences of being in the flow. In fact some animals may have them more often and more intensely than humans because they are not subject to the same distractions of thought, worry and egotism. And many animals seem to play for the joy of playing.<sup>22</sup>

Some people may disagree, and seek to confine spiritual experiences to human beings. But if a more-than-human consciousness underlies not just human nature but all nature, then spiritual experiences may be very widespread in the natural world. Many species of animals may be able to participate in the joy or bliss of the spiritual realm. Humans may differ from many other species of animals in their ability *not* to be in the flow, by being preoccupied with worries, ruminations, and self-centred fantasies. As practitioners of martial arts realised long ago, the physical practices of sport can help humans achieve a unity of mind and body that comes naturally to non-human animals, but from which we are often alienated.

Yet only humans can integrate these experiences with conceptions of nature, mind and reality.

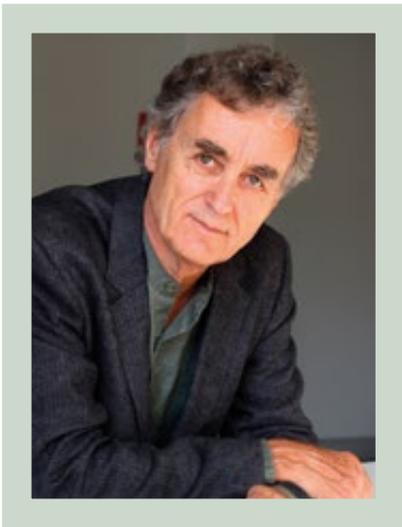
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*Dr Rupert Sheldrake is a biologist and author of more than 90 technical papers and nine books, including *Ways to Go Beyond, And Why They Work* (2019), from which this article is taken. As a Fellow of Clare College, Cambridge, he was Director of Studies in Cell Biology, and was also a Research Fellow of the Royal Society. From 2005-2010, he was Director of the Perrott-Warrick Project for the study of unexplained human and animal abilities, funded from Trinity College, Cambridge. He is currently a Fellow of the Institute of Noetic Sciences in Petaluma, California and of Schumacher College in Dartington, Devon. He lives in London and is married to Jill Purce, with whom he has two sons. His web site is [www.sheldrake.org](http://www.sheldrake.org). Rupert will be speaking on this topic at *are Beyond the Brain conference* this year.*

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# The Scientific Genius of Leonardo da Vinci

*Fritjof Capra*

*As readers will know, this year is the 500<sup>th</sup> anniversary of the death of Leonardo. Fritjof has made a deep study of his work resulting in two books, and he is curating an exhibition in Florence. He celebrates his 80<sup>th</sup> birthday this year.*

*“Leggimi lettore se ti diletta di me,  
perché son rarissime volte  
rinato al mondo.”*

*“Read me, O reader, if in  
my words you find delight,  
for rarely in the world will  
one such as I be born  
again.”*

Leonardo da Vinci

Leonardo da Vinci, the great genius of the Renaissance, has been the subject of hundreds of scholarly and popular books. However, 500 years after his death there are still surprisingly few books about Leonardo's science, even though he left voluminous notebooks full of detailed descriptions of his experiments, magnificent drawings, and long analyses of his findings.

I have been fascinated by Leonardo's genius for several decades and spent ten years studying his scientific writings in facsimile editions of his famous Notebooks. I have written three books about Leonardo da Vinci. *The Science of Leonardo* (2007) is an introduction to his life and personality, his scientific method, and his unique synthesis of art and science.

*La botanica di Leonardo* (2009), published only in Italian, is a study of Leonardo's botany, which I use to illustrate the main characteristics of his scientific thought. My study of Leonardo's botany will be the basis of an exhibition in Florence at the old monastery of Santa Maria Novella. I have been invited to act as scientific curator of the exhibition, which will run from mid-September to mid-December.

In my third book, *Learning from Leonardo* (2013) I present an

in-depth discussion of the main branches of his scientific work from the perspective of twenty-first-century science — his fluid dynamics, geology, botany, mechanics, science of flight, and anatomy. Most of his astonishing discoveries and achievements in these fields are virtually unknown to the general public.

## **A systemic thinker**

Leonardo da Vinci was what we would call today a systemic thinker. Understanding a phenomenon, for him, meant connecting it with other phenomena through a similarity of patterns. He usually worked on several projects in parallel, and when his understanding advanced in one area he would revise his ideas in related areas accordingly.

Thus, in order to appreciate the full extent of his genius, one needs to be aware of the evolution of his thinking in several parallel but interconnected disciplines. This has been my approach to absorbing and understanding Leonardo's scientific thought. Since I have contributed to the systemic understanding of life that has emerged in science in the last thirty years, and have written several books about it, I found it very natural to analyse and interpret Leonardo's science from that perspective. Indeed, I believe

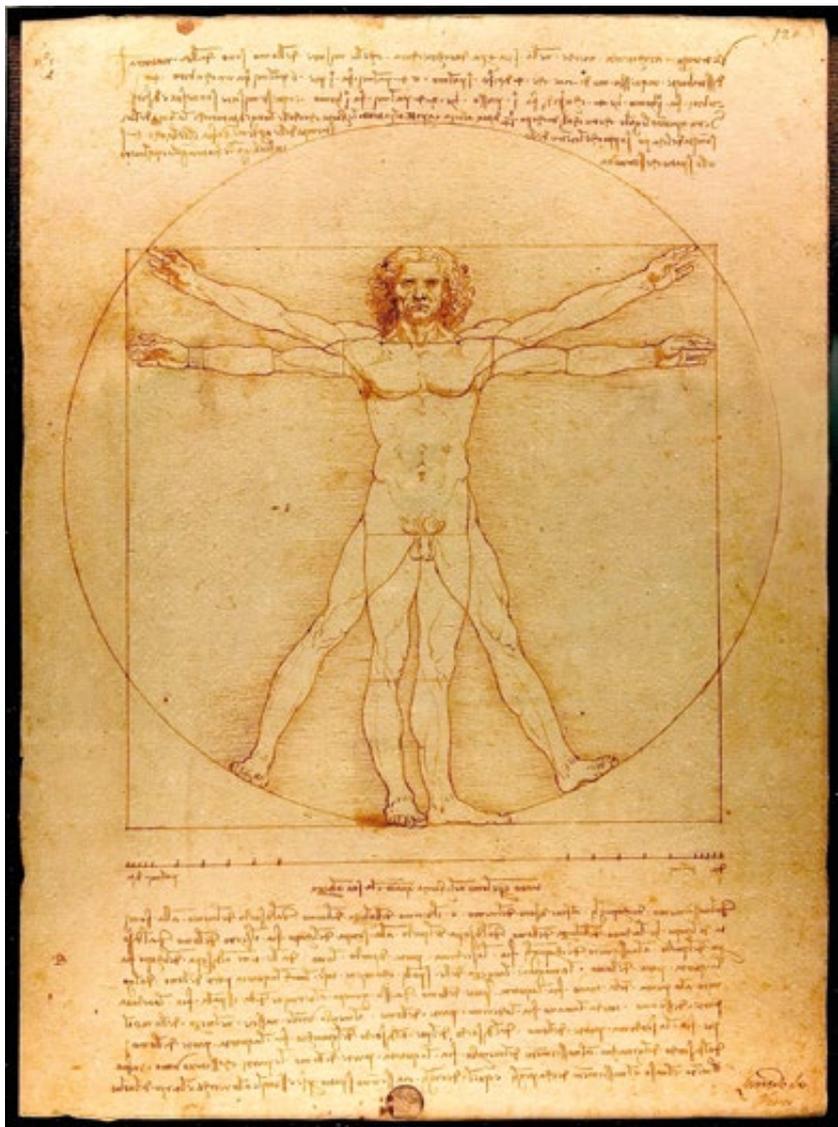
that the ever-present emphasis on relationships, patterns, qualities, and transformations in his writings, drawings, and paintings — the telltale signs of systemic thinking — were what initially attracted me to his work and have kept me fascinated for so many years.

### The nature of life

What emerged from my explorations of all the branches of Leonardo's science, was the realisation that, at the most fundamental level, Leonardo always sought to understand the nature of life. My main thesis is that the science of Leonardo da Vinci is a science of living forms, radically different from the mechanistic science of Galileo, Descartes, and Newton, that emerged 200 years later.

Leonardo's art served this persistent quest for life's inner secrets. In order to paint nature's living forms, he felt that he needed a scientific understanding of their intrinsic nature and underlying principles; and in order to analyse the results of his observations, he needed his artistic ability to depict them. I believe that this is the very essence of his synthesis of science and art.

Leonardo thought of himself not only as an artist and natural philosopher (as scientists were called in his time), but also as an inventor. In his view, an inventor was someone who created an artifact or work of art by assembling various elements into a new configuration that did not appear in nature. This definition comes very close to our modern notion of a designer, which did not exist in the Renaissance. Indeed, Leonardo's synthesis is a synthesis of art, science, and design; and in all three dimensions he uses living nature as his mentor and model. As I delved into the Notebooks, I discovered not only Leonardo the systemic thinker but also, to my great surprise, Leonardo the ecologist and ecodesigner. And this is why his synthesis is not only intellectually fascinating but also extremely relevant to our time.



### Leonardo's legacy

The persistent endeavour to put life at the very centre of his art, science, and design, and the recognition that all natural phenomena are fundamentally interconnected and interdependent, are important lessons we can learn from Leonardo today.

As we recognise that our sciences and technologies have become increasingly narrow in their focus, unable to understand our multi-faceted problems from a multidisciplinary perspective, we urgently need a science and technology that honour and respect the unity of all life, recognise the fundamental interdependence of all natural phenomena, and reconnect us with the living Earth. This is exactly the kind of synthesis Leonardo da Vinci outlined and practiced 500 years ago.

### Leonardo's conceptual framework

In previous decades, scholars of Leonardo's Notebooks tended to see them as disorganised and chaotic. My own sense, however, is that in Leonardo's mind, his science was not disorganised at all. In his manuscripts, we find numerous reminders to himself as to how he would eventually integrate the entire body of his research into a coherent whole. I have tried to follow these clues, arranging the material of my book *Learning from Leonardo* in a framework that I feel is consistent with Leonardo's thought. In fact, several of my chapter titles — "The Movements of Water," "The Elements of Mechanics," "The Human Figure" — are the ones Leonardo himself intended to use.

A fundamental idea underlying Leonardo's scientific writings is

that nature as a whole is alive, and that the patterns and processes in the macrocosm of the Earth are similar to those in the microcosm of the human body. I have divided the contents of *Learning from Leonardo* into these two basic categories: nature's forms and transformations in the macrocosm and in the microcosm.

In the macrocosm, the main themes of Leonardo's science are the movements of water, the geological forms and transformations of the living Earth, and the botanical diversity and growth patterns of plants. In the microcosm, his main focus was on the human body — its beauty and proportions, the mechanics of its movements, and how it compared to other animal bodies in motion. In this essay, I can only review some of the highlights of Leonardo's achievements in all these fields.

### The movements of water

Leonardo was fascinated by water in all its manifestations. He recognised its fundamental role as life's medium and vital fluid, as the matrix of all organic forms:

It is the expansion and humour of all living bodies.  
Without it nothing retains its original form.  
(Ms. C, folio 26v)

This view of the essential role of water in biological life is fully borne out by modern science. Today we know not only that all living organisms need water for transporting nutrients to their tissues, but also that life on Earth began in water, and that for billions of years, all the cells that compose living organisms have continued to flourish and evolve in watery environments. So, Leonardo was completely correct in viewing water as the carrier and matrix of life.

Throughout his life, he studied its movements and flows, drew and analysed its waves and vortices. He experimented not only with water but also investigated the flows of blood, wine, oil, and even those of grains like millet. He was the first to formulate the basic principles of

flow, and he recognised that they are the same for all fluids. These observations establish Leonardo da Vinci as a pioneer in the discipline known today as fluid dynamics.

### The living Earth

Leonardo saw water as the chief agent in the formation of the Earth's surface. This awareness of the continual interaction of water and rocks impelled him to undertake extensive studies in geology. His geological observations are stunning not only by their great accuracy, but also because they led him to formulate general principles that were rediscovered only centuries later and are still used by geologists today.

Leonardo was the first to postulate that the forms of the Earth are the result of slow processes taking place over long epochs of what we now call geological time. With this view, he was centuries ahead of his time. Geologists became aware of the great duration of geological time only in the early 19<sup>th</sup> century with the work of Charles Lyell, who is often considered the father of modern geology. Well, Leonardo was there 300 years earlier!

### The growth of plants

Leonardo's Notebooks contain numerous drawings of trees and flowering plants, many of them masterpieces of detailed botanical imagery. These drawings were at first made as studies for paintings, but soon turned into genuine scientific inquiries about the patterns of metabolism and growth that underlie all botanical forms. Leonardo paid special attention to the nourishment of plants by sunlight and water, and to the transport of the "vital sap" through the plants' tissues.

He was the first to recognise that the age of a tree corresponds to the number of rings in the cross-section of its trunk, and — even more remarkably — that the width of a growth ring is an indication of the climate during the corresponding year. As in so many other fields, Leonardo carried his botanical thinking far beyond that of his peers, establishing himself as the first great theorist in botany.

### The human body in motion

Whenever Leonardo explored the forms of nature in the macrocosm, he also looked for similarities of patterns and processes in the human body. In order to study the body's organic forms, he dissected numerous corpses of humans and animals, and examined their bones, joints, muscles, and nerves, drawing them with an accuracy and clarity never seen before. He demonstrated in countless elaborate and stunning drawings, based on his dissections, how nerves, muscles, tendons and bones work together to move the body.

Unlike Descartes, Leonardo never thought of the body as a machine, even though he was a brilliant engineer who designed countless machines and mechanical devices. He clearly understood that the means of the body's movements were mechanical, but that their origin lay in the soul, the nature of which was not mechanical but spiritual (by which he meant "immaterial"). I have found that Leonardo's concept of the soul, in fact, comes very close to what we call "cognition" today.

### Elements of mechanics

To understand in detail how nature's "mechanical instruments" work together to move the body, Leonardo immersed himself in prolonged studies of problems involving weights, forces, and movements — the branches of mechanics known today as statics, dynamics, and kinematics. While he studied the elementary principles of mechanics in relation to the movements of the human body, he also applied them to the design of numerous new machines, and as his fascination with the science of mechanics grew, he explored ever more complex topics, anticipating abstract principles of mechanics that were centuries ahead of his time.

These include his understanding of the relativity of motion, his discovery of the principle now known as Newton's third law of motion (which states that for every action, there is an equal and opposite reaction), his intuitive

grasp of the conservation of energy, and — perhaps most remarkably — his anticipation of the law of energy dissipation, now known as the second law of thermodynamics.

### The science of flight

From the texts that accompany Leonardo's anatomical drawings we know that he considered the human body as an animal body, as biologists do today; and thus it is not surprising that he compared human movements with the movements of various animals. What fascinated him more than any other animal movement was the flight of birds. It was the inspiration for one of the great passions in his life — the dream of flying.

The dream of flying like a bird is as old as humanity itself. But nobody pursued it with more intensity, perseverance, and commitment to meticulous research than Leonardo da Vinci. His science of flight involved numerous disciplines — from aerodynamics to human anatomy, the anatomy of birds, and mechanical engineering.

In my chapter on Leonardo's science of flight, I analyse his drawings and writings on this subject in some detail, and I come to the conclusion that he had a clear understanding of the origin of aerodynamic lift, that he fully understood the essential features of both soaring and flapping flight, and that he was the first to recognise the principle of the wind tunnel — that a body moving through stationary air is equivalent to air flowing over a stationary body. This establishes Leonardo da Vinci as one of the great pioneers of aerodynamics.

In his numerous designs of flying machines, Leonardo attempted to imitate the complex flapping and gliding movements of birds. Many of these designs were based on sound aerodynamic principles, and it was only the weight of the materials available in the Renaissance that prevented him from building viable models.

### The mystery of life

As I have mentioned, Leonardo's forms are living forms, continually shaped and transformed by

underlying processes. Throughout his life he studied, drew, and painted the rocks and sediments of the Earth, shaped by water; the growth of plants, shaped by their metabolism; and the anatomy of the body in motion.

His ultimate goal — in his science as well as in his art — was always to understand the nature of life. This persistent quest culminated in the anatomical studies he carried out when he was over sixty, especially his investigations of the heart — the bodily organ that has served as the foremost symbol of human existence and emotional life throughout the ages. He not only understood and pictured the heart in ways no one had before him; he also observed subtleties in its actions that would elude medical researchers for centuries.

During the last decade of his life, Leonardo became intensely interested in another aspect of the mystery of life — its origin in the processes of reproduction and embryonic development. In his embryological studies, he described the life processes of the fetus in the womb, including its nourishment through the umbilical cord, in astonishing detail.

More than that, Leonardo's embryological drawings are graceful and touching revelations of the mysteries surrounding the origins of life. They epitomise the artist's great care, sensitivity, and tremendous respect for life. To me, they exude a tenderness that is deeply moving.

Leonardo was fascinated by the mystery of the origin of life not only in his science but also in his art. His most famous painting, the *Mona Lisa*, was originally a portrait of a young Florentine lady, Lisa del Giocondo. It was commissioned by her wealthy husband, but for some unknown reason the painting was never delivered. Leonardo kept it in his possession until he died and over the years transformed it into his personal meditation on the origin of life.

The painting is different from his other portraits; indeed, it is different from *all* other portraits. The striking difference is the strong contrast between the mellow features of the figure and the wild austerity of the archaic landscape in the background. The forms of the Earth are portrayed here in ceaseless movement and transformation, as the primordial waters cut through the rocks, carving out valleys and depositing masses of gravel and sand which, eventually, will become fertile soil. What we see here is the birth of the living Earth out of the waters of the primeval oceans.

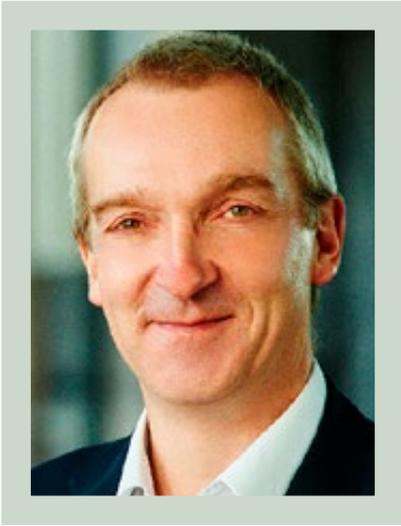
We know that the *Gioconda*, as she is called in Italy, was a young mother; and she may even have been pregnant when she sat for the portrait. It is evident that the central theme of Leonardo's celebrated masterpiece is the procreative power of life, both in the female body and in the body of the living Earth.

Leonardo knew very well that, ultimately, the nature and origin of life would remain a mystery to him, no matter how brilliant his scientific mind. "Nature is full of infinite causes that have never occurred in experience," he wrote in his late forties (Ms. I, folio 18r), and as he got older, his sense of mystery deepened. Nearly all the figures in his last paintings have that smile that expresses the ineffable, often combined with a pointing finger. "Mystery to Leonardo," wrote the famous art historian Kenneth Clark, "was a shadow, a smile, and a finger pointing into darkness."

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*Fritjof Capra, Ph.D., physicist and systems theorist, is the author of several international bestsellers, including The Tao of Physics (1975), The Web of Life (1996), The Science of Leonardo (2007), and Learning from Leonardo (2013). He is scientific curator of the forthcoming exhibition "Leonardo's Botany: A New Science Between Art and Nature" in Florence (Museo Santa Maria Novella, 13 September to 15 December).*

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# Creativity, Imagination and Being in the Image of God

*Tom McLeish*

## Introduction

One of my great joys is the opportunity to visit sixth-form classes to take a general studies session on the history and philosophy of science. I am often impressed by the students' critical abilities and intelligence, but also wondered why at least some of the really bright ones choose not to study science at this level. Far too often I get answers along the lines of, "I didn't see any role for my own creativity or imagination." At this point I know that something has gone terribly wrong in the message young people are receiving about science – that it is simply a body of 'facts' to learn, a set of known questions with right 'answers'. Yet working scientists know that without imagination there can be no progress in science at all, and that formulating the right *questions*, not answers, is the central and critical step in our inspirational calling to 're-imagine the universe'.

What seems to have happened is that what I would now call the 'second half of the scientific method' – that is the way that we test our ideas when we have had them, has dominated all discussion of the way science is done, so that

the first, and more important half has been effectively silenced. There may be no formal 'method' for having the ideas or formulating the hypothesis in the first place, but that does not diminish the essential importance of ideation.

I determined to explore where the threads that bind science to the creative imagination had become unraveled. This led to a long journey into its history, philosophy and theology, but I decided to begin simply by asking colleagues to tell me the story behind their most cherished idea or discovery. I didn't want the polished results and the covered tracks, but the unvarnished truth of how science is actually done, from biophysics to materials science to astronomy. They gave fascinating accounts of curiosity, initial trials, chance encounters repeated frustrations and, in fortunate cases, illuminations that often seemed to come effortlessly, as 'gifts', and during moments of rest or mental relaxation.

## Imagination in science

I felt enabled to reflect more deeply on my own experiences of seeking, and sometimes finding, scientific ideas in the imagination—the macromolecular picture that

began as a dance in my mind's eye; the long-sought structural geometry of a two-phase fluid that came in a dream; the sudden and simultaneous realisation of what a polymer network was doing as a colleague and I glanced at each other and shared the same thought... I also asked the same questions, as a sort of 'control' of artists, composers, poets and writers. Would their stories of creativity differ markedly from those of the scientists? The first remarkable (for me) discovery from those conversations was that, just as the scientists tended to be shy about the inspiration phase of their work, so the artists were a little coy at first about just how much experiment, re-working, encounter with material constraints, they themselves experienced in their own work. I have often heard scientists say of, say, novelists, 'it's all very easy for you – you can make your characters do just as you please; we have to get things right!'. Nothing could be further from the truth. It turns out that thinking of creativity as the outward and explosive force of the imagination being met and formed into something true and beautiful by the world's constraints, is just as true a generalisation of science as of art.

A new book, *The Poetry and Music of Science*, began to take shape. I thought at first that it would begin with an account of scientific creation, followed by material from conversations with the artists, composers and writers, motivating a final discussion of the similarities and differences. Yet this structure proved impossible to impose. Dividing scientific and artistic creativity along the 'Two Cultures' lines in this way just wasn't faithful to the experiences I was hearing about, nor to the rare but occasional accounts of creativity in science and the arts, such as the physiologist William Beveridge's 1950 book *The Art of Scientific Investigation*, which deliberately echoes novelist Henry James' earlier *The Art of the Novel*. Instead, science and art seem to share three imaginative modes, which I have called the visual, the textual and the abstract.

### Three imaginative modes

The first is the realm of visual art, and of visual conception in science from cosmology to biophysics. Visual thinking is so powerful that it endows us with our normal metaphor for understanding itself – 'I see.' Plato thought that vision itself was an 'extromissive' process – that visual rays *from* our eyes alight upon objects and allow us to perceive them. I have come to hesitate before criticising such old and 'unscientific' ideas hastily: modern neuroscience teaches us just how much we create what we think we see. That is after all what 'Bayesian inference' means. Seeing is indeed a creative process, and arguably science itself can be defined as an extension of our visual perception. Theoretical science creates internal vision in our 'mind's eye' into the smallest biological cells or out into the processes at the heart of distant galaxies; experiment enhances our vision directly with microscopes and telescopes. There are close parallels between scientific imagination and expressionist art, where the viewer's plane of focus is perpetually redirected between the two 'planes' of the canvas and the world behind it. And much mathematical conception is essential visual.

The second mode of imagination employs words and text, rather than image. The story here begins with the coincident but not coincidental origin of the experimental method and the literary novel. We find Daniel Defoe writing the 'experiment' of *Robinson Crusoe* in the same mode as Robert Boyle's

new style of scientific writing, and even claiming that the novel was an authentic record of diarized events. Margaret Cavendish, the great natural philosopher of the late 17<sup>th</sup> century, chooses a novelistic 'science fiction' setting – in her *Blazing World* – to mount her most serious critique of the new 'experimental philosophy'. The mutual entanglement of imaginative writing and science continues from Newton and Milton, via Goethe and Humboldt, to Coleridge and Davy. Then in Wordsworth we find an almost prophetic glimpse into two possible futures, one in which science grows to inspire the great poetry of the future, and another in which its structures, powers and beauties fail to achieve a universal cognizance, and so retreats into an exclusive world of the technical and abstruse. Sadly, the latter future seems to be the one we have inherited, for now at least.

The third imaginative domain is the miracle of the wordless, picture-less worlds of music and mathematics. At the point at which there are no images and no words left to us, and when we expect a conceptual vacuum, there we find these transcendent wonders. An assumed connection between music and mathematics has become a commonplace, but I do not think we really understand it. The occurrence of numbers in both is really a misleading commonality – the numerical is not the core essence of mathematical structures; nor is it at the centre of musical creativity. The family relationship becomes clearer at the deeper level of harmonic patterns and sequences of music, and at the partially resolved architectures of mathematical reasoning. To discover this requires not only a broad panoramic gaze over the fields, but also deep-dives into the creation of particular examples. Sitting at the feet of scholars in literature, music and mathematics has been one of the most satisfying experiences of the project – one pay-off for example was the privilege of working with Durham musicologist Julian Horton over an analysis of my favourite piece of music, Robert Schumann's *Konzertstück* for four horns and orchestra. Not only does this musical glory deserve a published structural analysis, but the epoch of its writing coincides with the fragmentation of disciplines in the 19<sup>th</sup> century that runs parallel with a silencing of conversation on imagination in science.

### Reason and emotion

Detailed examination of the three imaginative modes also uncovered a truth that may be uncomfortable to some: thought and emotion are inseparable in all stories of creativity. In our late modern world, we pretend that cognition and rationality can be divorced from the affective currents in our minds. It turns out that David Hume was attuned to this deception – maybe this is one reason that Einstein, so aware of the vital imaginative energies of science, read him with such avidity. But the last era that saw a wide, communicated and nuanced contemplation of creative impulses turns out to be the medieval. Anselm, Grosseteste and Aquinas knew – surely through longer, deeper and more unhurried internal gaze than we habitually permit ourselves – that emotions are not just pinned to the start (desire) and end (joy) of the creative process, but weave their way throughout the stages of conception, trial, retreat, incubation, inspiration, and refinement.

That very structure to the creative process leads to the slow dawning of another realisation – that in the human miracle that brings structure and beauty into existence where there was nothing before – there is a great *narrative*. Christopher Booker is one of those writers who have attempted a categorisation of the 'great plots' of all human stories. He lists the love story, the great battle of good and evil, the journey home among other ur-stories of literature and experience. But the human story of creation seems to be another, although omitted from such lists. It is the ultimate romantic adventure – all creativity begins with a desire reach a dimly-perceived goal, whether that be a sonnet on a visage or the science of vision. There is surprise on the meeting of unexpected constraints, whether of oil-paint on canvas or of observational data. The frustration and despair at inability to progress is shared by those experiencing writer's block as much as wrong predictions of an experiment. The resignation of time spent fallow, the moving on to other matters when all seems hopeless, is shared by composers and chemists, but so is the occasional joy when the wonderful and under-researched subconscious creative processes of the human mind throw up solution strategies at the most unexpected moments. I did not expect to have to read my way into the literature



*Empyrean by artist Alexandra Carr (photo courtesy of the artist), an installation inspired by Dante's description of the medieval cosmological model. Empyrean's 3600 glass spheres are arranged into concentric spherical shells reflecting the celestial spheres. The geocentric model of the universe was one of the great creative acts of the human scientific imagination.*

of narrative analysis, or of left and right brain lateralisation, but it turns out that an account of creativity is impossible without them.

### The end of creation

The final surprise for me was the suggestion of a new task – to account for the deeply-felt human purpose in bringing the new into being. There is a *teleology* in creativity. Here the discipline of theology is unique in bringing its critical tools to bear on illuminating the deepest seam of all. The drive to bring order out of chaos, to seek for beauty and understanding where dullness and ignorance lay before, draws on deep roots within our religious traditions. The study of creativity is another way in to seeing that to ask 'how one reconciles' science and religion, is profoundly the wrong question. Until the last century or so, the moral and purposive framing of

natural discovery had been assisted by the traditions of contemplation and theology. I was led once more to sources such as the incomparable *Book of Job*, found buried in the central pages of the Old Testament, that contains such jewels as the 'Hymn to Wisdom' in which human insight into the deep material structures of the world is compared to the unique vision of the miner into the underground structures of the Earth. The 'visual mode' of scientific imagination turns out to possess very old roots. Job links knowledge of the world to the heart of wisdom itself, and the ability of humans to see deeply into the structures of the world as an aspect of sharing in the divine. There is insight here into the Biblical mystery of the *Imago Dei* – the idea that human beings are in some sense 'in the image of God'. How this extraordinary idea is to be interpreted has spawned theological debate down the centuries, but

one way to think about it that brings the huge potential, yet great responsibility of *homo sapiens* into focus, is through creativity itself. We, too, create, and so alter and grow the world around us.

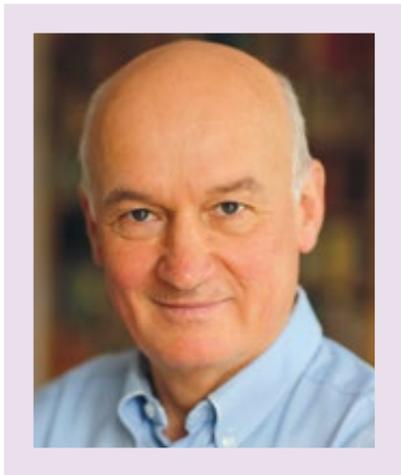
Thinking about creativity in this way leads to serious consequences for how we teach science at school or share it in public, and for how we train our researchers, even in entirely secular contexts. I cannot recall a single discussion during my own formation as a scientist of what practices, disciplines, rhythms of work and relaxation, types of reading or directions of thought might encourage that vital visit from the scientific muse. When challenged about this, many colleagues expressed doubt that anything can be said. As traditionally formulated, the scientific method describes only the second phase of the process—testing ideas. There is no method, it is claimed, for having ideas. But this does not imply that there is an absence of any possible advice. We know that innovation rarely emerges from exposure to narrowly conventional thinking. This is why interdisciplinary conversation is so important. Time spent talking across boundaries causes ideas to spark over the highly-charged disciplinary gaps, shocking us into new modes of thinking. Furthermore, those 'aha' moments—which more than one scientist has told me are what they live for—never come when the conscious mind is busy. They are the product of the unconscious winnowing of apparently fruitless weeks of labour into fresh thought. They will never come unless we give them the space to do so. Hence the need to alternate hard work with experiencing liminal moments of changing mental space.

It is my great hope that we can move the public history of scientific ideas back onto the track that Wordsworth, Goethe and Humboldt enacted in their own inspirational prose and poetry. To do this we will need to talk more openly about the creative process in science, its groping in darkness as much as its illumination, its contemplative practice as much as its generation of understanding, its way to wisdom as much as its path to knowledge.

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*Tom McLeish FRS is professor of natural philosophy in the department of physics at the University of York, and the author of *The Poetry and Music of Science* (OUP, 2019).*

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# Consilience – SSE Meeting in Broomfield, CO

June 6<sup>th</sup> – 8<sup>th</sup> 2019

<https://www.scientificexploration.org/conferences/2019>

*Harald Walach*

This year's meeting of the Society for Scientific Exploration had the conference theme "Consilience", a neologism that means "coming together of insights or results". The meeting was generally a collection of talks by members of the SSE, with one exception, the invited address by Larry Dossey. I presented an overview of the Galileo Report and a few booklets of the short version to advisors and potential teachers and distributors. The report was very well received, and I had a series of compliments and positive feedbacks. I heard no critical remarks. Especially the idea of a contemplative science and an integration of spirituality were applauded. I present the most important talks in a short overview. Longer abstracts are available in the abstract booklet at the web-address.

*Larry Dossey* presented a nice overview over the theme of consilience. He started with the Harvard biologist E.O. Wilson, who had coined the term. But while for Wilson consilience meant that a (materialistic) evolutionary understanding would be sufficient, Dossey pointed out that religion and spirituality are an important element that needs to be integrated. Although medicine and other disciplines have amassed a lot of data, some of which Dossey presented, the mainstream orthodox paradigm prohibits a deeper understanding.

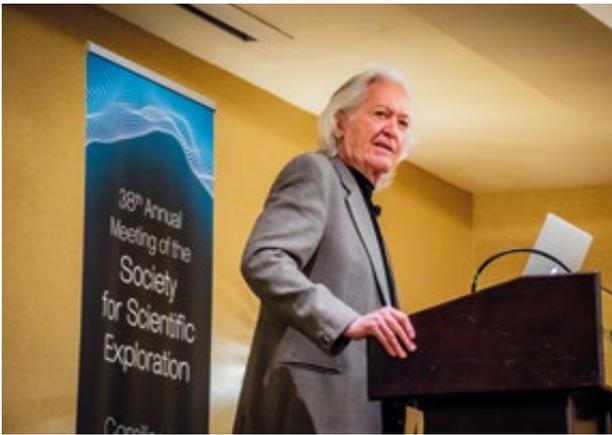
*Karsten Ohrmann*, member of the program committee and business coach, presented the case for consilience from a business point of view as his own story, from spiritual experience to integrating

this in business. I found especially interesting that he mentioned that most business leaders are actually either personally interested in spirituality or have their own spiritual path but they dare not speak out loud for fear of being ridiculed or not taken seriously. But spirituality is an open secret in most management floors of big business.

I was third with the Galileo Report which was, as mentioned, well received.

*Paul H. Smith*, a remote viewer and former member of the Stargate Team of remote viewers of the army intelligence service presented data and arguments, that some of the so called pseudoscience is actually better supported than some science and derived criteria.

*York Dobyys*, erstwhile member of the PEAR lab in Princeton,



Dr Larry Dossey



Prof Dean Radin

presented the case for consilience of PK and other anomalous data. He argued that there is enough data in those segments to support the case that consciousness is at least as primary as matter, if not more so.

*Bill Bengston*, the president of the SSE, provided a high level overview over his own healing data. As is well-known, he developed his own healing method over a long time. This method consists in developing up to 20 wishes for oneself that are then visually and imaginatively envisaged to have become true. During some training these wishes are cycled through repeatedly and quickly and this is the conscious process applied during healing. This healing technique has proven effective in animals and people, in cancer cells and other systems. It is independent of distance, but there seems to be a dose effect and there is a kind of entanglement effect in that also related but untreated animals can be healed. It is as if the healing bestowed some inoculation on animals, as healed animals will be immune to future challenges of the same pathogen and others can be inoculated. This is a fascinating paradigm.

The neurologist *Morris Freedman* from Toronto presented a very convincing argument and data: he argued that psi-effects are due to a reduction of inhibition, especially in the prefrontal areas and are associated with a reduced sense of self. While this can be achieved voluntarily through some practices, such as meditation or by some gifted people, it is easiest to study in brain-damaged people whose frontal centres are compromised. He presented data from such patients who had to perform PK or other PSI tasks and showed extremely strong results.

The Founder's lecture by British born astrophysicist *Peter Sturrock* from Stanford was an amazing feat, not only because Sturrock is almost 98 and still active in his field, but because he presented research from his hobby area, the true authorship of the author known as Shakespeare. He argued, based on the analysis of the dedication poem in the original publication of Shakespeare's Sonnets that the true author was the Earl of Oxford, Edward de Vere. If I understood him correctly, then the reason for the secrecy is to be found in the fact that de Vere was a child of Queen Elizabeth by the Earl of Southampton. Certainly the cryptographic analysis of the dedication, together with some mathematicians who provided the calculation of the odds, was fascinating. The book he wrote about this he gave to the members of the English department in Stanford, without any feedback.

The immunologist *John McMichael* presented a novel medication for traumatic brain injury, a condition that affects chronically many million Americans and is, if not spontaneously remitting chronically debilitating. His remedy is an oxidized version of the toxin of hemolytic streptococci. Through oxidation it loses its toxicity, but seems to remain an immune modulator. McMichael holds the patent and has produced some interesting case series, but is currently trying to get FDA approval, or rather funding for such a trial.

*Wagner Alegretti*, a Brazilian researcher now based in Portugal, presented very interesting case studies, both of himself as a life-long person with out of body-experiences and of others that make plausible that the mind

can separate from the body and can glean information and affect machines, such as MRI machines. Such states can be produced at will quite reliably, and he has developed protocols for that and gives seminars in his foundation.

The sociologist *Charles F. Emmons* has studied spiritualist churches and healers in the UK and in the US. He found an amazing variety of beliefs and practices, some of them conforming to traditional models, most completely at odds with any model and very idiosyncratic. It seems, each healer is producing his or her own world-view according to experiences and leaning.

*Yury Kronn* and *Igor Nazarov* are two Russian scientists working in their own private institution. Following their Russian tradition they have produced an "energetic" essence of life force that is being extracted from various substances and then "informed" onto water or other carriers. They maintain it can fight stress in humans and animals, and a special small gadget which contains some geometric patterns derived from it can immunize people against the consequences of microwaves, e.g. from mobile phones.

In an interesting talk *Nancy du Tertre*, an attorney, demonstrated how she uses a remote viewing protocol to help her clients (see [www.skepticalpsychic.com](http://www.skepticalpsychic.com)). She uses her remote viewing abilities conjointly with synchronicities, and presented some fascinating case stories to illustrate this.

*Eric Wargo* made the point that Freud had actually had a lot of paranormal experiences himself and was interested, but afraid at the same time. This is the reason, why so much of his writing is ambivalent, regarding



Dr Roger Nelson



Group

this issue. Especially he seems to have had a sense of premonition or precognition which he found uncanny and which interfered with his otherwise rational stance.

*Nanci Trivellato*, who works together with Wagner Alegretti in Portugal, made a convincing point that spiritual experiences are very frequent in childhood and often misunderstood or repressed and should be taken more seriously.

*Gabriel Felley*, a professor from Zurich University of Applied Sciences, gave a very well-informed talk about the system of the I Ching and how it can be used to produce a kind of electronic oracle which allows prediction and understanding of events through producing synchronicities.

*Dean Radin* gave an overview over his novel approaches in PSI research. Apart from the physical systems, affecting the output of a double slit experiment, polarisation of light and entangled photons, as well as affecting plasma-light, which is an inexpensive gadget, he talked about the conceptual issues, like the replicability and the publication difficulties. Some of the data are not replicable, when produced by others.

*Marc Boccuzzi* and *Julia Mossbridge* gave presentations that made this obvious: in most of their studies they found effects opposite to the desired ones, often significantly so. This demonstrates to me, what we have predicted long ago, that these PSI effects are no simple field or causal effects but more complicated.

*Roger Nelson* presented data from his world wide networks of random event generators, called EGGs or ElectroGaaGram. Apart from the well-known traditional analysis

that shows deviations when global or regional events happen that affect many people, he also showed a visual analysis making the case plausible that these deviations are similar to evoked potentials in the brain, making the EEG something similar to an EEG, as a measurement of the global mind, as it were.

*Garret Modell*, professor of physics at Colorado State University in Boulder and SSE vice president, presented an attack against the overuse of quantum physics to explain psi. In his view this is not a viable scientific path.

*David Scharf*, professor of physics at Maharishi University, supported his case for a mind-over-matter world-view with physical argument, data from meditation research and a well-founded philosophical argument in which he used Kant's critique of Hume and Newton to derive a new system of categories at whose base is information or mind.

*James Oschman*, who is well known for his work on electromagnetism, presented his own personal journey that brought him from a well steeped classical science career to the study of subtle energies through a deep spiritual experience of non-locality. He ended with "sacred geometry", the flower of life, as a potential shield against radiation of all kinds.

The conference ended with two interesting talks: *Daniel P. Sheehan*, a professor of physics, made a point that most unsolved PSI riddles can be solved if one takes a more unconventional physical stance and adopts the transactional model by Cramer or a similar model of quantum theory that allows for retraucausation, which he introduced. Thereby all the apparent problems are solved.

*Jason Yotopoulos*, an entrepreneur and funder, mapped out how some funders and venture capitalists develop strategies in order to invest money in the field. According to him there were quite a few foundations and sources of capital around. But these would normally want more systematic and strategized research than is currently the case.

Apart from the presentations there were some 20 posters that were given a space of 1.5 hours in the evening for presentation and discussion, whose abstracts are available in the abstract booklet.

At the banquet dinner that concluded the conferece *Julie Beischel*, wife of Marc Boccuzzi and researcher in mediumship, gave a dinner address that made the point that the research available on mediumship and psi allows the conclusion that consciousness lives on after death.

All in all, this was a successful conference with some 200 attendees, mostly from the US and some from Europe with lively talks and discussions and interesting talks at the fringe during coffee and dinner breaks.

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Martin Lockley



Paul Marshall

# SNR – Spiritual Not Religious: paradigms and acronyms for today

A report on the Religious Experience Research Centre Conference 2019: *The Future of the Study of Religious and Spiritual Experience*

*Martin Lockley and Paul Marshall*

As the developed nations of the so-called First World turn increasingly secular and away from traditional, “churchgoing” religion to varying degrees, so many less-developed Second and Third World nations are seeing a dramatic revitalization of traditional religions. This dichotomy, complicated by the proliferation of new religious movements and personalized spiritualities, is of great interest to the Religious Studies community and equally intriguing across the fields of anthropology, sociology and demography. One might go further and frame this

demographic dynamic in terms of the evolution of consciousness, as pursued by the likes of Ken Wilber, Steve McIntosh and others influenced by Jean Gebser, who have used the last three “stages” of the Archaic-Magical-Mythical-Mental-Integral consciousness structures paradigm to posit that traditional religion (mythical tendency) breaks down with the ascendancy of the scientific/scientism (mental) paradigm, but can in turn give way to what William Irwin Thompson called a more Integral “post-religious spirituality.” Such sentiments surely

confirm humanity’s perennial spiritual dimension, and Rudolf Steiner, founder of the Spiritual Science movement (Anthroposophy), would also likely agree.

The “Spiritual Not Religious” (SNR) theme and acronym were much in evidence at the conference on *The Future of the Study of Religious and Spiritual Experience* held July 1<sup>st</sup> – 3<sup>rd</sup> at the Trinity St David’s campus of the University of Wales to commemorate the 50<sup>th</sup> Anniversary of the founding of the Alister Hardy Religious Experience Research

Centre (RERC), originally located at Manchester College, Oxford. The conference spread over a half, a full, and a second half day featured 24 presentations plus three keynote addresses, the first by Ann Taves asking “What counts as religious/spiritual experience?”

To address this question Prof. Taves (Univ. California) and her team undertook a massive Inventory of Nonordinary Experiences (INOE) in the US, China, Thailand, Vanuatu and Ghana, thus asking if Hardy’s UK inventory “overwhelmingly” dealing with “sudden, dramatic experiences” could be “generalized beyond the British context.” Indeed, the question, in our opinion only makes sense in a global context. Taves was asked if her interest in the subject stemmed from her own experience(s), dramatic or otherwise, to which she gave a rather guarded “non-experiential” answer, ostensibly by encouraging the ready acceptance of the experience of others. The first day session continued with explicit mention of the SNR theme in a talk by Wendy Dossett on “Higher Power in Addiction Recovery.” Her research has shown that the saving “Higher Power” and “spiritual awakening” called upon in addiction programmes (Alcoholics Anonymous, etc.) are not necessarily framed in supernaturalist or extraordinary terms. Up next, Marianne Rankin, author of the useful book *An Introduction to Religious and Spiritual Experience* (RSE), described her combing of the RERC archives to see if the chief “fruit” of RSEs is a turn from self-centredness to altruism. She asked if the label Intense Experience (IE) would be more digestible than RSE to those of a secular bent. Thus, attention is again directed to the meaning of the terms “Religious” and “Spiritual” in today’s lexicon. Anne Morgan, representing her home campus (Univ. Wales) rounded out Day 1 by asking about the *Female Conversion Experience* and how it might differ from classic male reports (Saul and Augustine). She concludes that within the UK’s more traditional Christian communities “equal numbers of men and women experience religious conversion.”

With Day 2, the conference divided into two concurrent sessions, one on types of religious experiences, the other on experiences in different communities. Mara Steenhuisen-Siemonsma introduced her research on “orbs” or circular lights, often encountered in photographic images,

as instigators of spiritual experience and putative messengers from other realms. She asked why orbs, often dismissed as artefacts, can have such dramatic roles, and raised again the modern phenomenon of personal spirituality. Nicole Graham then introduced the intriguing idea that laughter can be a form of religious experience. Although often viewed with suspicion in religious contexts, supporters such as Osho (Rajneesh) have seen laughter as disruptive to rational thinking and conducive to awakening. In the concurrent session, Jennifer Uzzell described her study of the religious experiences of self-identified Pagans at ancient sacred sites, raising two questions: one about the responses of Pagans to sites outside their cultural backgrounds, and one about the applicability of William James’s influential characterization of religious experience. Julia Wright then looked at the practice of spiritually based agriculture, with particular attention paid to the beliefs of biodynamic farmers and how these impact on their work, and the implications for the sustainability of farming systems.

The next set of concurrent sessions focused on health and shamanism/mysticism respectively. Emily Pierini explored the overlap of the spiritual and the therapeutic through ethnographic study of the Brazilian religious community Vale do Amanhecer (“Valley of the Dawn”). Here healing involves the release of spirits and the therapeutic development of mediumistic abilities. Nicole Holt used an online questionnaire and interviews to explore how those who identify as “spiritual but not religious” understand their health to be affected by their spiritual experiences. The results suggested that spiritual experiences outside mainstream religion do have significant impact on health. Olivia Luijnenburg described her research on the spiritual needs of older people in residential care. Hopefully the findings will inform management and staff training for the benefit of residents. The concurrent session began with Tish Marrable’s survey-based investigation of shamanism as a contemporary alternative to mainstream religion, and how shamanic practices approach healing and death. Paul Marshall noted the neglect of metaphysics in the recent study of mystical experience, a serious omission given the reality-orientation of the experiences. He

outlined the work of the “Sursem” group at Esalen Institute’s Center for Theory and Research, in the tradition of William James and Frederic Myers, with its expanded empiricism and willingness to broach the metaphysical. Tying in nicely with the conference leitmotif of tradition and modernity, Zsuzsanna Szugyczki drew on secularization theory to examine mysticism scholar Richard H. Jones’s distinction between mysticism of the past, valued by Jones for its embeddedness in tradition and rigorous way of life, and a watered-down, less demanding, intellectually unambitious mysticism of today, oriented towards achievement of health and happiness.

William James’s presence was never far away, and came fully to the fore in the second keynote lecture by Professor Jeremy Carrette (University of Kent), who described his ongoing work on James and the nature of love. Also drawing on the Spanish philosopher José Ortega y Gasset, Prof. Carrette sought to understand love as a form of “conscious attention,” with parallels in the Christian contemplative tradition and the metaphor of “the kiss,” pointing to love as a deeply embodied, human actuality. Concurrent sessions then recommenced. Terence Palmer proposed research strategies for placing spirit release work on an evidential basis and utilizing qualitative analysis for the benefits of mental health provision. Fabian Graham described his participant research on two very different kinds of Chinese healing ritual: one in Singapore undertaken to cure the living through mediumistic contact with the dead, and one in Taiwan that seeks to cure the souls of the dead. Adam Powell introduced Durham University’s wide-ranging, interdisciplinary “Hearing the Voice” project, which explores cognitive and neurological underpinnings of “auditory hallucinations,” as well as looking into social, cultural, and religious dimensions, including work on clairaudience with members of the Spiritualist National Union. Drawing on several case studies, James Murphy made a strong case for “Interpretative Phenomenological Analysis,” a form of qualitative research that looks deeply into the lived experience and meaning-making of an individual. This underscores the value of the oft-derided “anecdotal” in research. Finally, Alison Robertson took



*Organizers and keynote speakers from the recent *The Future of the Study of Religious and Spiritual Experiences* conference. The photo shows (L-R): Jeff Leonardi, Jeremy Carrette, Sneha Roy, Bettina Schmidt, Ann Taves, Tom Farley, Peggy Morgan, Wendy Dossett, Leslie Frances.*

issue with spiritual experiences conceived as private, subjective states, countering with the example of BDSM (Bondage, Domination, Sadism and Masochism), which her research suggests often brings about relational peak experiences.

Day 3 launched with two concurrent sessions, one on medical and anthropological, and the other on interfaith religious experiences. The former session began with consultant psychiatrist Simon Dein acknowledging the growing interest between religion and health, but asking the more penetrating and intriguing question does religious healing “work.” Following this, psychiatrists Arjan Braam and Annemarie Noort examined religious delusions (RD) and religious hallucination (RH) among older patients, concluding that such “experiences,” and other delusions, correlate positively with “religiousness” or “strict” religious backgrounds, church attendance and other “dogmatic religious convictions.” Since the term “spiritual” is not used, may we conclude that there are indeed SNR distinctions, perhaps in reality as well as in research vocabulary? Eva Ouwehand rounded out this session with an investigation of “healthy and pathological religious experiences” as they relate to bipolar disorder. She concludes that REs may have positive transformative power,

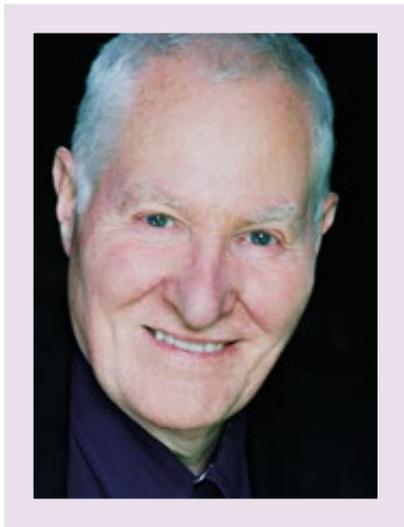
encouraging patients to explore them with health professionals, but that “clinical practice is not yet equipped to do this adequately.” This latter refrain may sound familiar to SMN members and those in clinical practice who wish to explore such alternative therapies.

The interfaith session began with an exposition by Martin Lockley on the *Kundalini Awakening phenomenon* and how it is a physically intense or high energy species of “spiritually transformative experience” (STE). RERC records show that the experience is most frequent in mid life (modal age ~30–35) as limited previous research had suggested. Also, whereas earlier reports very rarely used kundalini vocabulary, an increase in kundalini awareness has manifest among experiencers who in most cases recognize the mystical, spiritual and consciousness-shifting import of the phenomenon, and its beneficial effects. An extraordinary presentation by Johnson Elijah Amamnsunu explored the charismatic Islamic NASFAT movement in Nigeria which has deliberately borrowed a repertoire of worship and organizational modalities from Pentecostal Christianity. The result has been rapid growth and enthusiasm, especially among the youths who find the movement dynamic and vibrant. A spin off has been the encouragement felt by ministers to

help address the community’s socio-economic needs. Lastly Julia Kuhlman turned attention to the experience of middle-class women in two Pentecostal Churches in India, where growth is very rapid. She found that, contrary to previous studies of “poor and low-caste” women, middle class “trials and struggles tended to form the basis of positive experiences of God,” and so may be “class contingent.”

The conference ended with a very entertaining keynote from Professor Leslie Francis (University of Warwick) who when asked what aspect of his distinguished career had brought him most satisfaction gave as the first, and more flippant, answer: “the number of bishops I have been able to annoy!” Francis followed up on classic studies by John Greer on more than 7,000 16-19-year-old students from Northern Ireland and the Republic of Ireland, to conclude that in both samples religious experiences resulted in “a more positive view of the Christian tradition and living happier lives.”

Conference organizer Professor Bettina Schmidt, director of the Alister Hardy Religious Experience Research Centre, and her team at both the Centre and Trinity Saint David, are to be congratulated for putting on such a diverse and stimulating international programme, one that shows an impressive “variety” of religious and spiritual experiences are still a subject of interest among academics, and most importantly among an upcoming generation of young researchers, including some in the Trinity Saint David programme. This interest has in turn generated its own vocabulary and now-familiar acronyms like SNR. The conference was made additionally interesting through access to the RERC office and library, where rare Alister Hardy memorabilia were on display, underscoring the unique qualities of this marine biologist who turned his scientific skills to the study of religious experience. We were also fortunate to have Dr Tom Farley, grandson of Hardy, and Peggy Morgan, former director of the Centre, to give their reminiscences at the 50th anniversary celebratory dinner.



# Technology, Spirituality and Wellbeing

## University of Greenwich, 6th-7th April 2019

*Barry Tomalin reports on the opening day*

Among the famous historical monuments of the Royal Naval College, the National Maritime Museum and the Queen's House at Greenwich University in London, with Wren's 17<sup>th</sup> century Royal Observatory standing on the Greenwich Meridian high up in Greenwich Park overlooking the River Thames, the Network's Mystics and Scientists Conference 2019 addressed the issue of Spirituality and Wellbeing in the Digital Age with around a hundred scientists, medics, psychologists, students and other professionals.

The question posed by the conference was what is the influence of technology, particularly social media, on the young and how social media can be used to build relationships and develop spirituality? As **David Lorimer**, Programme Director of the Network, said in his opening remarks we live in an 'attention economy' moderated by ours and our children's addiction to social media. Citing Aldous Huxley in 'Ends and Means' (1941) he reinforced Huxley's view that 'Technological progress has merely provided us with a more efficient means for going backwards.' We live more and more, he said, in a world of accelerating mechanical time, with an increase in speed and a demand for immediate gratification leading to increasing impatience, frustration and even rage. David cited James

Williams' 'Age of Attention', stressing the new pressures of information overload, especially on the young, the way the user of Information and Communication Technologies has become a product through sales of personal data, the industrialisation of persuasion techniques and that, as a result, living and reflection have been more and more replaced by entertainment through constant stimulation and distraction leading in many cases to attention deficit and sleep disorders.

Ashley Whillans in the Harvard Business Review, having researched almost 100,000 working adults from all over the world, wrote that 'Research consistently shows that the happiest people use their money to buy time.' 'We consistently find that people who are willing to give up money to buy time... experience more fulfilling social relationships, more satisfying careers and more joy and, overall, live happier lives.' As David concluded, the quality of inner state or environment is real quality of life and, citing, Simone Weil, balancing our inner and outer life gives us the choice to use technology rather than being used by it.

The first keynote 'Spiritual Technologies, Old and New' by **Jules Evans** of Queen Mary University, London, also focused on the legacy of novelist and philosopher, Aldous Huxley, author of, among, others, 'Brave New World' and one of

the first to predict a form of social media addiction. Humans, Evans argued, have a deep-seated urge for transcendence, but, he asked, is Huxley's fictional vision of a carefully stratified world (through eugenics, in which he believed) through a mixture of hedonism and well-manipulated social control actually being realised in our current 'technological dystopia'? The mass adoption of meditation techniques and the application of resistance therapy might provide an antidote.

In his presentation, 'Protecting the Essential Qualities of the Human Heart in the Digital Age' **Louis Weinstock**, founder of 'Bounce Works', which runs the charity, 'Apart of me', explained how it supports young people who have lost their parents, homes and friends and have only one 'support system', social media. However, social media outlets, such as Instagram and Snapchat are no more than distractions, creating negative memes such as FOMO (Fear Of Missing Out) among young people. Researchers such as J Twenge have charted the increase in young people's suicides since 2007, many a result of perceived unpopularity, or 'trolling' on social media. Bounce Works, working as part of 'Apart of Me' tries to provide an 'emotionally smart home' for young people affected negatively by social media – to reduce dependence on it and build 'heart coherence.'



Peter Fenwick



Jeffery Martin

Dr Oliver Robinson of Greenwich University and organiser of the conference venue also stressed the importance of the heart and the balance between the ‘local self’ (spirit, meaning and the heart chakra) and the ‘non-local self’ (the influence of science, intellectual grounding) but also of spiritual practices such as Tai-chi and yoga, which all became popular in the western world around the same time.

Social media does not have a positive image, according to Dr Ben Narder, author of the ‘Extended Chilling Effect’ (2017). He noted that social media is cited in 1 in 33 divorce cases and that the fear of exposure in social media is leading to a greater degree of self-regulation in personal behaviour, particularly among young people in Generation Z, as they are known. Narder also made a distinction between *relevance* (modification of behaviour) and *resonance* (greater empathy). As examples of resonance he cited the “warming effect” of greater social awareness and involvement through media, increased donations to charities and social movements through new online payment systems and the emergence of a new generation of Internet spiritualism in the work of Teale Swan and Jordan Petersen, among others.

However, the dangers of increased surveillance through social media and the amount of hours spent, especially by young people, on social media every day is also fragmenting attention. Narder cited research demonstrating that human beings have an average attention span of eight seconds, whereas a fish has nine seconds. Most concerning of all, however, is the way that AI (artificial

intelligence) is already being used in China in classrooms to identify successful students in schools by changes in facial expressions during class and this is being used to decide entrance to university and to apprenticeships. The problem, concluded Narder, is that we need to manage the ambiguity offered by social media and to recognise both the “chilling” effects of surveillance and its influence on social behaviour and the “warming” effects on increased social involvement. Interesting, suggested Narder, that an online meme. “I just want to be my own neuron’ got one billion ‘likes’!

The “Infinite World Game” (IWG), set in 2040 and created by a team led by Brett Warshawski and Andrea Harding, is a computer game based on the ideas of, among others, David Bohm, which aims to create a holographic universe in which everyone is simultaneously part of a whole, or holon as Ken Wilber described it. The game takes players through the seven core functions of a life system based on the seven chakras and aims to replace computer games based on money and competition with one that stresses relationships, synergy and cooperation to achieve what Bucky Fuller described as the Prime Meta-Mission – the Infinite Win.

In a detailed presentation of his research, Dr Jeffery Martin, Director of the Center for the Study of Non-Symbolic Consciousness at Harvard and the California Institute of Integral studies explained the principle of PNSE (Persistent Non-Symbolic Experience). He described it as a catch-all phrase covering such experiences as Plateau (the equivalent of Maslow’s peak) experience, enlightenment,

mystical experience, non duality and consciousness and stressed this is not limited to spiritual or religious people. He also divided non-symbolic experience into three phases, persistent (PNSE), ongoing (ONE) and temporary (tNSE). His team studied the existence of PNSE using three key measures, self reporting, in-depth interviews and physiological measurement, including breath, blood and other biological features.

What did they learn? People with PNSE or ONE suffered less from fear, anxiety and stress, freedom from thoughts impacting mood, focus on now rather than on the past, reduced mental chatter and an increased sense of connectedness and possibility. In other words, he summarised, ‘life flow’ not ‘task flow.’ Referring to his book ‘The Finders’, Jeffery Martin identified locations of progression, which he called ‘The Fundamental Wellbeing Continuum’. At level 5 and above a person’s life is marked by a fork in the road – a greater sense of freedom and humanity (a less rigid more fluid approach to life). He also described it as a stage of transition, which can be dramatic and even potentially dangerous, saying that, “It feels like it’s just the universe looking out of my eyes.”

What can help people improve their quality of life and achieve ONE and PNSE? Jeffery Martin’s ‘Finders Course Experiments’ the world’s largest crowd-sourced, crowd-funded PNSE Consciousness Experiment raised over a million dollars and confirmed that short intensive meditation and a positive psychology programme can help people achieve PNSE over all locations and increase mental and emotional wellbeing.

Day One of the conference ended with a down-the-line conversation with Dr Julia Mossbridge on Transcendence Technology using the ‘Loving AI’ project with Sophia, the humanoid robot.

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*Barry Tomalin is a journalist and university lecturer and long-standing member of the SMN. He specialises in international cultures, civilisations and religions and has an ongoing commitment to personal spiritual development. He is a published author in the cultural field and is News and Features Editor of an international online news website.*

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# Network News

## ATTENTION MEMBERS

### PERSONAL NUMBERS AND OFFICE PROCEDURES

Please help your administration office to run smoothly and so help you efficiently:

- when your details change (address, telephone number, email address etc.) please make sure we know
- use your membership number whenever you contact us, and write it onto all correspondence, conference booking slips, subscription forms and orders for books, services etc.
- book early for conferences - it helps you get a place
- ensure cheques are made out correctly to Scientific & Medical Network; for conferences and orders: always add (legibly!) details of what it's for and membership number on back, even when accompanied by a booking form
- remember we're a network, and it often takes time for all relevant people to be contacted so when making requests give us time to respond helpfully (and always remember to tell us who you are - we sometimes get forms back with no name at all!)
- help us save money; whenever possible pay in £ sterling and remember to gift aid when you make a payment (subscription, conference fees, etc..) - it maximises funds available for more important things.

Office hours are 10.00am to 5.00pm Monday- Thursday. Please leave a message if no one is available to take your call. We will get back to you as soon as we can.



We welcome **Andrew Polson, MA** as our new administrator. He will take over administering the SMN three days a week alongside Chiara Reghellin. Prior to joining the Scientific and Medical Network Andrew has been in the print industry, having worked in the production and sub-editing department for a leading UK consumer magazine publisher for the previous ten years. He has also had event organising experience, booking and facilitating weekend meditation retreats and workshops in London. With an educational background in the humanities and a Master's degree in Education and Politics, Andrew has maintained a keen interest in philosophy, science and the latest research into

consciousness, and in 2017 he completed a two-month online course through The University of British Columbia on the Science of Religion. Originally from Auckland, New Zealand, Andrew has lived in the United Kingdom for over 15 years and now holds dual citizenship in both countries. Andrew is really looking forward to helping the SMN aspire to its full potential.

Our thanks and appreciation to **Chiara Reghellin**, our office manager for many years. Her hard work and inspiration will be missed. Due to her husband's work, Chiara has moved with her family to beautiful and sunny Italy. However, she will continue to assist Andrew Polson one day a week, particularly with the finances, and will take on other occasional duties. We will miss seeing you, Chiara!

### OFFICE MOVE

The SMN is moving its office. We are grateful to the Study Society for hosting us at Colet House. However, with the change in office personnel, we are moving to a virtual office. We have moved the archive to a storage space, though we are still looking for a home in ideally London, to host our archives, and if space allows, books. We are slowly getting the archive material digitised, and if anyone has time to help with this process, then please do contact our Office Manager, Andrew. To contact the office please email Andrew Polson: [Andrew@scimednet.org](mailto:Andrew@scimednet.org) or ring our usual number +44(0) 203 468 2034

Our registered address for business correspondence will be:

Scientific & Medical Network,  
c/o Dawe, Hawken & Dodd,  
52 Fore Street, CALLINGTON,  
Cornwall PL17 7AJ

## GALILEO COMMISSION NEWS

The Salvia Foundation has awarded us a second round of funding for outreach work connected with the *Galileo Commission Report* under the heading *Frontiers of Knowing: Expanding Science beyond a Materialist Worldview*. The principal aim of the SMN is to challenge the adequacy of scientific materialism as an exclusive basis for knowledge and values. The Galileo Report articulates this challenge in a rigorous philosophical fashion and forms a strong point of departure for future development in expanding the scope of consciousness studies. Members can access the final formatted Summary and Full Reports at [www.galileocommission.org](http://www.galileocommission.org) where they can also be ordered as printed copies. *You can sign up either as a friend or professional affiliate on the site by clicking Join Us on the menu and we encourage all readers to do this.*

One emerging theme from the Board Retreat in January and that fed into the Galileo proposal was the idea of the Network at the frontiers of respectability and acceptability, which is particularly the case in relation to universities, which tend to espouse materialism and social constructivism, with strong peer pressure towards conforming to such orthodoxies. So one strand of activity will be university outreach, while others are focussed on building a post-materialist science and an evidence based spirituality with partners and outreach to the general public via website activity and science festivals.



## THE SCIENCE OF CONSCIOUSNESS, INTERLAKEN

**Prof Harald Walach** and **David Lorimer** both presented posters at the European Science of Consciousness meeting in Interlaken at the end of June. There were over 200 posters in all, with many from India, and a whole session was devoted on the first day to East-West Dialogue. The range of themes presentations was very wide, covering neuroscience, quantum physics, altered states of consciousness, metaphysics of consciousness, panpsychism, perception, time, varieties of religious experience, psychoactive substances, language and evolution, digital and phenomenal, subliminal and unconscious processing, consciousness and the arts, mind-brain and language. The meeting was held in the magnificent 19th-century casino just next to a fast flowing river in which we swam. The whole field seems to be opening at and highlights for me included Harald Atmanspacher on the Jung-Pauli conjecture, Sir Roger Penrose on computation, intelligence and understanding, Sydney Lamb on language and consciousness and Jeffrey Kripal on impossible events, where he quite rightly asserted that the problem is not with the events, but rather with the narrow view that fails to explain them. 250 leaflets and 100 summary booklets were distributed at the meeting. For further details, see [www.tsc2019-interlaken.ch](http://www.tsc2019-interlaken.ch)

## OBITUARY

## PROF CHRIS CLARKE

Rupert Sheldrake



Chris Clarke (SMN) died on 16th April 2019. He was a mathematician and theoretical physicist and was also deeply committed to the mystical side of religion, and in finding ways of bridging the realms of science and spirituality.

I first met Chris in the late 1960s, together with his wife Isabel, when

we became members of the Epiphany Philosophers, a Cambridge-based group of scientists, philosophers, mystics and explorers. This group produced a journal, *Theoria to Theory* to which Chris was a regular contributor. 'Theoria' referred to the direct intuitive mystical experience, and 'theory' to intellectual theories such as those of science. The journal was edited by Professor Dorothy Emmett, a philosopher who had studied with Alfred North Whitehead. This group was also grounded in Anglican religious practice, and we went on retreats four times a year in a windmill on the Norfolk coast, at Burnham Overy Staithe, where we discussed a wide range of philosophical, scientific and spiritual topics. The Epiphany Philosophers also had a retreat house in Cambridge, in Marion Close, where we met for Easter retreats, and for several years the priest who celebrated the Eucharist with our group was Rowan Williams, later Archbishop of Canterbury.

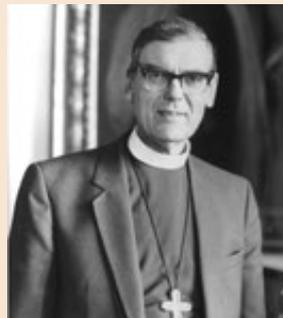
Chris was born in 1946 and studied mathematics at Christ's College Cambridge where he remained as a graduate student until he became a Research Fellow at Jesus College, Cambridge. From 1974 to 1976 he was a lecturer at York University, and from 1986 to 1999 professor of applied mathematics at Southampton University. Much of his academic research work was on Einstein's theory of gravitation and on its relationship to quantum theory, including quantum cosmology. His technical books included *The Analysis of Space-Time Singularities and Relativity on Curved Manifolds*. As well as his technical papers he wrote several books including *Knowing, Being and Doing: New Foundations for Consciousness Studies* (2013) and *Weaving the Cosmos: Science Religion and Ecology* (2010). He also wrote many articles on the themes he thought most important: the relationship between people and the planet, and the fundamental spiritual connectedness of all. He chaired Green Spirit, an organisation that promotes 'engaged spirituality for a living earth', and he was also chair of the Scientific and Medical Network, in which he played a leading role for many years.

Chris was kind, friendly and modest but had a passionate commitment to the causes he felt so strongly about, as well as a keen intelligence and sense of humour. Family life was always very important to Chris, and he and Isabel have two sons, Leon and Dunstan.

In 2012 he began to show symptoms of Alzheimer's disease, and also suffered from cancer. Yet despite these ultimately fatal challenges, he remained cheerful

and on the occasions when I met him at Epiphany Philosopher gatherings in the last few years. To my surprise he was more than cheerful, and seemed radiant. His spiritual life shone out through all his difficulties. The loving support of Isabel and his family no doubt played a major part in this, but the way he dealt with his problems showed that his spiritual commitments ran deep. In his last three years he wrote a series of short blogs in which he reflected on his own experience of living in the moment, and on the experience of Being itself. Leon has compiled these into a book entitled *Wisdom and Isness*.

He is survived by Isabel, to whom he was married for 51 years, and by Leon and Dunstan.

RT REVD LORD HABGOOD PC  
(1927-2019), HONORARY MEMBER

*The Tablet reports:* John Habgood, Archbishop of York from 1983 to 1995, and Bishop of Durham from 1973 to 1983, died on 6 March, aged 91. He was one of the most remarkable churchmen of his age. A brilliant scientific thinker, Christian apologist, ecumenist,

liturgist and supporter of women's ordination, he was always working on the boundary of theology. He was also prominent in the World Council of Churches, and wrote extensively on a wide range of issues. He made a particular contribution to medical ethics, the dialogue between science and religion, and the place of Christianity in the modern world. Within the Church of England, he was deeply involved in the ecumenical movement, and served on many professional and House of Lords working parties into scientific and technological questions. His first career was as a scientist in Cambridge where his doctoral thesis was on hyperalgesia. He was seen as a highly promising neurophysiologist who lectured and researched as part of a group investigating the nature of pain. Habgood had left Eton as an atheist but at the age of 19 he was converted by an Evangelical mission to the university. For full report (well worth reading) see: <https://www.thetablet.co.uk/texts-speeches-homilies/4/1235/obituary-john-habgood-archbishop-of-york-1983-1995>

*David Lorimer writes:* I first met John Habgood about 30 years ago when we were both speaking at a conference in York arranged by the Churches Fellowship for Psychical and Spiritual Studies. John began his lecture by remarking that there were two reasons why he was cautious about psychical research: first because he was a scientist, and secondly because he was a theologian. He went on to give very informative talk, but I have never forgotten this revealing caveat. He was involved in two of our dialogues in the *Science, Consciousness and Ultimate Reality* project in 2002, most memorably in a dialogue in Oxford with Lord Winston attended by 200 people. He wrote extensively and perceptively on issues in science and religion, also speaking in the House of Lords on science and technology.



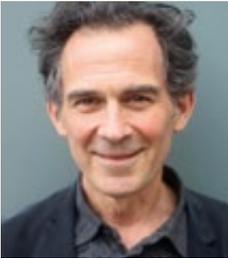
## LONDON GROUP REPORT

LONDON GROUP  
CLAUDIA NIELSEN  
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To read reports from other meetings, go to the REPORTS page of the London Group page of

the Network's website. If you don't live in London but wish to be advised of London events, please drop me an email and I shall add your e-address to the circulation list.

### ■ MAY



This month we invited **Rupert Spira** to speak to the group. Rupert is a spiritual teacher and author of a number of books on spirituality. From an early age Rupert had an interest in the nature of reality and developed his path through the teachings of various non-dual teachers, eventually settling with the perspective of Kashmir

Shaivism. He called his talk **The Nature of Consciousness**. He started by encouraging the audience to observe their own experience by exploring their inner space directly. So, with closed eyes, most of us went inside and noticed our experience to the sound of his words. He encouraged us to become aware of our awareness. To discern the 'I' of having feelings and sensations, but not being the feelings and sensations. We were asked not to think and to focus on the experience of being. Rupert used the metaphor of a screen on which a movie plays. Consciousness is like this screen. The activity happens on the screen but it is not part of the screen.

He then asked us to observe whether our awareness or consciousness have an edge? A border? Can we leave the field of consciousness? Consciousness, he said, is single but is also shared. It has no dimension - it is a knowing void full of potential. The 'I' awareness is infinite, it is the same 10 minutes, 10 hours, 10 months, 10 years ago. A discussion arose over Rupert's use of the words 'consciousness' and 'awareness', which for him are interchangeable. A number of people disagreed. Pointing out that, whereas they could understand that consciousness is infinite and we – our consciousness - participate in this infinite consciousness, we do however have our unique experience of our personal consciousness through awareness. But Rupert could not accept that, and insisted that although our perceptions are personal, consciousness is universal. So, what could be seen as a discussion about semantics, became a frustrating case of talking at cross purposes for some people...

### ■ JUNE



**Charlie Morley** was our speaker for the month of June. Charlie is a teacher of lucid dreaming and shadow integration, having been "authorised to teach" within the Kagyu school of Tibetan Buddhism by Lama Yeshe Rinpoche. He has written three books on the topic, which have been translated into

13 languages. He called the talk for this evening, **Lucid Dreaming: Transformation while you sleep**. He started the session by asking people to close eyes and relax into their deeper selves and ask the question: why have I come to this talk? Having set the scene, he explained what lucid dreams are, what they achieve and their place in the Buddhist tradition. Lucid dreaming is making friends with ourselves he said, it is connecting with the very deepest and most unconscious part of ourselves. In the lucid dreaming state, we "wake up" inside a dream with awareness that we are dreaming. We can consciously follow the narrative and to a certain extent control it, but as Charlie pointed out, if the control is too heavy, the dream will chuck us out. We are not meant to deeply control it. The idea is to learn from it. Dreaming in general are ways in which our minds try to process difficult experiences. Nightmares, for instance, are efforts to integrate traumas. They are not to be dismissed, says Charlie.

In lucid dreaming we face the deepest projections of our psychology. Psychological work can be undertaken in lucid dreams, when a person confronts a personalised manifestation of their fears for instance, which can help integration. Other benefits include increased insights and also rehearsal and training. Many of the studies on lucid dreaming we were told, come from the field of sports sciences. It has been found that athletes can train in a lucid dream and improve performance in the waking state. Creative people have more lucid dreams and conversely lucid dreams help creativity. It can help with healing of low-level ailments, along the lines of a placebo effect. For the Buddhist lucid dreaming is a path towards dying consciously in order to know the visions of the Bardo. This is when our true nature will be realised or recognised. In lucid dreaming we encounter hyper reality.

We can feel physical pain and emotions, taste and touch, within a clear awareness that we are dreaming. It is safe. The majority of children can lucid dream because it is a natural capacity. The way in therefore Charlie tells us, it through the inner child. First of all, we need to train ourselves to remember our dreams, which most of us don't, so the training for it involves repeating upon falling asleep 'I remember my dreams, I have excellent dream recall' and other such affirmations. The next thing we need is to keep a dream diary, in which we record our dreams even if only fragments. We can then look out for patterns. Patterns are triggers. If we recognise a pattern in a dream, we become aware that we are dreaming. A sign of lucid dreaming is to look at the outstretched hand in quick movement of palms up and down, and notice if the hand changes to some impossible state. It was a fascinating evening, and I am sure many people present will have been surprised to have recalled a dream that night, as I did.

### ■ JULY

We did not have a meeting in July as regrettably, our speaker had to cancel.

### ■ AUGUST

In August we welcomed **Daniel Stone** who talked about the subject of his book, *Harmonic Resolutions 12, Science, Business, Spirituality and Healing*. Daniel is the founder and director of the Centre of the Conscious Dream in the desert of San Luis Potosi in the Mexico, where he runs retreats. He presents courses and seminars in Europe, the US and Australia and is also an exhibiting artist and musician. He started the evening by telling us what brought him into this work. He had vivid dreams as a child and described his experience as living a double life, the night life in his dreams, in which he experienced other

dimensions where he met animals and other beings, and in the day, his daily life. At the age of 19 he could not keep these two experiences apart. To understand the meaning in his dreams he tried psychology, especially Jung, but it was when he engaged in spirituality, particularly Toltec, Australian aboriginal and Buddhist shamanism, that things started to make sense for him.

In time, he realised that the different worlds people live in, whether culturally, professionally or spiritually the language may be different, but he found a common denominator in their representation in numbers within the teachings of the Medicine Wheel in shamanism, where those different worlds can be understood through a single representational lens. The Medicine Wheel goes from zero to 12 and represents the journey of the soul. These numbers find their meaning in all areas of human experience and activity. Daniel explored only two numbers this evening, zero and twelve. Zero is nothingness. In religion it is represented by the great void

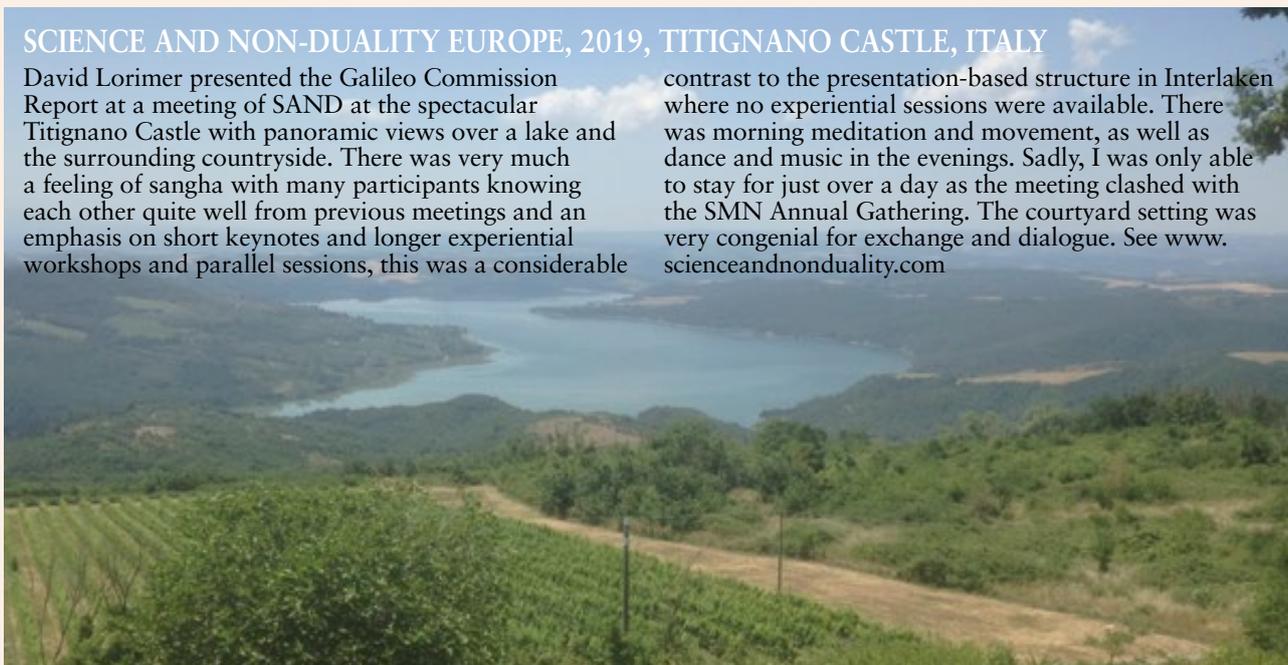
which is god, the Great Spirit or Creation. This emptiness is full of potential. In the body it requires letting go of everything, reverting to basic existence of breathing. It can be experienced by focusing the attention on the basic experience of being. In physics it is represented by singularity and in business Daniel suggests it is the withdrawing of the attention from the stress of decision making, onto something totally different to allow a different perspective to emerge.

The number 12 manifests in many areas of our experiences, as in the 12 musical notes, 12 basic colours, 2 x 12 vertebrae and so on. There are a number of elements associated with each number, such as colour, frequencies and harmonic vibrations. Numbers are powers. It sounded a fascinating perspective which however, we did not have time to explore in further detail but came away with the realisation that in this culture, each number represents a particular way of perceiving the universe from any number of angles.

### SCIENCE AND NON-DUALITY EUROPE, 2019, TITIGNANO CASTLE, ITALY

David Lorimer presented the Galileo Commission Report at a meeting of SAND at the spectacular Titignano Castle with panoramic views over a lake and the surrounding countryside. There was very much a feeling of sangha with many participants knowing each other quite well from previous meetings and an emphasis on short keynotes and longer experiential workshops and parallel sessions, this was a considerable

contrast to the presentation-based structure in Interlaken where no experiential sessions were available. There was morning meditation and movement, as well as dance and music in the evenings. Sadly, I was only able to stay for just over a day as the meeting clashed with the SMN Annual Gathering. The courtyard setting was very congenial for exchange and dialogue. See [www.scienceandnonduality.com](http://www.scienceandnonduality.com)



### NEWS AND NOTICES

#### A Solution for the Wikipedia-Problem: Freewiki

*Joerg Wichmann writes:* Everyone who has tried to find information about any form of alternative medicine or thoughts and sciences based on an open world view in Wikipedia, will know that Wikipedia has become an instrument not to spread knowledge but to manipulate public opinion. FreeWiki.eu is a necessary alternative to the distorted articles in Wikipedia and is meant to draw public attention to this problem. It is also a chance for us to collect solid information in one place where it is easily accessible for everyone. You are invited to participate in this project and introduce your fields of knowledge in form of encyclopaedic articles. Any kind of proposals, ideas, criticism and additions are very welcome. Interested? Register in FreeWiki.eu and write to Joerg Wichmann, [jw@provings.info](mailto:jw@provings.info). *NB – please email for a more detailed announcement.*

#### Research Grants from

#### The John Björkhem Memorial Foundation, JBM

The John Björkhem Memorial Foundation announces grants for the furtherance of parapsychological research to be applied for latest by the 17 November, 2019. The total amount of 70,000 SEK is available to be distributed to large or small research projects. The application should contain a specification of the aim of the project together with a work and time plan for reaching this aim, a budget for the project and statements as to whether or not the results will be published and in what form. For more detailed information, see the Guidelines for Grants from the John Björkhem Memorial Foundation, JBM. Applications in English are to be sent to the foundation's secretary Edgar Müller in the form of e-mails: [adtempus@comhem.se](mailto:adtempus@comhem.se) and also [adtempus1@outlook.com](mailto:adtempus1@outlook.com), (due to expected change of e-mail address).

## MEMBERS' ARTICLES AND ARTICLES OF INTEREST

Available through links or from dl@scimednet.org

## SCIENCE/PHILOSOPHY OF SCIENCE

**Jaume Agustí Cullell**

- *Mind the Intelligent Machines: A humanistic approach to creative intelligence* (16 pp.)

**Alicia Landman-Reiner, M.D**

- *Complementing Reductionism: Goethean Science.* (23 pp.)

**Alan Rayner**

- *What, Most Fundamentally, Are We Made Of? The Revitalising Science, Art and Spirituality of Natural Inclusion* (5 pp.)

**Dimitris J. Panagopoulos**

- *Comparing DNA damage induced by mobile telephony and other types of man-made electromagnetic fields* (10 pp. from *Mutation Research-Reviews in Mutation Research* 781 (2019) 53–62)

## MEDICINE-HEALTH

**Michael Evans**

- *Researching the potential therapeutic action of medicinal plants using a post-reductionist method* (6 pp. from *Journal of Holistic Healthcare*)

## PHILOSOPHY-SPIRITUALITY

**Anne Baring**

- *The Two Mary's of Chartres: The Virgin Mary and Mary Magdalene* (19 pp.)

**Martin Lockley**

- *Kundalini Awakening, Kundalini Awareness* (26 pp., from *Journal of Religious Experience*)

**Harald Atmanspacher and Wolfgang Fach**

- *Exceptional Experiences of Stable and Unstable Mental States, Understood from a Dual-Aspect Point of View* (21 pp. from *Philosophies* February 2019)

**Paul Hague**

- *Healing my Fragmented Mind in Wholeness* (42 pp.)

**David Cadman and Scherto Gill**

- *A Narrative of Love Project Proposal* (6 pp.)

**Dr Larry Culliford**

- *Wisdom: What is it? Why we need it & How to get it.* (8 pp.)

## CONSCIOUSNESS STUDIES

**Max Velmans**

- *The Future of Consciousness Studies – his masterly AGM Powerpoint*

**Mario Beauregard, Natalie L. Trent, Gary E. Schwartz**

- *Toward a postmaterialist psychology: theory, research, and applications* (13 pp. from *New Ideas in Psychology* 2018 21-33)- *this is essential reading!*

**Robert Hesse, Calixta Machado**

- *Transcendent Consciousness – hand out from Interlaken Meeting*

**Andrew Lohrey**

- *The Paradigm of Non-local Realism* (7 pp.)

**Stephen A. Mascari**

- **THE QUALION HYPOTHESES: Some New Proposals on the Physical and Supraphysical Bases of the Conscious Mind (Part** (17 pp from *Journal of Consciousness Exploration & Research* | November 2016 | Volume 7 | Issue 10 | pp. 834-850)

**AK Mukhopadhyay**

- *Communication of the “Objective Reality” as Signal to the Senses in Orchestrated Non-Reductive Way* (14 pp. from *Archives in Neurology and Neuroscience* July 2019)

## ONLINE ARTICLES BY ANTHONY JUDGE

- **Metaphorizing Dialogue to Enact a Flow Culture**

*Transcending divisiveness by systematic embodiment of metaphor in discourse*

<https://www.laetusinpraesens.org/docs10s/metaphor.php>

- **Who to Blame: “Donald Trump” or the “American People”?**

*Let's get real clear on any responsibility for imminent global disaster*

<https://www.laetusinpraesens.org/docs10s/respon.php>

- **Patterning Intuition with the Fifth Discipline**

*Critical review of the*

*conclusion of the 5-fold Patterning Instinct*

<https://www.laetusinpraesens.org/docs10s/pattern.php>

- **Varieties of Fake News and Misrepresentation**

*When are deception, pretence and cover-up acceptable?*

<https://www.laetusinpraesens.org/docs10s/fakenews.php>

- **Enrolling Winnie-the-Pooh's Companions in Climate Change Discourse**

*Key roles in the environmental psychodrama of Hundred Acre Wood*

<https://www.laetusinpraesens.org/docs10s/winnie.php>

- **Comprehension of Requisite Variety via Rotation of the Complex Plane**

*Mutually orthogonal renderings of the Mandelbrot set framing an eightfold way*

<https://www.laetusinpraesens.org/docs10s/mandel3.php>

- **Ecological Mouthprint versus Ecological Footprint**

*Learning action avoidance from rabbits in anticipation of disaster*

<https://www.laetusinpraesens.org/docs10s/mouth.php>

- **Coping Capacity of Governance as Dangerously Questionable**

*Recognizing assumptions and unasked questions when facing crisis*

<https://www.laetusinpraesens.org/docs10s/coping.php>

# book reviews

*Books in this section can be purchased via the Network web site ([www.scimednet.org](http://www.scimednet.org)) from [Amazon.co.uk](http://Amazon.co.uk) and the Network will receive a 10% commission. In addition, the Network receives a 5% commission on all sales if you log on through our web site!*

## SCIENCE-PHILOSOPHY OF SCIENCE

### IMAGINATION AND FORM

David Lorimer

#### ■ THE POETRY AND MUSIC OF SCIENCE

Tom McLeish FRS

Oxford, 2019, 355 pp., £25, h/b – ISBN 978-0-19-879799-9

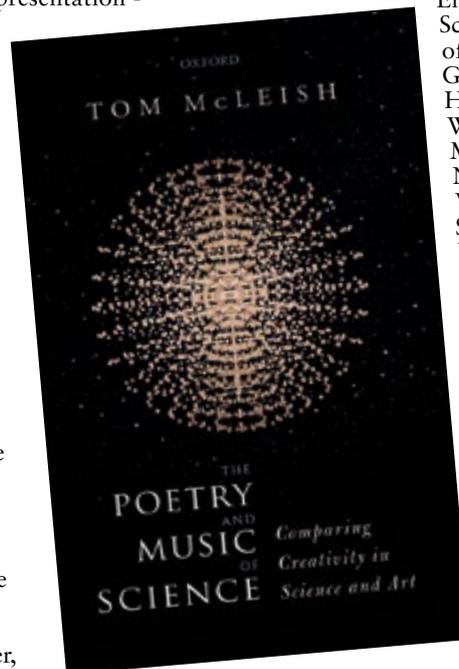
Tom McLeish is a physicist who currently holds an interdisciplinary Chair of Natural Philosophy at the University of York, reviving the old terminology that evokes a wider view and remit for the field. In this brilliant, lyrical and encyclopaedic study of the roots of creativity, he challenges the two cultures thesis by showing how imaginative processes are just as essential and indeed seminal in the sciences as in the arts. Already in the introduction, he demonstrates the power of verbal associations with two lists. The first consists of creativity, inspiration, passion, form, imagination, composition, representation - all commonly associated with the arts. Then we have experiment, design, formulation, method, theory, observation, hypothesis, computation, trial, error - more typical of what we would associate with science, and yet both activities require imagination on the one hand, and form, structure and limitation on the other: the spirit metaphorically informs the letter,

while the letter gives expression to the spirit.

The scope of the book is unusually wide, beginning with creative inspiration in science, then visual imagination and the unconscious, experimental science and the art of the novel, music and mathematics, emotion and reason in scientific creation, and the end (in the sense of goal) of creation. Readers can sense an overall duality here, which runs through the book in diverse forms. A basic distinction arises from the interplay between unconscious and conscious processes, the intuitive and the rational, inner and outer, holistic and reductionist, moral and natural law, passive and active modes of creation, right and left hemispheres (p. 262). Creative imagination is absolutely critical, but the expressions of art and science are both necessarily constrained within a form, whether a musical composition or a scientific theory, which are representations in their respective fields: 'imagination within constraint', as the author puts it.

Using a galaxy of examples - among them Newton, Feynman,

Einstein, Poincare, Schumann, Anselm of Canterbury, Grosseteste, Picasso, Henry James, William Beveridge, Medawar, Milton, Nabokov, Defoe, Wordsworth, Stravinsky and Virginia Woolf - the author delves into the creative process and comes up with a seven stage schema as what he calls an ur-narrative of the creative experience: an initial *vision*, *desire* as an emotional drive, *industry* involving focus and persistence, *constraint*



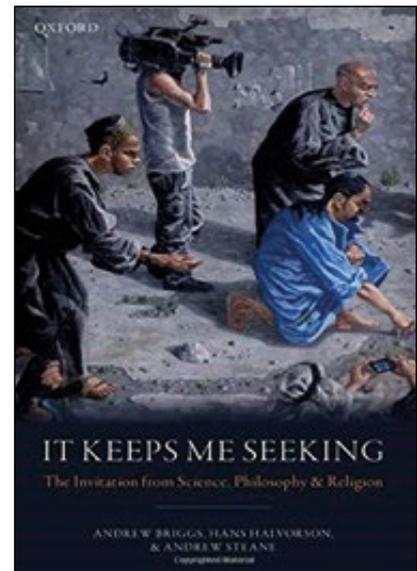
also manifesting as frustration and failure, *incubation*, followed by *illumination* then *verification* and *arrival* in terms of the final work. The rich narratives throughout the book vividly illustrate the detail of this unfolding process, for instance in close-readings involving Schumann's *Konzertstück* for Horns and Orchestra and the fluctuation-dissipation theorem. This particular chapter on creating the sublime concludes that 'both music and mathematics illuminate wordless spaces within the human mind.... and have given witness to the deep role of aesthetics at every point of their creative journeys.' (p. 260) We also learn about Schumann's study of mathematical harmony in Bach while at the same time he is reading the romantic literature of John Paul Richter.

In his chapter on Seeing the Unseen, the author points out that the act of visual perception rests upon the act of visual imagination, and these in turn are predicated on neural and perceptual processes embedded in the human body. He discusses complementary extramissive and intromissive understandings of perception corresponding to active intentionality and passive receptivity, both of which are required in the creative process. In this respect, he could have brought in the scientific work of Goethe in more detail as he not only activated both observation and contemplation, detachment and immersion, but also spoke of new organs of perception required for creative advance. The author rightly observes, though, that 'the thought process is continually in tension between the representation and the thing represented.' (p. 83) This involves 'both projection of imagination onto the world, and reception of impressions from it, that are interpreted through the structures of our inner, mental world.' (p. 85) Later in the chapter, he applies this to cosmological models as they have evolved through history; the models involve imaginative and inductive recreation. Not only do we think as we see, we also see as we think, in accordance with prior mental frames that condition what William James called apperception - the appropriation of the new into our overall scheme of knowledge.

Experimental Science and the Art of the Novel uses texts from William Beveridge - *The Art of Scientific Investigation* and Henry James's *The Art of the Novel*. In both modes of experiment and fiction we do not necessarily know the outcome in advance, but must have confidence in our creative skill and ability. The author conducts a fascinating

exploration of the 'orbits' of the early novel and science, discussing Robinson Crusoe, Newton, Milton and Boyle. A further parallel is indicated by Beveridge when he writes that 'scientific research is not itself a science; it is still an art or craft.' This and other passages put me in mind of the philosopher of science Gerald Holton's distinction between what he calls Science 1 and Science 2, where the first is the actual lived process and the second (usually third person) report lending a certain detachment and objectivity not necessarily present in the actual experience of the experimental scientist. This chapter contains more reflection on the phases of incubation and illumination, along with a fascinating account of the work the novelist Vladimir Nabokov on butterflies, where his morphological comparisons gave rise to a migration theory only confirmed 60 years later by modern genetic analysis.

The chapter on emotion and reason draws on a variety of historical and contemporary sources, explaining the mediaeval distinction between *aspectus* as intellectual apprehension and *affectus* as will or desire. There is an appreciative commentary on the work of Iain McGilchrist and a discussion of the significance of the work of Hume, Spinoza, Humboldt, Bohm and finally of Picasso's *Guernica* as a powerful artistic and emotional statement. As the author puts it at the beginning of his final chapter, 'at every turn we have found the process of creation to draw on the deepest human energies, most radical thought, and most powerful emotion. Hope, desire, cognition, vision, dreaming, craft, skill, expertise, and passion are all summoned in the task of conceiving and realising our imagination.' (p. 301) His foregoing analysis amply supports his thesis and he also returns to the theme of his earlier book *Faith and Wisdom in Science* by reminding us that wisdom and understanding are the ends of all human artistic and scientific endeavour, and that while visual perception tends to create distance, hearing is immersive [T.S. Eliot - *we are the music while the music lasts*]. The major achievement of this landmark study lies in its demonstration of the common sources of creativity in the sciences and the arts and therefore its contribution to healing our cultural rift and creating a harmonious balance between heart and head, emotion and reason, intuition and analysis: we need both in order to be fully human.



## MUTUAL ENRICHMENT

David Lorimer

### ■ IT KEEPS ME SEEKING

Andrew Briggs, Hans Halvorson  
and Andrew Steane

Oxford, 2018, 360 pp., \$25.95,  
h/b - ISBN 978-0-19-880828-2

This rigorous and wide-ranging discussion of central issues at the interface between science, philosophy and religion reflects the formidable intelligence and insight of the joint authors, respectively Professor of Nanomaterials at Oxford, Professor of Philosophy at Princeton and Professor of Physics at Oxford. They are all committed Christians dedicated to grappling fully with the complexities and subtleties of hard problems in all three fields. There are four key themes running through the book: God as a being to be known, not a hypothesis to be tested; the setting of a high bar on what constitutes good argument; the view that uncertainty is okay; and that we have permission to open up the window offered by the natural world in order to see more deeply into it on the basis that it gestures beyond itself to what we experience inwardly in our lives. Evidence and reason are esteemed throughout the book, and the authors note the implications of the mathematical harmony of the natural world, which they regard as 'freighted with meaning' in contrast to the atheistic outlook, unpicking the equating of rationality with this view.

They take Richard Dawkins to task in a number of respects, presenting as he does the evolutionary process as an argument for atheism. The authors regard this approach as a misconceived category error, and reject the idea that God should be

treated as a scientific hypothesis, advocating instead both a positive cataphatic and negative apophatic approach based on knowing and relationship rather than ideas. Andrew Steane describes the process of reading Dawkins as a form of intellectual mugging employing the tactics of propaganda and overstating his case, while also failing to distinguish between facts and his presuppositions. The authors acknowledge their own assumptions in their quest to make sense of the world, making the observation that what we consider real corresponds to this sense-making process and flows from more basic presuppositions. They present a very helpful chart/glossary (p. 36) where they clarify a number of words, distinguishing between their commonly understood meaning and their meaning as used by them. These are critical, and need to be borne in mind - for instance religion as 'a set of practices in relation to beliefs about God' as compared with their view that it is 'a way of living in relation to God', which in turn relates to what they regard as the essential message of Jesus, which is how life is to be lived in the light of his understanding of God. Then again, faith in the commonly understood parlance means 'forming beliefs without evidence' (c.f. Dawkins) while for them it means 'willingness to respond to suggestive evidence.' In this respect, philosophy, theology and science all have unresolved questions to be lived with and processed. (p. 82)

The authors address in a series of chapters and dialogues some of the principal features and ideas of modern science, including machine learning, issues arising from quantum physics, general relativity, biological evolution and the argument from design; from philosophy and theology, they look at naturalism, the nature of human identity, readings of Scripture, free will and attitudes to miracles. From the transition to quantum physics, they take the limit to the validity of reductionism in a dance-of-the-probability-waves picture, and the fact that 'the entangled state cannot be described using any description that tries to model the system as two individual things.' (p. 93) The picture of a deterministic clockwork mechanism can no longer be sustained, but this does not mean that the difficulties around free will have been thereby resolved, rather that human responsibility is not ruled out by our scientific outlook.

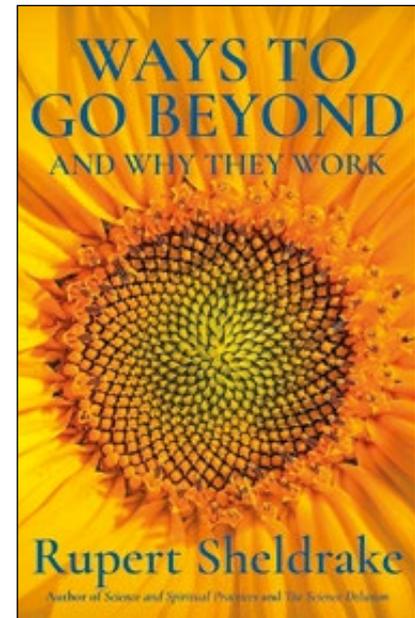
The discussion of the arguments involved in fine tuning and intelligent design are detailed and subtle. They

find the first to be self-undermining in that two aspects pull in opposite directions: 'if the niceness of our particular universe suggests that it was created by God... then it must assume the non-niceness of the laws, so that fine tuning is needed.' (p. 145) Yet God is also assumed to be capable of choosing the laws as well as initial conditions. They also take the view that fine tuning of physical constants is really a 'just so story'. Likewise, they find the complexity argument of ID overstated and some of its claims lacking in evidence. This leads on to a chapter on how they see the story of life on Earth, where they suggest that randomness should be seen as openness and that a better metaphor for selfish genes would be eager. For them, our connection to the rest of life on Earth does not diminish our humanity but should heighten our regard for the natural order and its possibilities. They address the question of suffering, pain and death as part of the God-given pattern of life on Earth while not claiming to resolve it, but rather being left - as we all in fact are - in a position of not knowing and needing to trust the overall process.

A chapter on the relationship between science and religious commitment draws on historical examples from the 13th and 17th centuries by entering into the thought-space and categories of those eras as reflected arguments between a number of leading thinkers. This helps to define the scope of science in discovering 'those truths that are amenable to systematisation and mathematisation', which form only part of our reality. The authors see the practice of science calling for new vocabularies and standpoints that can enrich rather than destroy a religious perspective as a different frame of reference. Their treatment of miracles is extensive in relation to reasonable belief and questions of evidence. Rather than taking sides on New Testament accounts, they prefer instead to treat the stories as 'conveying truths that are important for growth in wisdom.' Their central concern is moral issues and our personal response to these, more specifically the challenges raised by Jesus himself which do not relate to certainty, but rather the importance of developing an overall sense of trust and the practice of love.

Reading and digesting the contents of this book is a demanding but highly rewarding process due to the quality of intelligence and insight into issues central to knowledge and human life. The authors have thought deeply, conversed widely and articulated coherent ways of making

sense of the world that does justice both to the Christian commitment and scientific integrity. Readers are also encouraged to keep seeking for themselves.



## EMPIRICAL SPIRITUALITY

David Lorimer

### ■ WAYS TO GO BEYOND

Rupert Sheldrake (Hon SMN)

Coronet, 2019, 327 pp., £20, h/b  
- ISBN 978-1-47365343-6

Rupert Sheldrake's pioneering work in expanding science and consciousness studies will be well known to readers of this journal, and here he follows up his recent book *Science and Spiritual Practices* with a further volume on the same theme. He covers the spiritual side of sports, learning from animals, fasting, psychedelics, prayer, festivals and the cultivation of good habits, before concluding with a chapter discussing why spiritual practices work. As he states in the introduction, he is a strong believer in the scientific method and empirical enquiry, extending his interests into areas where most scientists fear to tread. The book is a further valuable contribution to overcoming the separation between science and the spirituality. Rupert defines the term spiritual as 'a flow of consciousness that connects us to more inclusive, higher forms of consciousness, and even to the source of consciousness itself.' (p. 68) In each chapter, the practice is related to strands of scientific research and the wider cultural background where there has never been such widespread access to the spiritual wisdom of the world across many traditions. Then at

the end of every chapter there are a couple of suggestions for practice.

Rupert elaborates on the spiritual side of sports elsewhere in this issue, providing some interesting evolutionary background and discussing the experience of flow, the thrill of speed and oriental martial arts, where he relates an interesting experience of his own when he confronted a celebrity beating up a woman simply by focusing his energy in his *hara* centre, in accordance with his Aikido training. The effect was dramatic. The chapter on learning from animals summarises Rupert's research in this area within the overall context of human-animal relationships. He sees psychic phenomena such as telepathy as part of our biological nature, providing evidence from his own work, also on human telepathy. He also draws out some spiritual lessons from animals in terms of humility, unconditional love and living in the present.

Fasting has been a common practice across many cultures and is making a health-related comeback in our time. Rupert covers physiological effects of fasting, including the impact of ketosis on the brain and its potential impact on rising levels of obesity and diabetes. In some cultures, there is a practice of fasting to death while elsewhere there is evidence that exceptional people have lived for long periods without eating. The chapter on psychedelics brings in the impact of Rupert's own experiences (also those of Aldous Huxley) and the revival of neurochemical research in the area - here he gives details on the exact processes involved, while also covering cross-cultural spiritual understandings and religious arguments against the use of psychedelics. His overall approach is imbued with the sacred as the title of the chapter suggests in incorporating spiritual openings.

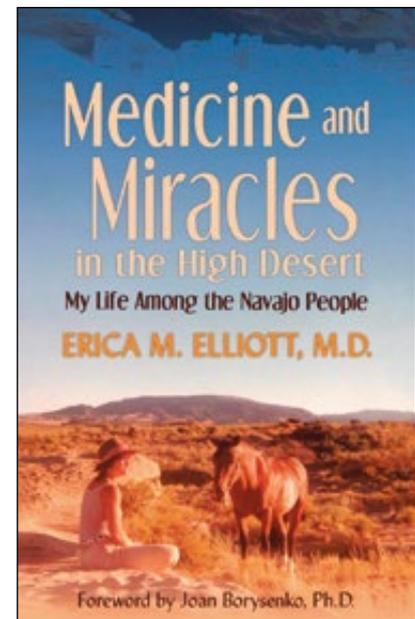
While the first book covered meditation, this one addresses the powers of prayer as a relationship with more than human consciousness. Rupert himself practises both meditation and prayer, comparing the first to breathing in and the second to breathing out. An interesting consideration is that minds are transparent or porous to gods and spirits, enhancing the overall sense of connection. Some prayer is directed to healing, while research shows positive correlations between prayer and health and happiness. References to the relationship between prayer and positive thinking are connected with both positive psychology and New Thought; in this latter respect, there is a great deal more historical

material than Rupert has the space to mention. He refers to Wallace Wattles as an influence on Rhonda Byrne, but in my view the work of Thomas Troward, Charles Haanel and even Earl Nightingale is much more profound.

The sacred theme continues with holy days and festivals, related to pilgrimage and holy places covered in the first book. These can give a rhythm to both the week and seasons of the year in our current era where 24/7 commercial activity predominates. Our ancestors used seasonal festivals to connect with the larger cycles of nature, as Rupert shows in his discussion of Christmas, Easter, May Day, Midsummer, the feast of Angels and St Michael, and finally the festivals of All Saints and All Souls in early November. As I mention in the work of William James, the cultivation of habits is related to the development of good character. Rupert discusses virtues as good habits, drawing on a number of traditions, but here he could also have highlighted the contribution of Aristotle and its current manifestation in the revival of virtue ethics. He discusses the evolutionary roots of human morality as well as selfishness and cooperation, including within insect societies, the relationship between morality and conscience, and vices as bad habits, concluding with an emphasis on the importance of practising kindness.

The final chapter asks why spiritual practices work. While many people take them up for health or happiness benefits, their deeper significance lies in 'making a connection to a greater consciousness, or presence, or being' (p. 246) as a result of which we may even experience bliss. Even if such practices make little sense within a mechanistic and unconscious universe, there are now atheist meditators and secular Buddhists, a phenomenon that moves the goalposts in an interesting way. In terms of metaphysical structure, Rupert compares various versions of the threefold nature of God, relating this to scientific thinking where 'the laws of nature play the role of the Logos, the principle of form and order, and energy is the Spirit principle.' (p. 256) Logos also operates in formative fields. He notes the emergence of a philosophy of panpsychism in many formerly materialist philosophers, adding the panentheistic perspective of his friend Matthew Fox. His overall message is that spiritual practices can lead us to a greater sense of connection with the whole while at the same time expanding our kinship with people, animals, plants and nature, and encouraging the practice of

kindness. (p. 270) As such, they can contribute to our spiritual evolution. Taken together, Rupert's two books on science and spiritual practices provide an invaluable compendium of 'ways to go beyond' that can enhance our sense of connection and interconnectedness, which could not be more important in view of the planetary challenges we face.



## MEDICINE-HEALTH

### A NAVAJO INITIATION

David Lorimer

#### ■ MEDICINE AND MIRACLES IN THE HIGH DESERT

Erica M. Elliott MD

Balboa Press, 2019, 184 pp., \$14.99, p/b – ISBN 978-1-9822-2098-3

This vividly written account plunges the reader straight into the author's medical crisis on her first night duty at the Cuba medical centre in northern New Mexico. A Navajo medicine man has been repeatedly run over and is dead on arrival. The conditions of work are appalling and every previous medical director has tried to leave, submerged by lack of support, sleep and overwork. Friends and relatives of the dead man are taken aback by her speaking the language as she compassionately explains the circumstances - then immediately has to deal with life-threatening seizures in a pregnant woman. It is already well past midnight, and work continues until it is daylight and beyond.

Then go back 15 years to the autumn of 1971, when Erica arrives to teach a class consisting mainly of Navajo

children. When she greets them, they look down and say nothing. Only later does she realise that this is because of deep shyness and that to avoid her gaze is a gesture of respect. This is her first lesson in 'one of the most impactful and transformative educational experiences of my life.' We disrespectfully impose our worldview on these people, who have their own language, traditions and culture. So the first thing is to learn this very different language, not without its hazards as a slight difference in intonation completely changes the meaning. Erica immerses herself in the culture and language, and it is not long before she is receiving invitations to visit her pupils and their families at the weekend.

This is just the start. She spends the night in the Canyon de Chelly, waking up in her sleeping bag to find that a mountain lion is sniffing her only inches from her face. She freezes in terror, but nothing happens and she wakes up again in broad daylight. Unwittingly, she had done the right thing by not moving, and learns from an old woman that she was in fact really lucky that the lion came to her as a spirit guide to give her 'his courage, strength and intense focus because I would need those for what lay ahead.' She would face many obstacles, but if she lived through them she would have 'a strong heart and powerful medicine to give to the people.' She takes part in many sacred ceremonies, the first for the healing of a sick baby, but later she herself experiences the complete healing of a hard lymph node thought by a specialist to be potentially cancerous. This totally disappears during the ceremony, one of the experiences that 'blew my concept of reality to smithereens.' She learns about the history and devastation in 1863 by the U.S. Army. She encounters magnificent wild horses and other subtle presences in the Canyon. She also learns to share in a culture where individuality is subordinate to the community good.

Some situations she describes are life-threatening. A drunken man smashes a window in her house, leaving shards of glass embedded in her skin. She reluctantly goes off with a friend and two men, only just escaping with her life while her friend is brutally beaten and raped. The friend is so terrified that she does not speak up to police, for fear that she would be stalked and killed in revenge. She learns to weave rugs and arranges to spend the summer of 1973 herding 597 sheep belonging to the parents of her friend Marshall. This proves to be another initiation into the Navajo way of life where she strikes up good relationships with his parents

and a horse called Jimmy. All this is recorded in graphic daily bulletins written at the time. She marvels at the landscape, sits on Jimmy for hours, sometimes lying on his back to look at the shapes of the clouds and watch them drift by overhead while reflecting on her life purpose. She learns how the sheep are sheared and slaughtered (there are many illustrative black-and-white photos). At the end of the summer, the family expects her to stay and probably to marry Marshall. It was a wrench to leave, but her life had to move on even though she felt an overwhelming sense of grief and loss.

Erica returns to her home in New Hampshire, then volunteers for the next two years in the Peace Corps where she is posted to a remote village in Ecuador. It turns out that her Navajo experience was essential to establishing an empathic connection with these people and she finds herself unwittingly healing people and creating high expectations in this respect; only later does she learn about the placebo in medical school. She revisits Red Rock - Jimmy whinnies when he spots her, nuzzling up against her chest. The book then comes full circle back to the medical centre in Cuba, New Mexico, and two Navajo people offer her a special ceremony in gratitude for her work; she meets Tom Dwyer and they have a son, Barrett. Finally, back to the present where Erica's experience continues to live in the fibre of her soul and depths of her heart. The book conveys a powerful message of indigenous wisdom and empathy, reminding us to go silently within and to walk with beauty and courage on the Sacred Earth. It is a riveting and illuminating read.

## VIBRATIONAL MEDICINE

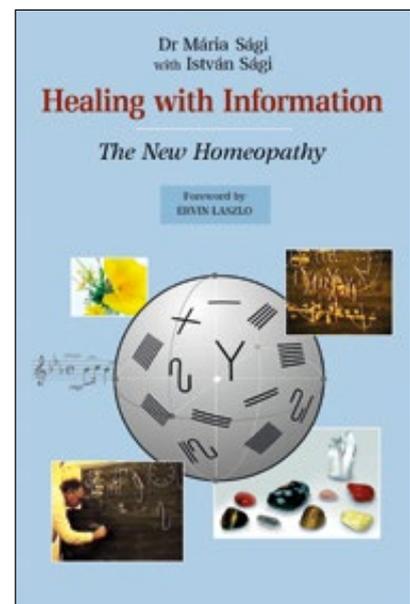
David Lorimer

### HEALING WITH INFORMATION

Maria Sagi with Istvan Sagi, foreword by Ervin Laszlo (Hon SMN)

O Books, 2018, 417 pp., £20.99, p/b - ISBN 978-1-78279-858-3

Subtitled 'the new homeopathy', this book builds on the work of the Austrian scientist Erich Korbler (1938-1994) with whom Maria and Istvan studied and collaborated until his death 25 years ago. In 50 years' time, it will be retrospectively obvious that we are in the process of moving from a primarily biochemical and molecular approach to one based on information and energy consistent with the principles of quantum physics. Here the language is one



of vibration, coherence, frequency, complexity and resonance, with information driving biochemical change. Living organisms try to maintain internal and external organic coherence as dissipative structures through which information is flowing.

We are in constant interaction with our surroundings, and a vibrational view will prove important in relation to new frequencies we are exposing ourselves to, for instance on the 5G network. The new view emphasises the exchange of biochemical, electromagnetic and quantum information. Patterns of information and energy sustain life functions within the human body, but these can be disrupted and in turn healed, in this system using modalities including 'informed water'. The authors postulate that this works through quantum electric dynamic mechanisms of water molecules in the body. Healing information 'corrects the flawed information causing disease and thus strengthens the immune system and activates self-healing processes that then lead to cure.' (p. 52) Disease is seen as a solidified change pattern that is not coherent with life functions.

The three main parts of the book cover principles and theories, using the system in healing, and a selection of articles published since Korbler's death. The authors explain the role of information in living organisms and what happens when it breaks down, then the scientific background of the new homeopathy in terms of electromagnetic waves, thermodynamics, chaotic attractors and coherence. These ideas are expanded in a chapter on conceptual foundations, with the cell as a receptor and reflex zones representing the whole body in microcosmic form.

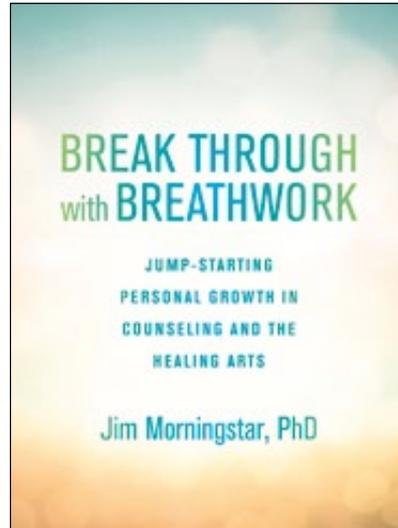
At this point, the new K-dowsing rod is introduced with experiments and reported findings - more on this below. One of the fascinating aspects of this approach is the use of geometric symbols as information in healing, including the equal armed cross, the Y and the sine curve. There are extensive descriptions of using the system with detailed case histories giving an insight into its workings. These also have a psychosomatic dimension, highlighting the role of information as positive thinking in the placebo effect. There are specific sections on the diagnosis and therapy of mycosis, food allergies and geopathic radiation.

It is very clear that Korbler was way ahead of his time in terms of his insights and healing modalities. I ordered a Korbler Dowsing Rod after our meeting in Italy last autumn, and followed the instructions on how to use it. It has a wooden handle at one end and a small ball the other and is 64.5 cm long. It works as a receiving antenna for electromagnetic and other waves in the environment, with the handle acting as electric amplifier and the PVC stick providing the antenna effect. One pole is the body of the person holding the handle, while the other is the wooden ball held close to the object under examination. It shows 'subtle energy interactions between the tester and the tested material, revealing to what extent the information of the tested material is favourable or unfavourable for the tester's organism.' (p. 91) An initial test establishes whether the tester is in the 85% category where a positive effect is reflected a horizontal oscillation - this was my case.

I then tested an apple, and sure enough the rod oscillated horizontally. This also works for photographs and books. I got a tremendously powerful horizontal oscillation when looking at a photograph of Peter Deunov, and also when I held one of his books of lectures. A photograph of Voltaire produced a mild vertical oscillation, and there was a more powerful vertical oscillation in the region of my Linky smart meter. My computer also produced a vertical oscillation, while a rose quartz crystal was powerfully horizontal, much more so than a piece of granite I found in Cornwall. An LP of Bach organ music produced a strong horizontal oscillation as well. Then I tried a suggested test where I held the glass of salt, which produced a vertical oscillation, but when I touched a Y symbol I had drawn on a piece of paper, the oscillation was transformed into a horizontal one, as described in the book - interesting... This gives a small indication of the power of these geometrical symbols, which can also be drawn on the body

at certain points. More generally, the rod can be used for testing foods.

The book will be of particular interest to those already engaged in medicine and healing, although the general reader can also follow up on many of the suggestions, especially relating to the K-Rod as I have described. It is an important stepping stone in the gradual evolution of informational and vibrational approach to healing and medicine.



## A NEW APPROACH TO HEALING THERAPY

Gunnel Minnett

### ■ BREAKTHROUGH WITH BREATHING IN COUNSELING AND THE HEALING ARTS

Jim Morningstar, PhD

North Atlantic Books, 2017,  
224 pp., £18.99, p/b - ASIN:  
B01N208T8T

Jim Morningstar is a true pioneer in Breathwork Therapy. Since the very first attempts to use the breath in therapy in the 1970's, Morningstar has been working to develop Breathwork as a new healing technique. Through his School of Integrative Psychology, that he founded in 1980, he has dedicated his working life to the development of a new form of Psychotherapy that he calls Therapeutic Breathwork.

Part of this new approach has been to re-define the role of the therapist from someone with all the knowledge and ability to 'treat' a person's problems to being one of the participants in a healing process. In his own words: "As a breathworker I have the willingness to step into another's world while staying grounded in my own, to go beyond my mind and also stay boundaryed, to be both a teacher

and student and keep balance in the process, seeing the client as both a mirror and a sacred companion in the co-creation of a new model of being whole relational beings." (p 30)

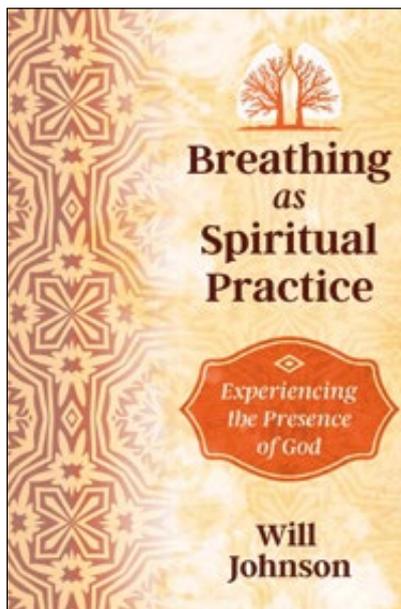
Working with the breath in a therapeutic context means working with a subtle energy, in a way that is far less structured than conventional therapy. In particular compared to 'talking therapies' such as psychoanalysis where the therapist can follow a clear structure for how to conduct the therapy session. In a breathwork session the therapist has far less control. His/her job is focused around guiding the client's breathing pattern and to be totally open to the direction this will take the client.

When a client is guided to release and relax the breathing, this tends to 'release' thoughts, emotions, memories (both mental and physical) from the unconscious. Just as with dreams, it is a number of factors that influence the content of a dream. And just as with dreams, it is impossible to guide or determine in advance what dream a person will have (even if events in the daily life may indicate the type of dream a person is likely to have at a particular moment.)

In his book Morningstar gives examples of what this new approach means for both therapist and client. How the therapist has to be prepared to 'learn on the job' in each session both how best to help the client but also how to be willing learn more about themselves. As a therapist this means being prepared to be vulnerable in front of a client. It may also mean being humble to one's own limitations. But above all it may mean being willing to be on a constant journey into unknown inner territories.

This kind of work requires good preparation and Morningstar presents a thorough theoretical framework that forms the base of Therapeutic Breathwork. He looks at the basic requirements for the setting of the session, the underlying psychology theories, trauma work, an integrative approach to breathing patterns and how to handle the experiences in the therapy sessions outside the therapy room.

Apart from being a much the definitive textbook on Therapeutic Breathwork, this book also offers a good insight to the potential of Breathwork therapy in general and should be of great interest for anyone interested in a new, exciting way of exploring the human mind.



## THE WONDER OF BREATHING

Gunnel Minett

### ■ BREATHING AS A SPIRITUAL PRACTICE, EXPERIENCING THE PRESENCE OF GOD

Will Johnson

Inner Traditions, [www.InnerTraditions.com](http://www.InnerTraditions.com), 2019, 160 pp., p/b, £14.99 - ISBN 978-1-620556-887

This book can be described as a daily journal written by someone on a spiritual retreat in a monastery. The author is not part of the monastery, only a visitor. The focus of his retreat is to pay attention to his breathing. Just that. To focus on every breath he takes, all day, every day for as long as he stays there. No more, no less. Coming from a Buddhist background, he wants to follow Buddha's instructions on the awakening of the awareness of breath; "as you breathe in, breathe in through the whole body; as you breathe out, breathe out through the whole body."

This simple activity turns out to lead to a big inner change. By simply paying attention to the breathing, breath by breath, his awareness starts to expand. What Buddha was referring to was not just to breathe in air, he also pointed to a spiritual aspect of breathing: it can expand your consciousness and become a spiritual path to a higher potential.

As a journal of someone on a spiritual path, the book is beautifully written with several poems and suggestions as to how to pursue the experience of expanding the

breathing. But personally I think the book would have benefited from a physiological explanation of breathing; understanding the central role breathing has in the body would have added to an understanding of the spiritual dimension. To make us see that breathing is not just vital for our survival and physical wellbeing, but also a powerful way to deepen our understanding of ourselves and how it can make us expand our consciousness and inner wellbeing.

I have been using breathing as a tool for expanding inner wellbeing since 1980 and have experienced how people have started an inner journey, similar to the one described in this book. It does not matter in what context a person starts to become aware of the potential of the breath. When the person starts to be aware of their breathing, either through altering their breathing pattern or simply by observing the breathing, they tend to start an inner journey.

If this type of comparison had been added to the book, it would have added a new dimension to the personal journey described. Nevertheless, the book offers a very interesting insight to the powerful tool which our breathing can be.

## PHILOSOPHY- SPIRITUALITY

### A PURPLE ROBE - MARGINALISING GNOSIS

David Lorimer

### ■ CATAFALQUE – CARL JUNG AND THE END OF HUMANITY

Peter Kingsley

Catafalque Press, 2018, Two volumes, 825 pp., \$75, h/b - ISBN 978-1-9996384-0-5

In this radical and passionately intense work of coruscating brilliance and at times sacred indignation and scathing denunciation, Peter Kingsley places Western culture on a catafalque, an image he received in a powerful dream and which signifies a wooden platform on which a coffin is placed. In 1917, Oswald Spengler published his landmark study *The Decline of the West* and now, just over 100 years later and building on the work of Carl Jung, comes Kingsley's stark declaration that Western culture is in fact already dead. This may be a surprise to progressive technologically minded people, but much less so to the more spiritually aware and exactly for

the reasons that Kingsley identifies, namely that we have lost touch with our primordial roots, as he also argues in his earlier works *In the Dark Places of Wisdom and Reality* about the significance of Parmenides and Empedocles for the origins of philosophy. Native Americans tell him that his duty as someone who remembers what most people have already forgotten, is 'to shock people into an awareness that all life comes from, and returns to, the sacred.' (p. 17) In Gnostic traditions, the fall is understood as a descent into separation, density, forgetfulness and sleep, hence gnosis - and initiation more generally - is an experiential remembering of one's true divine identity. Indeed, the Greek word for knowledge is *aletheia*, signifying not forgetting. As Plotinus said, 'Remembering is for those who have forgotten', which means most of us.

It is impossible to pick out more than a few key themes from this magisterial and profoundly significant book, and these will necessarily reflect my own concerns and understanding. The first volume runs to 445 pages, while the second consists of 344 pages of notes plus the index. Hence there is a staggering scholarship behind this study, with each note often consisting of up to 20 related references with commentary. Since the publication of Jung's extraordinary *Red Book* 10 years ago, it has become impossible to deny his role as a prophet, mystic and Gnostic, although some Jungians continue the attempt to rehabilitate 'the mystical fool' into some form of respectability and therefore rational acceptability. Jung himself is only too aware of this when at the beginning of the *Red Book* he contrasts the spirit of this time with the spirit of the depths. The first would like to hear of use and value, 'but that other spirit forces me nevertheless to speak, beyond justification, use and meaning.' Jung explains that he took away his belief in science, forcing him down to the last and simplest things and placed his understanding and knowledge 'at the service of the inexplicable and the paradoxical...the melting together of sense and nonsense, which produces the supreme meaning.' The spirit of the time is blind to what really matters, preferring to live on the surface rather than plumbing the depths, seeking out what is rational, reasonable and therefore comfortable and respectable.

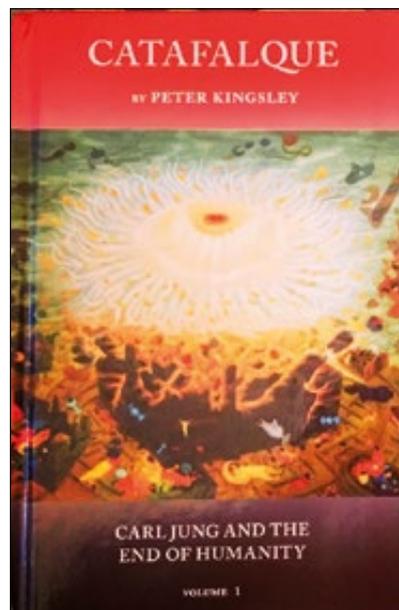
Kingsley writes that 'it is bound to be the case the only possible approach to the reality of the prophets will always be from the scorned side, the silenced side, the disgusting side of prophecy. At the end of the day

the only lasting good is going to come from the side openly mocked by rationalists, disposed of by Jung scholars, rejected by Jungians, even repulsive to Jung himself.' (p. 285) This is the purple robe put on Christ as prophet so that people could mock him and eventually kill him - the same fate has befallen many luminaries since his time, while rationalists from Aristotle onwards have mocked prophetic inspiration and ecstasy as unsound: reason can kill the living spirit. In the Gnostic Gospels, including *The Gospel of the Beloved Companion*, Jesus is a wisdom teacher who has realised gnosis and speaks directly from the Spirit. He is one with the Spirit and the Spirit is one with him. Those representing the letter and the law, including Peter, do not understand what he is talking about and refer to his 'strange and complicated ideas.' Nor do they understand the mystical vision of Mary Magdalene, the woman who is 'freed from the fetters of forgetfulness' and has 'seen the All..the truth of your Self, the truth that is I am.' Thus she becomes the 'completion of completions.'

In the famous BBC interview with John Freeman, Jung does not say that he believes in God, but rather that he knows God - it is not a question of belief, but of knowing: 'the existence of a transcendental reality is, indeed, self-evident... That the world inside and outside us rests on transcendental background is as certain as our own existence...' (p. 758) Jung represents the prophetic fire and spirit, but this is too intense for his followers, as it was for the followers of Jesus. Gnosis is translated into institutional dogma, 'the spirit and fire of the Christ had to vanish, be stamped out' so that the birth of the Church is a second crucifixion and death; 'and after that, the only way the spirit of Christ could stay alive was inside the heart of a few hidden heretics and mystics.' (p. 400) This is still true today. The foundation of the C.G Jung Institute in Zürich provides a telling example. Jung himself stated that the primary aim and focus of the Institute would be interdisciplinary research in a whole range of subjects, while his followers were amazed that Jung had not grasped that the main purpose of the Institute was to train analysts. Hence, as Kingsley puts it, 'In Jung's own name, officially and very efficiently, Jungians were managing to get rid of Jung.' (p. 396)

Kingsley shows how Jung stands in the initiatory lineage of Parmenides and Empedocles, whose wisdom was acquired from the spirit of the depths and who incarnated the real meaning of prophecy as

people who speak on behalf of the divine reality within: 'one who at any moment in history speaks or writes or communicates faithfully, accurately, without interfering with the process, on behalf of the divine, serves as a mouthpiece to record exactly what the sacred is needing to convey.' (p. 293) So to become a prophet means 'returning deep into the past until you are brushing against the root of yourself, your primordial beginning and ultimate point of origin.' (p. 298) Their role is always to conform to the divine will and to state what the collective awareness of people is not yet able to grasp, still less to face: the collective darkness which is unconsciously projected outwards onto others as the shadow. Jung himself explains (p. 300) that the primordially ancient



is something new, and that 'the task is to give birth to the old in a new time.' Kingsley then adds, with startling emphasis that 'without prophets willing to take us back to the primordial reality of what we are, we have no future left.'

This is exactly where we are as a culture. We are cut off from our ancestors, from our roots, from our centre, from the sacred, from our deepest identity, and we urgently need to return to this source. There are striking parallels here with the work of John Moriarty whose last autobiographical book is called *Nostos* or homecoming and who writes that we are so concerned with rights that we have virtually forgotten about rites, existing as we do 'in the narrow circle of sensory-intellectual light' where 'the excluded soul is the great calamity of our age', prioritising as we do information and knowledge over wisdom.

Kingsley refers to the ancient Greek mystical process of rebirth out of the personal into the impersonal so that we no longer live for ourselves and can become a source of life for others. Simone Weil in her essay on human personality also identifies the impersonal with the sacred as the realm of truth and beauty. And TS Eliot writes of the need to 'be still and still moving/into another intensity/for a further union, a deeper communion' - the process is necessarily intense, 'a condition of complete simplicity costing not less than everything.' This is symbolised for Kingsley by rebirth in the Grail cup of redemptive and intentional suffering, dying before we die, stripped away to nakedness - the journey recounted by Chris Bache in his forthcoming book *LSD and the Mind of the Universe* describes a similar transformational process on behalf of the collective. As Kingsley puts it in the last sentence of the book: 'it's only by shedding everything, including ourselves, that we sow the seeds of the future.'

Cleverness is not enough, rationality and reason are not enough; they both depend on deeper layers of the psyche that the left hemisphere has forgotten and even denies, as Jung and Kingsley insist: mysticism is more fundamental than theology, as Aquinas realised at the end of his life. However, the indigenous people have not forgotten, as we are beginning to learn - they remember our primordial and original instructions and some, like the Kogi, even send out messages to us as the younger brothers. These two aspects of ourselves represented by left and right hemisphere thinking (Iain McGilchrist's work dovetails well here, even though not mentioned) must be restored to balance, a process that prophets like Jung and Kingsley attempt to undertake within themselves and which involves listening to dreams and noting synchronicities that shape our lives. Kingsley gives a stunning example from his own life, linking up an unexpected viewing of a programme about Jung at the age of 14 at the flat of a girlfriend with his amazing unconsciously guided drive across the continent where he finishes up in the dark at Jung's Bollingen retreat, suddenly illuminated by moonlight and resulting in a profound new sense of self and of his mission 'living so close to a mystery that one becomes it.'

The last part of the book introduces the friendship between Jung and Henri Corbin, based on many conversations with his widow. Kingsley sees Corbin as both a mystic and an academic rescuing

through Sufism a real understanding of the imagination that the West had forgotten: 'philosophy, logic, science, even the apparent arts of reason, all have their origin in the experience of another world.' (p. 364) He adds (p. 727) that 'there is no true philosophy which does not reach completion in a metaphysics of ecstasy, no mystical experience which does not demand serious philosophical preparation. And such precisely was the *dawning wisdom*.' Corbin was almost unique in giving the feeling to Jung that he had been completely understood, something which I believe Kingsley has also achieved.

Only a few insights from the multifaceted richness, subtlety and penetration of this alchemically transformative book can be conveyed in a review, and I urge readers to invest time in studying this extraordinary work and pondering its profound significance not only for our perilous times but also with respect to our own spiritual journeys of individuation 'as the life in God and through God' – how we can speak from the divine reality within us. Then perhaps, at last, the repressed wisdom of the gnostic Sophia can shine a light into the dense darkness of our unconscious culture.

## GNOSIS AND INSUBORDINATION

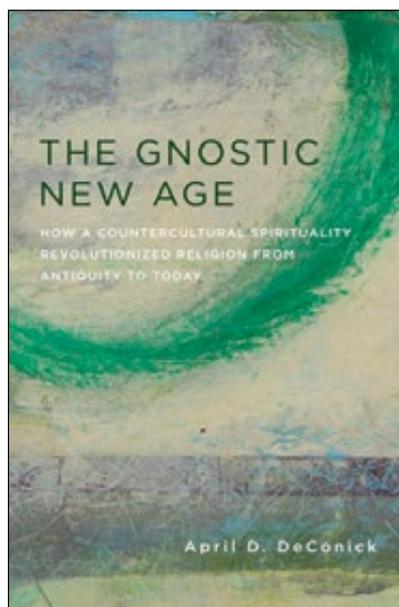
David Lorimer

### ■ THE GNOSTIC NEW AGE

April D. DeConick

Columbia University Press,  
2016, 380 pp., £22, p/b – ISBN  
978-0-231-17077-2

Subtitled 'how a countercultural spirituality revolutionised religion from antiquity to today', this authoritative and fascinating study traces the influence of ancient Gnostic thinking on modern spirituality as a transgressive force. Transgression is defined as 'breaching a norm that has become recognised by a powerful group as a prescription, law, or custom. It is the act of crossing a line, stepping over a boundary, moving beyond convention, straying from the straight and narrow, overstepping a limit.' (p. 289) This quotation already encapsulates one of the central themes of the book in the relationship between the Apostolic Catholics and Gnostic groups. The former developed political power to enforce sanctions against what they regard as deviant views, creating a norm and defining orthodoxy over against heresy. Faithful sinners subordinated themselves to the Church while errant Gnostics were insubordinate



in asserting that they do not need the Church as an intermediary in order to have direct access to the Divine. They claim that our essential human self or spirit 'is nothing less than God's very own life essence' waiting to be reawakened through gnosis.

In her historical treatment, the author characterises early expressions of spirituality in Babylon, Egypt, Greece and with the Hebrews as 'servant spirituality', reflecting the society of the time with dominant elites controlling a subservient populace. This then evolves to 'covenant spirituality' in the Old Testament and in initiatic traditions to 'ecstatic spirituality'. By insisting on the God within perceptible through the *nous* and in the experience of gnosis, the Gnostics inverted this message of servitude, which represented a major transgression to the dominant orthodoxy. A Hermetic hymn by Asclepius refers to:

*Mind (nous) by which we know you,*

*Reason (logos), by which we seek you  
in our dim suppositions,*

*Knowledge (gnosis), by which we  
rejoice in knowing you.*

Two central theological chapters address the influence of Paul on both Apostolic Catholicism and Gnosticism and the controversy over Gnostic and orthodox readings of the Gospel of John. Paul defined himself in contrast to the Jewish law and the church in Jerusalem under James, and his own conversion is described by the author as an extra-ordinary Gnostic incident. Significantly, he does not consider the father of Jesus to be the tribal God Yahweh but the One God Yahweh who transcends the tribe. This dual understanding is central to the two readings of John, where the

old tribal god becomes the adversary. The author characterises Jesus in the Gospel of John as the Descendent Light and his early followers as Children of Light. She makes an interesting case that the Gnostic Cerinthus (pp. 156-7) was the author of the Gospel and discusses the role of Simonian Samaritan converts, characterising the worldview of the Gospel as 'a unique cognitive blend'. She explains how the orthodox author of I John asserts the doctrine of sacrificial atonement, rejected by the Gnostics. Irenaeus in his *Against the Heresies* claims that the apostle John wrote the fourth Gospel in order to stamp out Cerinthus' teachings, and the final chapter containing the statement of authorship is added later to showcase the faith of Simon Peter. However, reviewing the evidence, the author concludes that Cerinthus' views on the fourth gospel are in line with the Children of Light and that his 'interpretation of the fourth Gospel matches their point by point. In fact, it represents the oldest reading of the fourth Gospel and aligns perfectly with the Gnostic predisposition of the gospel.' (p. 157) This is hugely significant and she sums up the overall scheme, commenting that we become friends of God rather than servants, and that it is our ability to love that makes human beings transcendent.

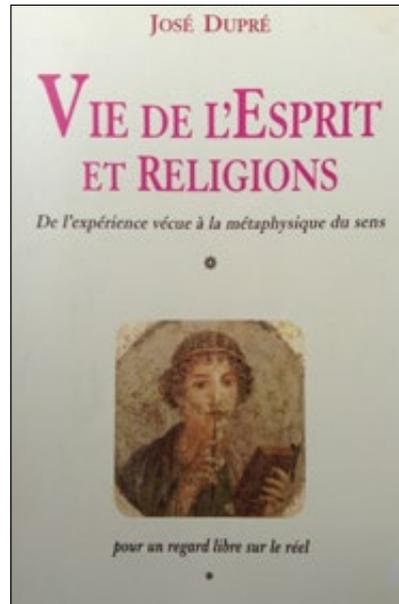
The Gnostic story is the story of the human self with its transcendent origin and the inherent dynamic of a fall into dark and dense matter involving separation and ultimate return, falling asleep and awakening, forgetting and remembering, descending and ascending from darkness back into light. The author identifies and illustrates different therapeutic ritual dramas involving purging, recovery and integration of the fallen spirit merging with God 'in a bath of Being or in an embrace of the sacred erotic.' (p. 175) These are described in some detail and what I found most fascinating was Gnostic incubation in silence, which represents 'both the primal state of the ineffable God they seek and a bodily practice in which they engage to withdraw into this primal state as they return to the source of life. The primal God in Gnostic myths is a silent God, and the goal of the Gnostic journey is to withdraw back into this original silence, rest, and stillness. Silence is considered the state of utter transcendence, the very essence of ultimate reality in its original condition.' (p. 182) Living silence is a state of silent light. I found this an extraordinary description of a non-dual state attained in meditation, but the author does not mention this word or draw such comparisons with

modern forms of spirituality. The initiated is one who has 'come to know the immortal spirit of light in silence', surely a very good description of enlightenment. Chanting was also used to attain ecstatic states.

In a chapter on spiritual avatars, the author describes the lives and ideas of the brilliant Valentinus and his followers Heracleon, Ptolemy and Marcus. There are three categories of people are *hylics*, corresponding to matter and the biblical Cain, *psychics*, corresponding to the soul, Abel and the faith of Apostolic Catholics, and *pneumatics*, corresponding to gnosis, the spirit and the biblical Seth. The implication of this categorisation is subversive in that *pneumatics* are spiritually more advanced than *psychics*, an assertion that gave rise to orthodox criticisms of arrogance or hubris and an evolving insistence on plain or literal readings of Scripture. As the author rightly indicates, this is a struggle over the value of different kinds of knowledge - *gnosis* and *pistis* (faith), esoteric and exoteric, mystical and doctrinal. Here it might have been useful for the author to quote the work of Clement of Alexandria writing in the mid-second century and establishing a progressive continuity rather than contradiction between *pistis* and *gnosis*, although he writes as what one might call an orthodox Gnostic. The life, teachings and influence of Mani are also described, including a poem where he writes: 'I knew him, and understood that I am he from whom I was separated. I have witnessed that I myself am he and (we are) the same.' A classic statement of gnosis. His religion survived in the West until the sixth century - other movements covered include the story of Jeu and the developments of Mandaeism (*manda* means to know).

This brings us up to the present, and I should mention that throughout there are interesting parallels drawn between Gnosticism and the message of contemporary films. The final chapter describes four gnostic awakenings -, or, strictly, reawakenings: the first in the mediaeval period involving Paulicians, Bogomils and Cathars, the second in the Renaissance rediscovery of Hermetic texts by Ficino and others, the third during the 19th century with the discovery of the Bruce and Askew codices and the translation of *Pistis Sophia* by GRS Mead and the fourth, ongoing, following the discovery of the Gnostic texts at Nag Hammadi. The author summarises the significance of the shifts involved and their parallels with a new-age or spiritual but not religious orientation that ditches the focus on sin and retribution, bringing in instead the God of love that Gnostics

claimed to know. The detail of the modern manifestation would require another volume with more extensive discussion of the contribution of CG Jung. However, the author has performed a great service by showing the historical and continuing role of transgressive spirituality based on personal experience and representing a massive Gnostic awakening in our time.



## BEING AS PRESENCE

David Lorimer

### ■ VIE DE L'ESPRIT ET RELIGIONS

Jose Dupre

La Clavellerie, 2007, 319 pp.,  
€17, p/b – ISBN 2-9513-076-7-X

I found this book in a hotel in Montsegur frequented by my friend Lars Muhl, author of *The O Manuscript*, reviewed in these pages three years ago. The title referring to the life of the spirit in relation to religions appealed to me, living as I do in the Cathar region of France ravaged by the genocidal Albigensian Crusade in the 13th century, and representing what Dupre calls a metaphysical amputation. The term 'esprit' has a dual meaning in French as both spirit and mind and in this book represents spirit and higher mind. The author was a friend and collaborator of Deodat Roche (1877-1978), originator of *Etudes Cathares*, and published a book about him and his work representing a Cathar of the 20th century. He has written two other books on Catharism and its relationship to Christianity, as well as a biography of Rudolf Steiner. As I indicated in my review of *The Gospel of the Beloved Companion* two issues ago, there is a tension between

spirit on the one hand and letter and the law on the other, between the prophet and priest. In the course of reading this book, I came to realise that the Spirit as a source of life/love and force of renewal is *always heretical*. Jesus was heretical in relation to the Pharisees of his time (as was Peter Deunov to the Bulgarian Orthodox Bishops), and it is a supreme irony that his views were translated into what the author characterises as a power structure of theocratic totalitarianism. As CS Lewis put it in a conversation between a senior and junior devil, the latter is concerned about this new religion of the spirit, while the former observes dryly 'we'll help them organise it.' Which they did.

The mediaeval Cathars were heretical in relation to the Catholic Church, and all the more dangerous for claiming to be a genuine expression of the original Christian impulse, a Church of the Holy Spirit with its own ritual and scriptures, including, I believe, the *Gnostic Gospel of the Beloved Companion*. The Inquisition was specifically established in order to combat the Cathar heresy, initially in a temporary form in 1184 and permanently in 1229. Theologically, Cathars were criticised for believing in two fundamental principles representing light and darkness rather than in one supreme God identified in the Old Testament as Yahweh. Dupre advances a subtle dualistic metaphysics by postulating an original Being, which, as soon as it is manifest in duality, gives rise to Counter-Being, which, morally speaking, represents evil, and metaphysically, death. This is one approach to the riddle of theodicy and evil, a phenomenon that can never be fully resolved given the limits of our human understanding. Dupre takes the view that the human condition is tragic rather than absurd. History is only too replete with cruelty and inhumanity in every era, including our own, inflicted only too frequently in the name of ideology, whether sacred or secular. As Montaigne said, 'it is putting a very high value on your opinions to roast men on account of them.'

For Dupre, the divine spirit is the immanent centre within, and the human spiritual journey is a metaphorically vertical quest for truth, coming to realise then embody and express the unity and universality of being, becoming an authentic, free spiritual being. He argues that the most advanced humans are dedicated to the life of the spirit and are progressively more aware of their soul activity, this essential being within, hence their inner orientation and emphasis

on meditation, contemplation and prayer. The whole process is one of overcoming an original sense of separation towards realising unity, remembering our core identity, an awakening to the light and love that we essentially are. From an evolutionary point of view this is a progression from *homo sapiens* to human being, from self to Self, *moi* to *Soi*: this is gnosis, an ontological/ontic and cognitive experience of unity expressed in an ethic of love and compassion.

Dupre traces the origins of monotheism and describes its historical influence and implications. It becomes associated with monolithic institutional structures and what we would now call monocultures, insisting on an exclusive possession of truth and a right to impose this by persuasion and if necessary force on other people, naturally for their own good. These become power structures of control and manipulation based on fear, guilt and shame (original sin). He characterises the sacrificial crucifix as a totem of Christianity, only making a widespread appearance in the fifth century, while for Protestants the Bible later becomes a totem. The development of Christianity incorporated many mythical structures into the Jesus story ('enrôlage fabuleux'). Mystics and freethinking bearers of the spirit are persecuted and even put to death by self-righteous representatives of the letter and the law. However, truly free person is not subject to what the author calls 'suisvisme' (followership) and in this respect Dupre's argument reminded me of Jung's essay on the Undiscovered Self, where he emphasises the crucial importance of truly individual and independent beings as a bulwark against collective sectarian insanity. The greatest awakened sages as supreme expressions of human potential emanate a palpable ontic presence, fully realising and lovingly radiating their universality of being. As the author puts it, they have interiorised the cosmic intensity of being in a human presence.

As humans it is our privilege to ask three essential questions: What? How? Why? Modern science has answered the first two questions in mechanistic and material terms, maintaining that there is no answer to the third question and no overall purpose to life. Institutionally, scientism has almost become a new form of epistemological and even ontological totalitarianism, tacitly imposing a strict orthodoxy on mainstream scientists and claiming that their approach is metaphysically complete. Unfortunately, science has inherited the dogmatic notions of orthodoxy and heresy, and while modern heretics are not burned at the

stake, they live in fear of losing their reputations and funding. If science represents an outer 'horizontal' form of knowing, then we as humans also need an inner 'vertical' dimension of knowing represented by the spiritual quest and gnosis. These can be mutually enriching rather than mutually exclusive, adding the depth dimension and affirming the ontological reality of transcendent and immanent Being. We are each responsible for bringing this awakening to birth in our own lives - even if ever so gradually and slowly - and lighting one more candle in the darkness.

## MYSTICS OF THE IMAGINATION

Nicholas Colloff

### ■ A SECRET HISTORY OF CHRISTIANITY: JESUS, THE LAST INKLING, AND THE EVOLUTION OF CONSCIOUSNESS

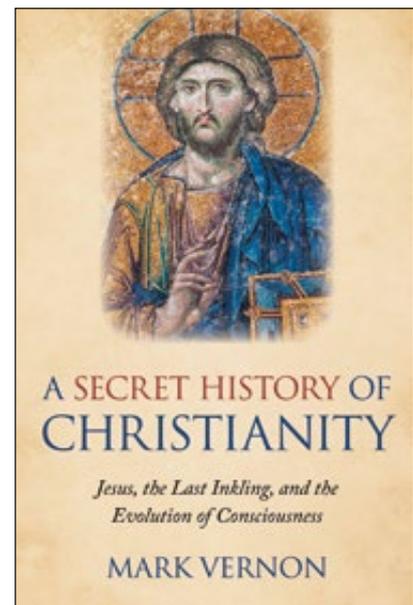
Mark Vernon

Christian-Alternative (John Hunt), 211 pp., £14.99, p/b - ISBN 978-1-78904-194-1

Does consciousness evolve and, if so, in what way and with what implications for our understanding of, say, a religious tradition's development over time? A tradition that, in this case, is, at least, from a 'Western' perspective, atrophying? Either retreating to the redoubt of a cogitatively dissonant 'fundamentalism' or flattened out to a thin liberal version of the secular with morally 'uplifting' stories attached. Can it yet be something other than these two alternatives and can a reimagination through the lens of an evolution of consciousness help?

Owen Barfield thought it could. Barfield was one of the Inklings, that remarkable group of Christian intellectuals and authors of whom C.S. Lewis and J.R.R. Tolkien were the most famous members. They sought to renew a living sense of Christian tradition that would stand the test of its times and for whom the critical keys were rigorous thought and compelling imagination.

Barfield's discovery was that our collective experience of life changes over time, the way our consciousness processes the reality we behold changes significantly over history. The first example of this, in the West, for Barfield was when we moved from myth to logos in the middle of the first millennium BCE. It did this in three phases. The first, he called 'original participation' where inner and outer life is barely differentiated and the



boundary between self and other is exceptionally fluid. You live as a flow in a particular space where everything within and around is animated with presence and forces into which you are woven. Your life is collective. The second phase is what he called 'withdrawal of participation' where a realisation of separation and even isolation emerges and an inner life, relatively felt as one's own, comes into being. This is both liberating and troubling at the same time - new questions are born, new answers sought - as one becomes responsible for this new 'self' as it relates to that which is 'other'. The third phase, which Barfield called, 'reciprocal participation' is a renewed negotiation between self and other, individual and cosmos, person and God.

This has not happened once but is a recurring pattern, thought Barfield - the new reciprocity leads to a deepening withdrawal and the emergence of a new reconciling participation.

Barfield's argument for this process began in philology. Looking at the root meanings and development of words gave you entrance into these shifts in ways of being. Thus, for example, the original meaning of 'pneuma' in Greek was 'wind-spirit' neither one nor the other, neither outer force nor inner prompting but both as undifferentiated reality. Words were 'fossils' giving insight into the morphology of consciousness.

Mark Vernon, in this beautifully written and artfully constructed book, uses Barfield's key insights and amplifying historical and literary scholarship to trace the development of Christianity's two founding traditions - Athens and Jerusalem - articulating how they embarked on similar

journeys from original participation to an individualising break to a new sense of humanity's place in the cosmos. No longer inhabiting a field in which the gods pulled the strings of fate into a world governed by a unitary, ordered universe in which recognisable persons could, in freedom, respond either to Yahweh as person or in law or to the ordering Good or Logos. These two traditions, Vernon argues, merge in Christianity and give birth to a new dispensation, a new reconciling participation, witnessed to and embodied in the person of Christ.

Vernon proceeds to articulate both how Jesus is similar to the teachers of his time and place and yet how he is consistently creative and novel and Christ's task is to deepen, through a renewing inwardness, our ability to live and flourish in a God gifted cosmos, to live in a dynamic freedom within the consciousness of God. Jesus did this by transforming the expectation of apocalypse as something that is to come from the outside to a reality, the kingdom of God, that is present and within us now and that invites practices that will help us to navigate its reality, bringing it alive. Such practices included teaching in parables that invite, even require a transformation of perspective if they are to be understood though are too often presented as flat bearers of morals and the privatisation of prayer that moves towards inward stillness and attentiveness to the God present within. Vernon wants us to recover a sense of Jesus' invitation to this mystical life - one that transforms us into virtuous, alive human beings.

This transformation developed into the fully fledged Christocentric view of the world that was not itself divine 'full of gods' but was a gift of God; and, together with Scripture, could be read as figuring forth divine meanings that operated on many levels. This medieval view of the world was a participatory one where our reality as made after God's image inwardly met a God gifted cosmos outwardly.

But, this in turn, broke down at the Reformation. The Church's outward sign of order was perceived by Luther as corrupt, leaving only Scripture as the guarantor of salvation - but since scripture had relied for its interpretation on a living tradition now barren, scripture can only be interpreted by its individual reader. The individual is both deepened in their seriousness and yet also disconnected from the world around them. They become an observer of that world and the groundwork is set for the Enlightenment and its rigorous separation of the 'subjective' inner world of qualities and the 'objective' outer world of quantities.

Barfield saw that each of these shifts in consciousness bring both their light and their shadows. Luther brought a renewed sense of the human, of individual rights and ultimately, after much conflict, an expectation of tolerance yet as well as a conflicted emphasis on the 'self', of me and mine. Science in its wake brought wonders of insight and transformation yet now at the costliness of feeling ourselves 'above' nature, ever-moving forward and oblivious to the boundaries of the possible, of life. A nature with only a utilitarian meaning.

As we stand thus withdrawn are their signs of a renewing participation?

Barfield, and Vernon following him, finds that there is, and they invite us to reconsider the role of imagination in our knowing. Imagination not as fantasy - the assembling or re-assembling of the known as Coleridge called it - but as the faculty through which we explore the world, creating new knowledge that resonates with reality. Coleridge saw this faculty as our participation in the 'I AM' of God's imagining the world into being. This form of imagination and its practice has been recognised by both artists and scientists as essential to revealing what can be known and what, bounded by that, what is. Einstein used it to bring to light his special theory of relativity, Blake to critique his world and its many failings in the light of eternal values. Both recognised that such knowing has its disciplines and essential to this knowing is our ability to enter into it, ever anew, it shows forth a world know only to the participant, not simply the observer. You have to learn to play and dance with reality if it is ever to yield up its secrets and its secrets always lure you on into wider and wider circles of discovery. As with the strange world of quantum mechanics seems to imply the world is continually being birthed in the eye of its conscious beholding.

That brings us full circle to Christianity - as Karl Rahner (quoted by Vernon) noted -the Church if it were to survive would have to become a Church of mystics but, as Vernon deftly shows, not mystics who have retreated into a redoubt mumbling a worn out creed but mystics of the imagination re-engaging with a renewed, renewing participation in a living cosmos, where wisdom and knowledge, art and science blend into a new holistic imagining of things that guards what has been gained and drops what has become dysfunctional, that seeks to connect the inward life of transformation and the outward life of participation that, in truth, is one life - our consciousness being the inside not only of our selves but of the world. It

is what Jesus did with the patterns of thought and experience he was heir to and if we are to 'imitate' him, we need to do likewise.

## PSYCHOLOGY- CONSCIOUSNESS STUDIES

### AFFAIRS OF THE SOUL

Martin Lockley

#### ■ THE SHAPE OF THE SOUL: WHAT MYSTICAL EXPERIENCE TELLS US ABOUT OURSELVES AND REALITY

Paul Marshall (SMN)

Rowman & Littlefield 2019,  
448 pp., £19.95, h/b - ISBN  
978-1-5381-2477-2

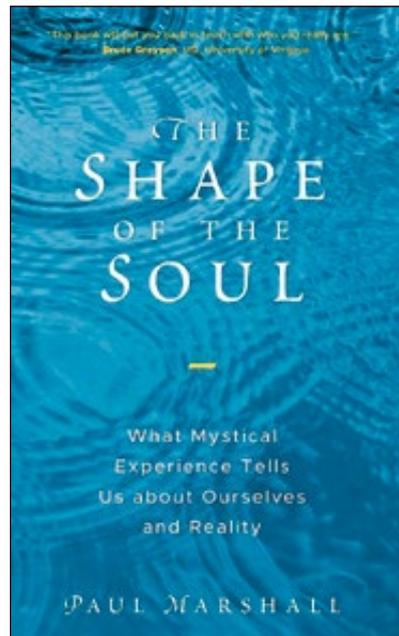
A favourite book title of mine is *Shapes of Time*, by Ken McNamara. Why? It is not just an excellent book on the dynamics of evolution, but it reminds us that the relationship between two taken-for-granted dimensions of so-called reality are complex and mysteriously intertwined. So *The Shape of the Soul*, by SMN member Paul Marshall, not only has a deeply intriguing title, but it also points to fundamental questions aptly summed up in the subtitle: *what mystical experience tells us about ourselves and reality*. Chapter 1, "Mystical Perceptions," reminds us that such perceptions are a perennial part of human experience, informing us that "reality" is not always the simple humdrum experience we might take it to be. The doors of perception to higher realities are not always open to individuals or humanity as a whole, but when they do open the experienter is given "a sense of what it is like to apprehend the universe as it truly is, a highly differentiated but nonetheless undivided whole." Most mystical experience is accompanied by an expanded consciousness and a sense of "peace that passes all understanding" as if homecoming to a comfortable transcendent knowing.

Paul summarises how mystical experiences generate a sense of profound "intuitive knowledge... unity, wholeness...[and]...contact with deeper realities." Such faculties which, Steiner might call "supersensory" are evidently latent and can "awaken" within us. Can we here avoid comparison with Gebser's treatise on *The Ever-Present Origin*, as wellspring of consciousness structures? Mystical experiences simultaneously erupt / awaken "within" us and propel or

elevate us “into” a greater, more expansive or cosmic consciousness reality. Beyond the spatial metaphor we might consider Sheldrake’s radio analogy of tuning into frequencies not previously accessible. Paul reminds us this may involve more than “heightened attention, and vivid sparkling colors” and, rather, a tuning into the world as it “truly is” on many trans-spatial, trans-temporal, this-worldly, other worldly, even non-worldly levels. As we shall see each one of us is a perceptual monad, whose reality is ‘part’ of a universal whole. [But beware the limitations of levels and parts vocabulary.]

In chapters 2 and 3 (“The Land beyond the Sea” and “Into the house of Death”) we are reminded that mystical experience often dispels the fear of death, bringing a sense of immortality and intuitions of reincarnation. Paul’s ever-present scholarship leads us from Gilgamesh and Plato to Jung and 20<sup>th</sup> century studies of Near Death Experiences (NDEs), and how temporary psychological death necessarily disrupts ordinary self-awareness. Such other-worldly journeys may simply be into “this world understood more deeply.” [Why in a vast universe, whole by definition, would worlds appear separate]? ‘Tis almost poetry to read that “only a simple shift in mental poise” is necessary to apprehend “the world and its inhabitants with a loving, inclusive uncluttered mind.” Journeys to the threshold of death while liberating also bring up age old issues of judgement, instituted in religion and law, and evaluation of our own morality. Origen is quoted on remorse being the “torment of hell” born of our unfaithfulness to our own, internal sense of goodness. In short mystical experience can reorient us to self-evaluation before we judge others. [Shades of G. K. Chesterton perhaps?] Chapter 4 asks “Who do you think you are?, the know thyself question often thrust forward by spiritual experience and mature reflection. “It is not the everyday self that is to be identified with the ultimate reality, but the higher self or soul.” This raises a perennial question: can we see the relationship between the divine in ourselves and the divine in all, and not divide the soul. Paul’s suggested answer is that spiritual practice should not *eliminate* the “normally isolated and relatively ignorant self” but *harmonise* it (his *italics*) with the underlying reality of a loving higher self. This parallels R. M Bucke’s “duplex” of the self conscious and Cosmic Conscious self.

In Chapter 5, “Soul Spheres,” the literal, symbolic and mystically perceived ‘shape’ of the soul is



considered: for example, Hildegard of Bingen’s vision of “soul globes” entering the bodies of pregnant women, and the spherical eye as the “traditional symbol of the divine.” [Beside the sphericity of the sun, planets and many seeds, one is reminded of Abbot’s allegory *Flatland* where the higher beings were “well rounded” spheres – the adjectives are in our language – containing maximum volume in minimum circumference.] In Chapter 6, “The Logic of Unity” Paul shows himself a big fan of Leibniz and his monad (2 pages of index citations), explained as a complete concept, and “no mere abstract entity”...“living centres of activity and perception” ranging from insentient monads (minerals) to sensible entities with perceptible appetites and desires or animal souls (anima), to human monads with reflective consciousness (apperception), spirits and minds with access to necessary truths and abstract ideas grounded in God. [Are these Steiner’s supersensory faculties of thought capable of intuiting natural law, such as gravity and entropy, without direct recourse to sensory perception?]

Traditionally “mystical philosophies have often recognised that some kind of superior knowledge or intellectual intuition...is attainable” as in the “ordinarily hidden, cosmic dimensions” of our souls. Chapter 7, “Worlds within Worlds” addresses the “experiential support for a universe... minds [perceptual perspectives or monads] that represent one another in their entirety and constitute the basis of matter.” The shape of the soul is a communal affair [put another way ‘affairs of the soul’ involve relationship]. Paul qualifies his exposition, perhaps unnecessarily,

with apologies for being “highly speculative” but in his discussion of how Thomas Traherne vigorously opposed Thomas Hobbes’ view of human nature as fundamentally self-centered we see the play of schism between mysticism and rationalism. Traherne believed in the soul’s need for communion with the “divine whole,” the “cosmos of beings” to share our joys and “to be ourselves the joy and delight of other persons.”

In chapter 8, “The Physics of Experience,” the mystic finds scientific support for Leibnizian metaphysics with relativity, space-time continua and the wholeness or interconnectedness of quantum physics and non-locality experiments. With Whitehead endorsing Leibniz we can view the world as experiential in nature with “monads passing from cosmic state to state” ever becoming or “striving, experiential units,” as occasion affects occasion [Perhaps we can identify!?] Paul acknowledges the “fantastical” aspect of these ideas but quotes John Barbour who regarded such “fantastical philosophy” as “the one radical alternative to Cartesian-Newtonian materialism” with the potential to be a “framework for natural science.” Preferring to ground his discussions “in philosophies more directly informed by mystical experience.”

Paul (Chapter 9) introduces origin and creation cosmogonies, distinguishing “vertical causation” and “horizontal causation” respectively driven by causation “behind” (external to) and “within” the phenomena. Plotinian thought saw abundant intellect flowing from the One source to incomplete, inchoate intellects, which in turn desire to ‘return’ to know the One, in a process of intellectual becoming. Perhaps, similarly, within Hindu Tantra, in the Kashmir Shaivism philosophy, the highest “Ancient Light” of primordial consciousness (Siva, the source) contains within an “I-ness” or reflexive awareness, a mystical self potentially embracing (experiencing) a much greater part of the whole than allowed by the ‘normal’ non-mystical or grossly dualistic state. But the twofold dualism of unifying and diversifying tendencies is manifest in nature / creation (electricity, magnetism) and the “cycles of consciousness” – interplay of subject and object, feeling and cognition [as also manifest in individual human development.] Lorenz Oken spoke of two processes: “one individualising, vitalising, and I one universalising, destructive” – relinquishing individuality “to become the universe.” Paul contrasts Eros, the pull toward unity and Ego, the pull toward separation.

Chapters 10 and 11, “Where do you think you are going?” and “The Making of God” review various evolutionary concepts such as the currently unpopular progressive/teleological notions of the “Great Chain of Being” and the “Tree of Life” before transitioning to more radical ideas of “transgenerational epigenetics” (the intergenerational transmission of some medical conditions) and Ian Stevenson’s notion of the psychosphere (“mind carrier”) from reincarnation studies. Could reincarnation work “in tandem with species evolution in a progressive manner directed towards ends.”? (cf., McIntosh, Network 109, or long before him Alfred Russel Wallace’s “purposive evolutionism” in a universe with “infinite grades of power... knowledge and wisdom” and higher beings influencing the lower). Here again Evolutionary Monadology is a consistent fit, seeing *all* creatures on paths to fulfilment, and doesn’t Wallace neatly capture the infinite flavour of mystical insight?

*The Shape of the Soul* is a highly recommended and inspired, conscientious, scholarly and bold *tour de force*. Having delved deeply into ‘affairs of the soul’ one of Paul’s conclusions is simple: “attempts to reduce mystical experience to religious conditioning and/or neurobiology have been unconvincing, and the possibility remains that mystical experiences do what mystics strongly feel they do, which is to reveal deeper aspects of reality.” “When this divine self is encountered as the numinous Other” the vocabulary of revelation, God, divine double, Cosmic Christ or Cosmic Buddha naturally emerges to describe these experiential realms of reality which deeply impact the shape and affairs of the soul. The such spiritual development has accompanied us through the ages and will likely continue to do so as human spirituality evolves. The perennial nature of such soul quests is in itself a testimony to their staying power and relevance to a deeper knowledge and understanding of reality.

## AN ESSENTIAL MAP FOR THE INNER FRONTIER

Renn Butler

### ■ THE WAY OF THE PSYCHONAUT: ENCYCLOPEDIA FOR INNER JOURNEYS

Stanislav Grof, M.D., PhD. (Hon SMN)

Multidisciplinary Association for Psychedelic Studies (MAPS), 2019, 456 + 376 pp., \$24.95 per volume, p/b – ISBN 978-0-9982765-9-5

One of the most important books ever written about the human psyche and the spiritual quest, *The Way of the Psychonaut* is a tour de force through the worlds of psychology and psychotherapy, Holotropic Breathwork, maps of the psyche and the roots of trauma, archetypes and sexuality, karma and reincarnation, spiritual emergency and transpersonal experiences, psychospiritual death and rebirth, great art, artists, and higher creativity. Grof writes that the new understandings were made possible thanks to Albert Hofmann’s discovery of LSD—the microscope and telescope of the human psyche—as well as other psychedelic substances.

Grof reviews the history of psychonautics, defined as “the systematic pursuit of holotropic states of consciousness for healing, self-exploration, spiritual, philosophical, and scientific quest, ritual activity, and artistic inspiration.” He believes that the craving for transcendental experiences, the motivating force behind psychonautics, is the strongest drive in the human psyche—its pursuit can be traced back to the dawn of human history, to shamans of the Paleolithic era. His view of psychedelics is both optimistic and cautious, reflecting that it is increasingly clear LSD “was a wonder child, but that it was born into a dysfunctional family.” Many therapists in the 1960s, let alone lay experimenters, were not conceptually prepared for the gifts of these unique medicines.

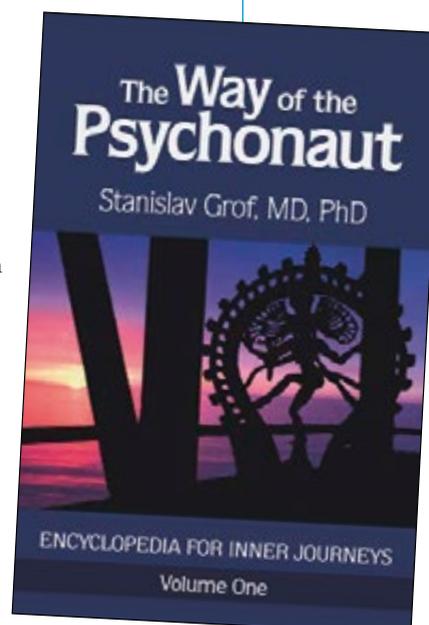
Exploring the history of depth psychology, Grof outlines the contributions of Freud and the famous psychoanalytic renegades, the ideas they contributed, and where their theories need deeper understanding and revision in order to bring them into accord with clinical observations from work with the powerful psychedelic catalysts. The problem was that Freud and most of the depth psychologists who came after him seemed to be blind to the bands of the psychological spectrum studied and emphasized by the others, reducing those other bands to his or her own model of the psyche.

“Thus Freud specialized in postnatal biography, and with one small and short exception ignored the perinatal domain, and reduced mythology and psychic phenomena to biology. Rank recognised the paramount significance of the birth trauma but reduced archetypal phenomena to derivatives of birth. Jung, who recognized and correctly described the vast domain of the collective unconscious, emphatically denied that biological birth had any psychological significance.” However, of all the post-Freudian renegades, Jung’s understanding of the psyche is the closest to Grof’s and seems to need the fewest revisions.

Grof believes that Freud’s original direction was brilliant and correct, but that he came to wrong and often ridiculous conclusions by reducing the psyche to postnatal biography: suicide is killing of the introjected bad breast of the mother, religion is obsessive-compulsive neurosis, and so forth. Mainstream psychologists rejected most of Freud’s ideas, but threw out the baby with the bathwater—they gave up the effort to understand the origin and dynamics of emotional disorders and assumed the “neo-Kraepelinian approach” (as outlined in the DSM manuals): a simple description of symptoms while giving up the search to understand their source and cause. Grof demonstrates how taking the exploratory quest deeper into the unconscious—to the perinatal and transpersonal domains—brings much more logical and believable explanations.

The importance of birth trauma, the fear of death, and the possibility of spiritual rebirth and transcendence play important roles in Grof’s understanding. He found that birth and death are events of fundamental

relevance that occupy a metaposition in relation to all the other experiences of life. “They are the alpha and omega of human existence and psychological system that does not incorporate them is bound to remain superficial, incomplete, and of limited relevance.” He suggests that the reluctance of most psychological schools to integrate the perinatal layer of the psyche is based on psychological repression of the terrifying memory of biological birth.



After many years of research and an influx of revolutionary data, Grof eventually came to the conclusion that a radical overhaul is needed in our understanding of the psyche. “The proud edifice of traditional psychiatry, with its mechanistic materialistic philosophy, is a giant on clay legs that stands in the way of genuine understanding of the human psyche and has a damaging effect on many people diagnosed as mentally ill.”

To give several examples of Grof’s clinical discoveries: his understanding of sadomasochism is intriguing. He believes that the primary focus of sadomasochism is perinatal, not sexual, per se. Sadomasochistic practices combine sex with elements of physical restriction, dominance and submission, inflicting and experiencing pain, and strangling or choking, i.e., repeating a combination of sensations and emotions that many people experienced during childbirth. Similarly, his work with suicidal patients has yielded credible insights about both the impulse toward suicide and the specific choices of suicide to which people are drawn. He writes that suicide is essentially a distorted and unrecognized craving for transcendence, a fundamental confusion between suicide and *egocide*—death or transcendence of the separate ego. Many readers will also be fascinated by Grof’s discoveries regarding the perinatal and transpersonal roots of wars, revolutions, racial riots, concentration camps, totalitarianism, and genocide. He is not offering a reductionist explanation but simply adding—to historical, economic, political, and religious causes—the psychological and spiritual dimensions of these forms of social psychopathology that have been neglected in earlier theories.

Written in his eighties, at the culmination of his magnificent career, *The Way of the Psychonaut* is possibly Grof’s greatest contribution. He has explored many of these themes before, but never in one place or delivered so gracefully. The commanding breadth and depth of his knowledge is astounding, the tone of his writing easy and accessible, and his narratives brightened with amusing anecdotes, brilliant case studies, and intriguing personal accounts. As one of the fathers of psychedelic-assisted psychotherapy, its most experienced practitioner, and deeply deserving of a Nobel Prize in medicine, in these two volumes, Grof has successfully unveiled a new and sweeping paradigm in self-exploration and healing. The vast and practical knowledge in this book is sure to be an invaluable and treasured resource for all serious seekers.

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## A NEW COSMIC OUTLOOK

David Lorimer

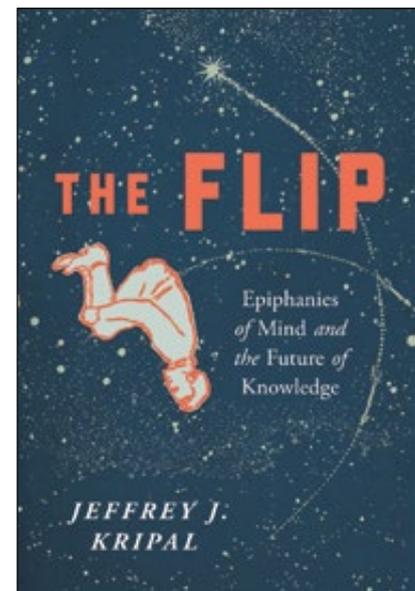
### ■ THE FLIP

Jeffrey J. Kripal

Bellevue Literary Press, 2019,  
239 pp., \$19.99, p/b – ISBN  
978-1-942658-52-8

Jeffrey Kripal is Professor of Philosophy and Religious Thought at Rice University and chairs the board of the Esalen Institute. He gave two brilliant and lucid talks at the science of consciousness meeting in Interlaken in June, and this superb book fully reflects these qualities. The flip of the title refers to epiphanies of mind that transform the outlook of the experiencer in the direction of holding consciousness rather than matter to be primary. This has immense implications for the future of knowledge, as the book explains in detail, beginning with experiences currently regarded as impossible within the scientific framework, then looking at flipped scientists and philosophers, the relationship between consciousness and cosmos, how symbols mediate meaning, and at the future politics of knowledge.

I was struck by Tom McLeish (see review above) quoting Charles Darwin’s son writing about a special quality leading him to make discoveries: ‘it was the power of never letting exceptions pass unnoticed.’ In the consciousness field, for exceptions read anomalies. *Nomos* is order so an anomaly is something that does not fit into the currently accepted framework of assumptions. Far from never letting exceptions pass unnoticed, the scientific establishment goes out of its way to ignore and suppress findings inconsistent with its basic philosophy, exerting social and professional peer pressure in order to keep people in line. For Kripal, this materialistic framework is not wrong, but only half right (or upside down), applying as it does to the outside of things and adopting a third person perspective. As Alfred Russel Wallace and Lawrence LeShan have argued, there is no such thing as an impossible fact. So if your theory is inconsistent with the fact, it is the theory that must be modified



rather than the fact set aside as an anecdote or mere coincidence. It is just not good enough to say that ‘such things that happen all the time cannot happen at all.’ The stakes are high, though, relating as they do to what is considered real or unreal in terms of ultimate ontology.

Kripal is very clear that present-day materialist orthodoxy is pure ideology consisting of unexamined assumptions about the nature of reality, as argued in the Galileo Commission Report. Moreover, as William James observed over 100 years ago and the author reasserts, ‘a materialist interpretation works so well only inasmuch as it rigorously leaves out everything that it cannot explain, including individual, subjective experiences. Put differently, *materialism only “wins” as long as it gets to declare the rules of the game.*’ (p. 105) This means that classical materialist theories of human consciousness ‘have to deny, erase, and take off the table so much of human experience to retain the illusion of the completeness of the materialist model.’ (p. 125) Elsewhere, the author rightly observes that ‘our conclusions are really a function of our exclusions. For him, the humanities are the study of consciousness coded in culture, and assume greater importance where consciousness is considered fundamental rather than incidental; this may eventually be equated with studying the interior expressions of quantum states. Commenting on William James’s distinction between the production and transmission models of brain and consciousness, he observes that the first is almost completely dominant, corresponding historically to Aristotle dominating Plato. Those familiar with the literature of ‘impossible facts’ tend to be much more open to a transmission or filter view.

The chapter on flipped scientists tells the stories of Eben Alexander, Hans Berger, A.J. Ayer, Barbara Ehrenreich, Marjorie Hines Woollacott and the sceptic Michael Shermer. Apart from the last case, the direction of travel is to see the universe as VALIS, a Vast Active Living Intelligence System, a view consistent with quantum physics. This leads into more general considerations about the relationship between consciousness and cosmos, including the implications of non-locality and entanglement whereby 'it is as if *everything is already one thing and is simply responding to itself, involving itself through time.*' (p. 103) This thought is taken up later when looking at the idea of a block universe. Kripal considers five related new developments in contemporary philosophy of mind: panpsychism, dual aspect monism including Jung and Harald Atmanspacher (who chaired the Interlaken meeting), Alexander Wendt's quantum mind, Philip Goff's cosmopsychism and Bernardo Kastrup's idealism, all of which imply a specific view on the relationship between mind and matter. This is well worth reading in detail.

In the chapter entitled 'Symbols in Between', Kripal focuses on questions of representation and meaning, noting that mathematics joins the knower and known, the mental and the material, but also that, for experiencers, mystical states of oneness and connectedness participate in the foundation of meaning and '*are the most important and meaningful forms of knowledge that a human being can possess.*' (p. 137) The word symbol derived from the Greek *sym-ballein*, which means to throw together, so connectedness is inherent. At this point he brings in further considerations from Kastrup to the effect that reality may be an expression or function of consciousness as imagination, that 'imagination may be reality', and that we need to evolve a language of resonance, tone, vibration and energy that is capable of penetrating more deeply into oneness that we are and out of which we emerge - this put me in mind of the somewhat neglected work of Douglas Fawcett and Walter Russell. He suggests that mystical experiences of light and energy may be the inside corresponding to mathematically mapped light and energy mapped from the outside. This metaphysics is not either/or, but rather both/and - it is participatory where subject and object are not separate but entangled.

In a chapter on the future politics of knowledge, Kripal sets out five basic skill sets: reflexivity is an intellectual form of the flip, fair and just comparison of others, an expanded anthropology or 'religion of no

religion' connected to a larger purpose, a cosmic humanism where the human is an expression of the entire universe, and finally a deep, dark ecology understood as self-care and providing an ontological foundation for politics and the realisation that it is our worldview that has generated the crises we face. All this entails the primacy of the whole over the part, a mindful universe that is alive and conscious. This bold and eloquent book delivers a necessary 'ontological shock' and maps a potentially expanded future of knowledge where the 'inside' of matter is mind - surely a crucial step to take and one that completely reframes our understanding of consciousness and reality.

## BUDDHISM, SCIENCE AND THE PARANORMAL

David Lorimer

### ■ MIND BEYOND BRAIN

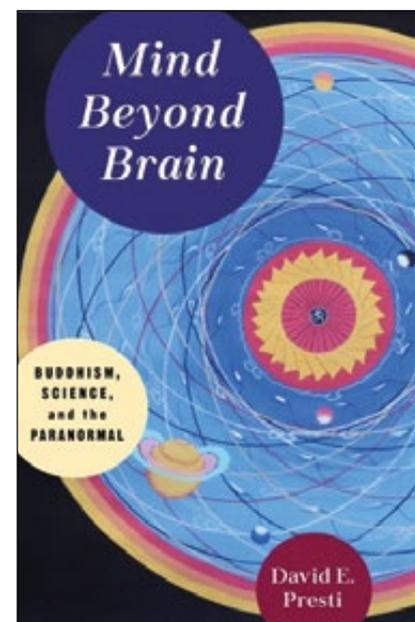
David E. Presti with Bruce Greyson, Edward F. Kelly, Emily Williams Kelly and Jim B. Tucker  
Columbia University Press,  
2019, 213 pp., £24, h/b - ISBN  
978-0-231-18956-9

This evidence-based book stands right behind the intent represented by the Galileo Commission and our recent report in terms of calling for a shift in physicalist metaphysical assumptions to allow an expanded science that can accommodate the kind of research presented here - 'a radically inclusive empiricism'. Conversations between Buddhism and neuroscience/psychology being going on under the aegis of the Dalai Lama for 25 years with the Mind and Life Institute. Tibetan Buddhists are familiar with the content of this book relating research in near death experiences, memories of past lives, apparitions and what they - and Dean Radin - would call *siddhis*. These areas of research cannot be adequately accounted for on the basis of current scientific theory, as in fact William James realised over 100 years ago. In the last sentence of a book written in 1892, he urges readers 'never to forget that the natural-science assumptions with which we started are provisional and revisable things.' (p. 19)

If mainstream readers study the contents of this book with an open mind, they might come to agree that 'the science of mind is poised for the entrance of revolutionary new ideas - and perhaps on the verge of a paradigm shift such as only occurs very infrequently in the history of science.' (p. xxi) David Presti contributes the first and last chapters on scientific revolution and the mind-matter relation, and an expanded

conception of mind. In between, we have authoritative chapters by Bruce Greyson on near death experiences, Jim Tucker on past life memories, Emily Williams Kelly on mediums, apparitions and deathbed experiences, and finally Edward Kelly on paranormal phenomena and an emerging path towards reconciling science and spirituality. This is all discussion of the highest order by leading experts associated with the Department of Perceptual Studies (DOPS) founded by Ian Stevenson at the University of Virginia.

Even seasoned readers will find their knowledge deepened and broadened by the detailed analyses of these fields. Bruce Greyson rightly comments that 'the question raised by these cases and many others is how we can reconcile a brain that is not functioning with a mind functioning better than ever.' (p. 32) Further, 'this enhanced mental functioning while the brain is impaired suggests that there is more going on with the mind than its being a simple consequence of brain physiology.' (p. 34) Bruce provides a great deal of statistical data from his own extensive studies, also nailing down, contra the evasive tactics of sceptics, that many veridical perceptions in NDE's - 86% in a study of 93 cases by Janice Holden - were corroborated by independent witnesses, and 92% were completely accurate in every detail. Moreover, they are 'clearly anchored in time to period of minimal or absent brain activity, rendering them inexplicable in terms of conventional physicalist neurobiology.' (p. 39) Exactly this point is also made by Harald Walach in the Galileo Report, putting the burden of proof firmly on sceptics.



Jim Tucker systematically reports on past life memories from the DOPS database, including a number of actual cases such as James Leininger and others where both birthmarks and corresponding memories are present. He explains the components of their strength-of-case scale assigning points to birthmarks and birth defects, veridical statements about the previous life, correlated behaviours, and distance between the two families. Findings show that more past life residue carries over in the stronger cases. In addition, memories of the interval between lives are consistent with corresponding reports of the afterlife.

Emily Williams Kelly points out that the evidence for survival is a matter of convergence and quality, so that an opinion on the topic 'should be based on an awareness of the breadth and depth of the evidence available, and not on uninformed assumptions or one or two isolated examples.' (p. 71) She then analyses the number of evidential cases involving mediumship, apparitions and deathbed experiences where the critical importance lies in the detail and facts that could not have been known by the sitter. She looks at these in terms of the 'filter theory' of the relationship between brain and mind developed initially at the end of the 19th century and updated in the University of Virginia volumes, *Irreducible Mind* and *Beyond Physicalism*. Edward Kelly continues in the same vein in the following chapter on paranormal phenomena, also relating his own journey. Psi phenomena are threatening to mainstream scientists because 'if the standard "production" model of brain-mind relations is correct, then these things simply could not happen. The fact that they do happen means that something is deeply wrong with the model, and we have got to enlarge our current scientific framework in some way that will enable us to accommodate them.' (p. 93) In my view, and that of the authors, this has now become an imperative, but the question is how to facilitate the process and transition.

This leads seamlessly into the final chapter on an expanded conception of mind. The fundamental limitation of current mainstream neuroscience, philosophy and psychology lies in its *assumption* that 'consciousness is completely explicable in some straightforward and localised way by neural processes in the brain and body.' (p. 123) This is exactly why we are inviting scientists to 'look through the telescope' at this kind of evidence that has historically been ignored or dismissed. Some scientists feel that this move would undermine the whole basis of science, but this is simply not

true – what it does undermine is a limiting assumption that needs to be consigned to history. This should lead to excitement rather than disturbance, but the materialist assumption is deeply and even unconsciously embedded, then reinforced by conservative social structures within science. This fine book should be widely read and debated as we try to formulate a radical new perspective where mind is a central part of nature rather than an epiphenomenon of neural processes. This will lead to a new and constructive relationship between science and spirituality.

## A MOST VITAL CONUNDRUM

Larry Culliford

### ■ DEATH - THE GATEWAY TO LIFE: AN INTERDISCIPLINARY EXPLORATION OF NEAR-DEATH EXPERIENCES

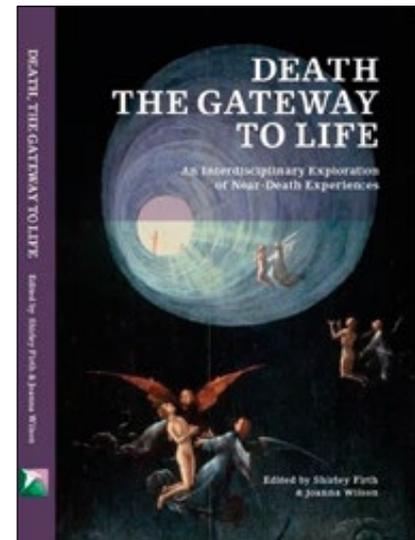
Edited by Shirley Firth & Joanna Wilson

Institute for Theological Partnerships Publishing,  
2019, 258 pp., £10.00, p/b  
- ISBN978-1-908532-7

The papers on matters concerning Near Death Experiences collected here are drawn from the 2016 conference in Winchester, 'Is Heaven for Real?' In his 'Afterword', David Lorimer offers a succinct summary, thus:

*'The spiritual view implied by contributions in this volume suggest that our physical life is embedded in a deeper spiritual reality characterised by love and light, and we are microcosms of universal or nonlocal consciousness... The experiences you have read about cannot prove this contention but strongly suggest it.'* (p. 202)

NDEs are arguably *near* death in two ways. Firstly, they are *near* death because they involve people who are close to perishing, following a heart attack, for example. Former cardiologist turned NDE researcher, Pim van Lommel reports scientific studies that provide evidence of consciousness existing beyond/ outside brain function. Subjects are utterly lifeless for periods lasting from about two to ten minutes: without pulse or heartbeat, not breathing, without reflexes or recordable brain activity. After that, through medical resuscitation, they come back. Life resumes, but often seeming better, more meaningful. People surviving coma, stroke, brain injury and near-drowning may also report NDEs.



Secondly, NDEs are *near* death because they are *like* death. Involving a special state of consciousness characterised by joyousness while somehow knowing you are dead. van Lommel, in Chapter One ('Nonlocal Consciousness'), also says about one-third of people remember being in a tunnel leading towards a bright light, observing a celestial landscape or meeting people who had died. About a quarter have 'Out of Body' experiences (OBEs) and some have a 'Life Review' and/ or a 'Flash Forward'. These elements are said closely to resemble the actual experience of dying, thus suggesting the possibility of an afterlife. It is worth noting that *all* the cardiac arrest survivors began showing more interest in nature, the environment and social justice, displaying more love and becoming more emotionally involved in family life. The twenty per cent who had NDEs alone became less afraid of death and more convinced of an afterlife.

There is a brief 'Introduction', followed by seven chapters, plus five appendices each containing a personal account of an NDE. Peter Fenwick (Chapter Two) recalls a conversation that led him to take up research into NDEs in the late 1980s, describes some early findings, and refers to the acclaimed work of Monika Renz on the series of psychological transitions people go through approaching death.

David Lorimer's chapter, which brings to a close Part One ('*The Nature of Consciousness*'), summarises the 'New Thought' view of mind that originated with the likes of Ralph Waldo Emerson. David quotes freely from the American's near namesake, Ralph Waldo Trine's 1920 volume '*In Tune with the Infinite*'; for example:

*'If there is an individual life, there must of necessity be an infinite source of life from which it comes... The great and central fact in human life... Is the*

*coming into conscious realisation of our oneness with this Infinite Life, and the opening of ourselves fully to this divine inflow.*' (p. 72)

The book's Part Two ('*Spiritual and Religious Perspectives*') begins with Marianne Rankin's chapter 'NDEs and Religious Experience', based on her role as Director of Communications with the Alister Hardy Trust. She describes how NDEs are among a range of universal spiritual or religious experiences including a sense of divine presence, voices, visions, healing, answers to prayer, meaningful coincidences, end-of-life and near-death experiences, also after-death communications. With multiple first-person quotes to illustrate this variety, Rankin concludes:

*'These experiences seem to point the way to understanding what it means to be truly human, opening our eyes to a greater reality of which we are part. They are vivid, unforgettable and transformative.'* (p 107)

Paul Badham, an Anglican priest and Professor of Theology, and Patrick Gaffney, a Buddhist scholar and co-editor of Sogyal Rinpoche's classic 2002 work, *The Tibetan Book of Living and Dying*, contribute consecutive chapters respectively on: the implications of NDEs for Christians; and, a comparison of NDEs with Tibetan Buddhist teachings. These are good chapters, and I wish there were space here to say more about them.

In the final chapter ('What Happens Next?'), Honorary Research Fellow in theology at Winchester, Shirley Firth, presents a commentary on earlier chapters using multiple quotes to expand and explore numerous themes. Importantly, to my mind, she (alone, and all too briefly) mentions unpleasant or negative NDEs that contain, '*Dark themes of guilt, remorse and punishment... Heaven and Hell*' (p. 150). A more extensive and critical account of this less appealing aspect of NDEs would have been appreciated.

Firth suggests that, experienced throughout history, NDEs could be a major source for various different world religions' accounts of dying, death and beliefs in an afterlife. So, the question must be asked, 'What if they are simply baseless and biologically inexplicable hallucinations?' Many members of the materialistic and consumerist culture of today believe that humanity has been deluding itself on this basis for generations. But, we must also ask, 'Is it really reasonable to dismiss the consistent accounts of life-transforming NDEs presented in such an authoritative fashion?'

Is Death really the 'Gateway to Life?'

This is a most vital conundrum, a sacred riddle, a kind of Zen koan that cannot indefinitely be avoided by anyone. Indeed, all wisdom literature recommends that we each tackle it sooner rather than later. After all, medically-speaking, from heartbeat to heartbeat, life is surely nothing less than a continuous near death experience. We could, of course, delay our investigations; simply wait and see what, if anything, does happen, when we expire; but this would be to miss the rich opportunity of investigating the proposition of Dag Hammarskjöld, quoted in Chapter One: '*Our ideas about death define how we live our life*' (p. 51-2).

Following the above quote from his Afterword, David adds, '*Readers will have to arrive at their own conclusion*'. In clarifying matters, this commendable collection of essays will certainly help illuminate the mystery. The authors and editors clearly hope that everyone will, eventually, discover the big 'Truth' of an everlasting soul connecting us lovingly to each other, to nature and the Divine, as well as the little truth of attachment to one's all-too-impermanent flesh. Let me here add my Amen to that.

*Larry Culliford is the author of Seeking Wisdom (UBP 2018) and several other books on love, happiness and personal growth (see [www.ldc52.co.uk](http://www.ldc52.co.uk)). He has also published a crime novel, The Red Chairs Mystery (Troubadour 2019), the first of a series featuring the delightful, doughty detective, Holly Angel.*

## BIOGRAPHICAL CYCLES AND DESTINY

David Lorimer

### THE VEILED PULSE OF TIME

William Bryant

Lindsarne Books, 2018,  
242 pp., \$20, p/b – ISBN  
978-0-58420-929-4

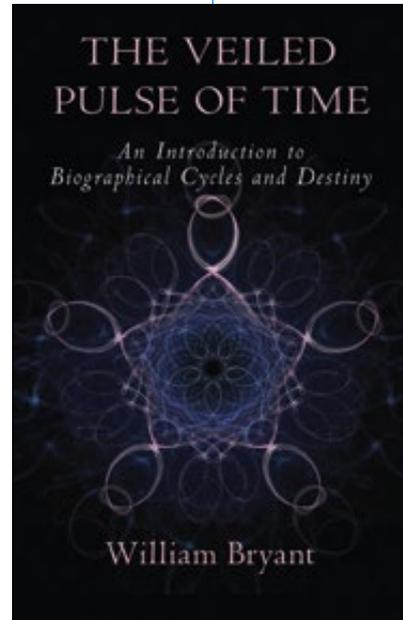
I imagine that every reader has at some point asked themselves if there is some underlying emergent pattern

in the way their lives unfold. When I was 22, I read *Testimony of Light* by Helen Greaves, where she explains the idea of an agreed blueprint for a life before one incarnates - this made a lot of sense to me at the time and still does over 40 years later. Certain key synchronicities have shaped my work, including my time at Winchester College and the fact that I met George

Blaker and have been working with the Network for over 30 years. William Bryant is a Waldorf educator deeply steeped in the work of Rudolf Steiner, whose understanding of the reincarnation process was evolutionary. He suggests that synchronicities in life are in fact orchestrated by a deeper self intent on growth - presenting new opportunities and connections while relating the inner with the outer.

The book begins with a general

discussion of rhythms and cycles, then with detailed chapters on the cycles of 7, 12 and 30, leading to an exploration of fate, freedom and destiny and how these may form part of a larger pattern of death and rebirth. We are all in a sense time beings located in time bodies that have their own rhythms and cycles of expansion and contraction (suffering and crisis), inhalation and exhalation. There are some interesting correspondences between rhythmic numbers: a pulse 72, a breathing cycle of 18, a precessional rhythm of 25,920, and a cultural epoch of 2,160; breathing 18 times a minute equates with 25,920 - although my own rhythm is much slower than that. More significant is the relationship between linear and cyclical time in the rhythms found in our maturation process. Some readers will be familiar with a part of the seven-year analysis from Steiner, illustrated with a number of fairytales. Here the author could have made some interesting comparisons with Erikson's life stages, but his work does not appear in the bibliography, nor does that of Steiner scholar Owen Barfield with his stages of participation. Readers can work out for themselves whether the cycle dates are significant, but, as in archetypal astrology, the question arises whether other numbers and years might also be equally significant.



The book is illustrated with the biographies of many famous people, including van Gogh, Schweitzer, Tolstoy, Einstein and Newton, Hannibal, TE Lawrence, Balzac, Marie Curie, TS Eliot, Nobel, Goethe and Rembrandt. In the case of Goethe, the author would have been interested in the excellent book by John Barnes entitled *Goethe and the Power of Rhythm* which undertakes a similar analysis, although with different time cycles. I am familiar with the biography of Schweitzer, who at 21 (7x3) resolved that he would live for music, philosophy and theology until he was 30 and who at 30 (Saturn return) fulfilled this by becoming a medical missionary and ultimately achieved three Chronos cycles, dying at 90. There is a detailed and fascinating analysis of the 12-year cycles in the life of Tolstoy as reflected in his novels and the various crises through which he passed - stations along his life's way and always demanding a further transformation. The author remarks that he, like all of us, are 'living contradictions, incongruous compounds of lead and gold.' And the function of our life experience is distillation, digestion and assimilation into the self.

Here we reached the kernel of the book, the idea that 'our voyage across the ocean of time is charted by the spiritual-psyche nucleus of our being, arranging the placement of particular experiences at specific times.' We convert experience into consciousness, gradually increasing the scope of our freedom, dependent as it is on the level of our consciousness. Hence 'experience is the vital connection between the growing self and the world' (p. 183) as we evolve from fate to freedom. The author points out that mechanistic genetics is pure fate while mechanism implies determinism. Here Steiner adds the perspective joining physical with spiritual heredity and creating 'resistances *promoting* the challenge of self transformation, the conversion of suffering into consciousness. Thus, this self-evolution converts fate into freedom' (p. 195) which may in turn involve a deep surrender and acceptance as we embrace our destiny and expand our spiritual understanding (in terminal suffering, we may only find freedom through the quality of our acceptance as we surrender and release our hold on the physical). This process is what the author calls the imperative to mature through experience as the driving force in all human biography where 'the goal of all destiny is evolution through transformation' (p. 203) individually and collectively through a series of lifetimes.

In his forthcoming book *LSD and*

*the Mind of the Universe*, Christopher Bache proposes that death and rebirth occur at every level in the cosmos, which dovetails with the assertion in this book that every crisis is a process in time and implies a transition to a new phase - 'between what we were and what we will become' in an ascending spiral of fulfilment. To be incarnated is to contract, while to die is to expand, as many near-death experiencers and mystics attest. In terms of rhythms of transformation, the author observes that 'plant biography is the transformation of form in space and time (as Goethe discovered). Human biography is the transformation of experience in the psychological and spiritual growth - in time and space' (p. 229) and a sense of destiny infuses eternity into time, incarnating the universal in the individual. Readers will find much food for thought in reflecting on how these archetypal patterns show up in their own biography, leading to a deeper understanding of life and how it unfolds.

## ECOLOGY-FUTURES STUDIES

### ALARMING SCENARIOS

David Lorimer

#### ■ THE UNINHABITABLE EARTH

David Wallace-Wells

Penguin Random House, 2019,  
309 pp., £20, h/b - ISBN  
978-0-241-35521-3

Earth Overshoot Day 2019 - marking the day when humanity exceeds nature's renewable ecosystem resources for the year - was the earliest ever, on July 29, using 1970 as the last year where the date fell on December 31. This represents using 1.75 planet's worth of ecosystem resources and provides a different framing to what is presented in this book, first articulated an article in July 2017 on worst-case scenarios for global warming. The article created a sensational effect, as is also the case with this widely reviewed book. As Manuel Castells points out in his book *Communication Power*, the capacity to frame an issue is critical. Our prevalent environmental discourse is a narrative primarily referring to global warming, climate change and carbon emissions, as presented in a series of IPCC reports.

One of the latest dates from October 2018, and is a policy document on the impacts of global warming at 1.5°. Paragraph A1 states: "*Human activities are estimated to have caused approximately 1.0°C of global warming above pre-industrial levels,*

*with a likely range of 0.8°C to 1.2°C. Global warming is likely to reach 1.5°C between 2030 and 2052 if it continues to increase at the current rate. (high confidence)*" Note that it is stated that human activities have caused the whole warming above preindustrial levels, with no mention of the percentage of this increase that might be natural. Climate experts all acknowledge that natural cycles do play a role in climate fluctuations, but there is disagreement about the extent of this effect, which some put as high as 75%, although this figure is rarely mentioned in the press.

C2 states: "*Pathways limiting global warming to 1.5°C with no or limited overshoot would require rapid and far-reaching transitions in energy, land, urban and infrastructure (including transport and buildings), and industrial systems (high confidence). These systems transitions are unprecedented in terms of scale, but not necessarily in terms of speed, and imply deep emissions reductions in all sectors, a wide portfolio of mitigation options and a significant upscaling of investments in those options (medium confidence).*" This paragraph highlights the scale of transformation required in order to limit global warming. There is currently no political will or strategy to achieve this kind of transformation.

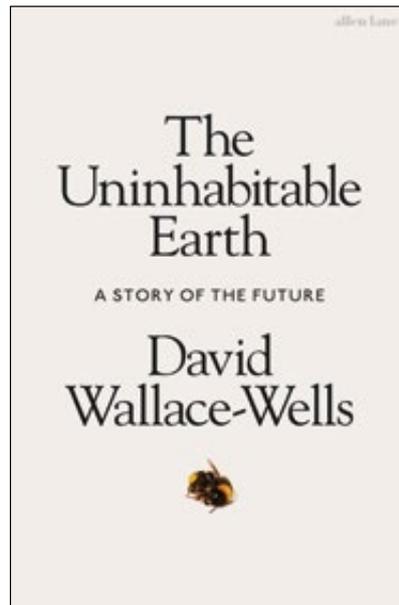
C3: "*All pathways that limit global warming to 1.5°C with limited or no overshoot project the use of carbon dioxide removal (CDR) on the order of 100-1000 GtCO<sub>2</sub> over the 21st century. CDR would be used to compensate for residual emissions and, in most cases, achieve net negative emissions to return global warming to 1.5°C following a peak (high confidence). CDR deployment of several hundreds of GtCO<sub>2</sub> is subject to multiple feasibility and sustainability constraints (high confidence).*" Here it is stated that CDR is essential to achieving this target, which involves either geoengineering through solar radiation management or carbon capture. I have discussed the first option in previous reviews, arguing that a certain amount of this is already going on, and also highlighting, like Peter Wadhams, that we cannot afford to stop it once we have started without provoking runaway warming. And the scale of the required CDR programme is rightly regarded by Wallace-Wells as politically and indeed economically quite unrealistic.

D1 continues: "*Estimates of the global emissions outcome of current nationally stated mitigation ambitions as submitted under the Paris Agreement would lead to global*

greenhouse gas emissions in 2030 of 52–58 GtCO<sub>2</sub>eq yr (medium confidence). **Pathways reflecting these ambitions would not limit global warming to 1.5°C, even if supplemented by very challenging increases in the scale and ambition of emissions reductions after 2030 (high confidence). Avoiding overshoot and reliance on future large-scale deployment of carbon dioxide removal (CDR) can only be achieved if global CO<sub>2</sub> emissions start to decline well before 2030 (high confidence).**” (emphasis mine). Taking this analysis as a whole, it is a grim prospect where emissions are likely to continue and little if any mitigating action will be taken.

This IPCC frame is used by the author for his analysis, but as I indicated the beginning, Earth Overshoot Day provides a different and much broader frame focusing on consumption of resources and implicitly on overall human impact on the planet - consumption multiplied by population, which is still increasing at 220,000 net per day. He does refer to the argument that natural cycles are making a contribution but makes no mention of any of the elements of analysis in terms of, for instance, the Atlantic Multi-Decadal Oscillation or even the cyclical effects of El Niño, which has been active in the last couple of years. A good estimate of the percentage of natural and human causes of warming is surely basic, as is understanding trends involving other factors - such as solar activity - which may well produce cooling in the future. Instead, the IPCC story assumes that 100% of warming is anthropogenic. The percentage involved does not alter our overall situation and the need for mitigation and adaptation, but it does provide a modification of the frame. Another frame is provided by the work of Lester Brown, with his costed analysis on how to make a transition to an eco-economy by using a fraction of annual expenditure on arms.

Human impact involves not only the burning of fossil fuels, but also population increase and impact, overfishing, overgrazing, overuse of water, intensive livestock breeding, loss of topsoil, forests and biodiversity, and pollution of the air and oceans (including plastic). Jason Drew and I analysed many of these factors in our book *The Protein Crunch* in terms of cumulative lifestyle effects and environmental depletion, especially changing dietary preferences among the rising middle class in India and China - hence the title. There are many more pressing issues than simple carbon emissions from fossil fuels, even if this is reflected across many areas.



Wallace-Wells does address many of these within his framework of analysis, pointing out that our current situation is a best case scenario of the future and identifying many linkages between natural systems, which he identifies using a metaphor of cascades. The second part is entitled Elements of Chaos and details heat death, hunger, floods, wildfire, freshwater issues, dying oceans, unbreathable air, plagues of warming, disasters that are no longer natural and the overall potential outcomes of economic collapse and climate conflict. All this makes very grim reading, and is based on nearly 70 pages of scientific references and conversations with many of the authors who share their overall sense of alarm while maintaining a scientific reticence. All the factors he cites are set to intensify with increases of temperature and a few figures show just how unsustainable our trajectory is: we will need twice as much food by 2050, a system that already contributes 30% of carbon emissions; in tandem, agriculture will require 50% more water over the same period, while parts of urban Africa and India are already in crisis; the deforestation policies of Brazil's President Bolsonaro the equivalent of the carbon emissions of the US and China between 2021 and 2030; between 1992 and 1997, the Antarctic ice sheet lost on average 49 billion tonnes of ice each year, while the average between 2012 and 2017 was 219 billion; population in Africa is forecast to increase from 1 billion to 4 billion by 2100; and we are currently burning 80% more coal than in 2000.

The third part, entitled The Climate Kaleidoscope, covers fossil fuel capitalism, the church of technology, the politics of consumption, history

after progress, and ethics at the end of the world. Since the 18th century, the human ideal has been one of progress and growing prosperity, but now we face the prospect of a collapse of our ecological and economic systems brought about by this very process of economic growth. As Wallace-Wells repeatedly argues, we ourselves have been writing this script and continue to write it. Developing countries aspire to the same level of prosperity, which European levels would require the resources of three planets. The prospect of a collision with nature is ultimately inevitable both through the frames of overexploitation of resources and population growth on the one hand, and the carbon emissions scenario on the other. His horrifying portrait of suffering is, as he argues, elective: 'if humans are responsible for the problem, they must be capable of undoing it.' We do in fact have the tools we need (but no mention of population here): 'a carbon tax and the political apparatus to aggressively phase out dirty energy; a new approach to agricultural practices and a shift away from beef and dairy in the global diet; and public investment in green energy and carbon capture.' (p. 227)

However, there is no sign that our institutions and leaders are in fact up to this momentous task, focusing as they do on short-term economic and political issues, and indeed we are all complicit as passengers on Spaceship Earth. At a time when unprecedented cooperation is required, many are retreating into populism and nationalism, looking after their own interests. A collectively intelligent species would realise the extent of our predicament and take pre-emptive action, but we are not yet collectively intelligent enough to do so, in spite of our conceit. As Catherine Ingram argues despairingly in a recent article, we are in fact facing extinction; and as James Lovelock has pointed out, the Earth will go on without us. Business as usual will be the default scenario until a series of catastrophes strike on a sufficient scale, as this seems to be the only language we have evolved to understand - the equivalent of a planetary near death experience. This is a profoundly depressing prospect to individually intelligent people, but it is hard to envisage a more positive collective scenario, even if we should continue our efforts to evolve and implement one. In that sense, this book is a wake-up call that may in fact not succeed in waking us up in time.

## CHANGING THE WORLD - INTENTIONALLY

Paul Kieniewicz

### ■ THE PLANET REMADE - HOW GEOENGINEERING COULD CHANGE THE WORLD

Oliver Morton

Granta Publishing, 2019,  
448 pp., £9.99, p/b  
- ISBN 978-1783780952

Oliver Morton, an award winning science writer has written extensively on planetary science. Here he offers us a new way to think about our planet, about the crisis facing it. The book is aimed at the general reader. It is well-referenced, thoughtfully written and shows a depth of understanding of the science and technical issues underlying geoengineering. While this is a very controversial subject, it is one that we cannot avoid discussing. He offers no recommendations other than urging the reader to consider all options.

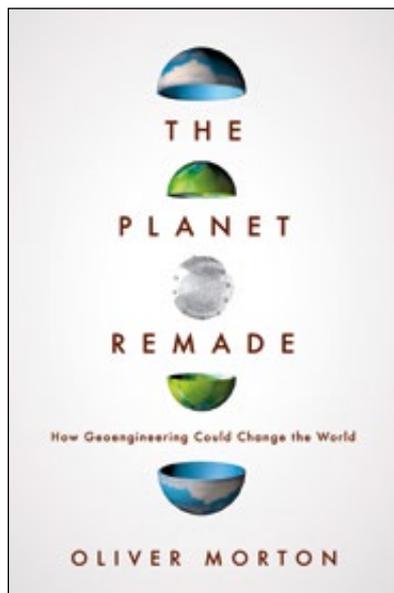
He asks the reader to answer two questions.

*Do you believe the risks of climate change merit serious action aimed at lessening them?*

*Do you think that reducing an industrial economy's carbon dioxide emissions to near zero is very hard?*

Skeptics of global warming typically answer the questions, No, Yes. There is no problem, and even if there were, we couldn't do much about it. Those supporting green policies tend to answer, Yes, No. Yes --- there is a serious problem. However, renewables, nuclear power and other low-carbon initiatives can reduce the world's output to near zero. All we have to do it to get serious about it. And leave the oil in the ground.

Morton takes a Yes, Yes position. Regarding the second question, he acknowledges the progress already made in Germany and in the UK in the development of renewables. However, those efforts involved the payout of massive subsidies feasible for wealthy countries, but not in 90% of the world. If carbon dioxide in our atmosphere is to be stabilized we need all the world's carbon emitters to join the party. Just 50% won't do it. In the case of China, despite a vast investment in renewables, current plans are to have carbon dioxide emissions keep rising until 2030, when 80% of Chinese



energy will still be from fossil fuels.

These are persuasive arguments for answering Yes to the second question. Our current efforts, while noble will not reduce our carbon emissions to make a significant difference in global warming. If that is the case, we have to include other approaches such as geoengineering.

Geoengineering is not new. We have been geoengineering our planet unintentionally for a long time, and the results have not been good. Changing our atmosphere by burning fossil fuels on a global scale is one example. Widespread use of artificial fertilizer derived from the Haber-Bosch process is another. It has allowed the Earth's population to grow, helped us avoid massive famines, but also created water pollution on a global scale. Our widespread transformation of the planet over the past few hundred years, physical and ecological, is recognized in the term Anthropocene that describes our current era. Except for cloud seeding and other efforts in rain making, we have not *intentionally* tried geoengineering to change the environment. Certainly not on a planetary scale. To that end, the most plausible options are carbon capture and storage, managing aerosols in the lower atmosphere, spraying sulphates into the stratosphere to dim the sun's energy, re-forestry, carbon-dioxide extraction using the oceans, cloud whitening. Each project poses potential benefits as well as significant risks from unintended consequences.

Intentional geoengineering raises many moral issues. A common position among environmentalists is that geoengineering will give us less incentive to reduce our carbon consumption. Morton argues that

this is not the case. He points to Germany where most of the geoengineering research is being done today, and which has also reduced its carbon consumption considerably. Geoengineering alone will never solve global warming anyway. At most it can give us breathing space, more time for us to reduce our carbon consumption. Because time is short, we have to try geoengineering. The alternative is to watch the climate disaster unfold, especially in third world countries that contributed the least to global warming.

What are the most promising avenues? The principles of carbon capture and storage are known. The process involves removing carbon dioxide at the factory stack and storing it somewhere. Unfortunately, this technology is expensive, and has yet to be tried on an industrial scale. Removing carbon dioxide from the air faces serious challenges because carbon dioxide is a minor constituent. One scheme is to add iron to the oceans so that they can remove carbon dioxide from the air more efficiently. However, a pilot programme gave disappointing results. The best publicised scheme involves the injection of sulphates into the stratosphere to diminish the power of the sun. This project was inspired by the eruption of mount Pinatubo in 1990 that ejected large amounts of sulphur dioxide into the stratosphere. The following two years were anomalously cool, drier over the continents, with lower carbon dioxide globally. The ozone layer was also depleted. We could mimic Pinotubo, more efficiently, and globally. We could use sulphates or another agent less destructive to the ozone layer.

There are reasons to go ahead with such a scheme, and many reasons not to. But until the research is done, we won't know enough to make an informed decision. Many environmentalists are opposed even to carrying out the research, calling such schemes, "hacking the planet" or "get out of jail free". To such criticism the author replies --- do you have a better idea?

Though the politics of global warming are particularly divisive, this has not always been the case. Morton reminds us of the 1980s, when several hawks in the Reagan administration suggested that a limited nuclear war could be winnable. In 1993 a paper entitled *Nuclear Winter – Global Consequences of Multiple Nuclear Explosions* was published by several scientists including James Pollack and Carl Sagan. Carl Sagan was later a frequent guest on Jonny

Carson's tonight show. He argued that any nuclear war was suicidal as well as genocidal. So much dust would spread in the lower and upper atmosphere, that sunlight would be cut down to where crops would cease to grow for up to three years. Carl's eloquence certainly got the message across. Curiously, following the paper's publication and popularization, the Reagan administration's policy changed, to promote nuclear disarmament.

Morton understands the delicate balance of ecosystems that must be preserved. He is a supporter of James Lovelock, and the Gaia Theory. His book is a passionate call for us to seek imaginative solutions to global warming. The current approach is not working. We need to consider what technologies to use to forestall global catastrophe.

*Paul Kieniewicz (SMN) is a co-editor of Paradigm Explorer. A geologist and astronomer, he is the author of Gaia's Children and co-author with Andrew Glazewski of Harmony of the Universe.*

## ON THE SIDE OF LIFE

David Lorimer

### ■ DEFEND THE SACRED

Edited by Gail Davidson and Ruth Gordon

Verlag Meiga, 2019, 147 pp., €22, p/b – ISBN 978-3-927266-66-7

The title of the book was also that of a gathering of international activists held in the Tamera Community of Portugal in August 2018, just before my first visit. The event itself was inspired by the non-violent resistance at Standing Rock in 2016 and the conviction that we must now stand together against the wholesale destruction of life and the assault on our natural ecosystems. I have written two reviews in these pages of books by one of the founders of the Community, Dieter Duhm, who refers to the sacred matrix of life. The book comes under the overall auspices of the Grace Foundation, which is working with organisations and individuals to initiate a global system change: 'from the system of war, exploitation and environmental destruction to a system of peace, trust and cooperation with nature.' In this context, Tamera is a 'healing biotype', a centre of research and experimentation towards a regenerative lifestyle. Perhaps the most striking aspect of Tamera is the tangible field of trust built up over many years and into which the visitor enters on arrival.

One of the unique and essential features of Tamera is the connection between ecological values, spiritual knowledge and political engagement, all of which is found in these pages. As my friend Martin Winiecki asks in his introduction, is there any way to overcome global capitalism given the extent of the existential and ecological crises we face? Along with many others, he is convinced that the ecological, economic, social and political orders that have shaped our lives cannot be sustained, and apparently the power elites already refer to the moment of collapse as 'the event.' He sees our choice as that between a totalitarian nightmare or global revolution, and communities like Tamera already embody this revolutionary future in a decentralised fashion. The answer is not so much resistance as



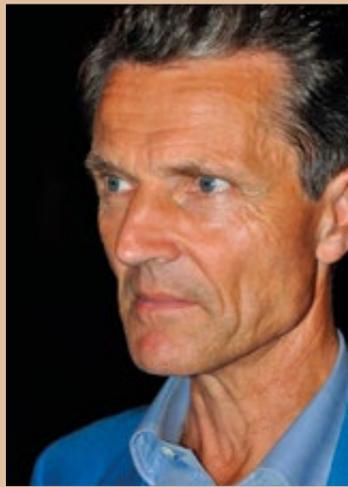
building 'decentralised, autonomous, community focused alternatives to the centralised systems of power' in which the feminine voice and values of cooperation are heard.

The book consists mainly of transcripts of interviews with about 50 of the visionaries who attended the gathering, under the general headings of energy systems without fossil fuels, healing water and cooperating with nature, a planetary community of solidarity and compassion, the female revolution, transformation of the economy beyond an extraction infrastructure, and visions as the drive towards a new earth. It is very significant that we in the West are now attending to indigenous wisdom that highlights our connection with the Earth and how to take care of our planetary home, insights that we have forgotten in our relentless pursuit of unending growth. One of the elders from Standing Rock, Ladonna Brave

Bull Allard, delivers a powerful address on indigenous resistance and the need to spread hope – she sees Standing Rock as a seed of knowledge about how we can live on Earth again. She is compassionate in believing that there are no bad people, only traumatised people and that we must hold to a positive vision beyond resistance - this represents Gandhian soul force.

One of the features of Tamera is its success in introducing a water retention landscape in a previously arid area, and we learn that the indigenous understanding of water is much more profound – *Mni* is 'a loving, moving, growing, cleansing and powerful living being.' This view emphasises the intrinsic nature of the sacred both around us, within us and between us in terms of the power of love, trust and solidarity. Fighting against violence reinforces separation, hence the need to use the power of trust for healing purposes. Brigida Gonzales from Colombia speaks movingly of her path of forgiveness and healing, in spite of receiving death threats in connection with her peace community work - indeed 300 people from the community have been killed in its 21 years of existence. Similar heartening stories of courage and vision are reported from around the world.

The new feminine power in the community is represented by the other co-founder, Sabine Lichtenfels, who with her partner Dieter Duhm has worked to transform our understanding of love and female sexuality as a sacred force of life in the face of a predominant patriarchal culture that needs the counterbalance of compassion and the heart expressed in sacred activism. Charles Eisenstein speaks about transformation from a system of extraction to a system of giving where extraction is associated with the values of growth, control, separation, competition and commodification through conversion into money. In a later extract, he senses that a vision is already present in our world - we simply need to listen for it and bow in service to humanity. For Sabine this means finding a greater life purpose reconnecting with the whole and revealing 'the point in us where the sacred can work through us to forge a global alliance and world community.' Those in need of a strong draught of hope and inspiration need look no further than this visionary collection, a beacon for a New World rather than an imposed New World Order which we all long for in our hearts and to which we are more than capable of devoting ourselves.



*David Lorimer*

*Note: many of these books are now available in downloadable electronic form*

# Books in Brief

## SCIENCE/ PHILOSOPHY OF SCIENCE

### ■ On the Life of Galileo

Edited, translated and annotated by  
Stefano Gattei

Princeton 2019, 348 pp., £40, h/b.

This book is a major scholarly achievement and represents the first collection and translation into English of the earliest biographical accounts of Galileo's life ranging from 1633 to 1702 with a major focus on one of his last pupils, Vincenzo Viviani (1622-1703). The thorough 75-page introduction initiates the reader into the various accounts, the longest of which runs to 95 pages. The original Italian is on the left, with the English translation on the right. Issues of power in relation to the Church recur in every contribution, especially with respect to his various publications including *The Sidereal Messenger* and his *Dialogue on the Two Chief World Systems* which finally came out in 1632 - Viviani tries to present his life diplomatically rather than fostering the myth that later became influential, pointing out that he was showing 'a more certain way to truth.'

It is exciting to read first hand descriptions of Galileo's key experiments and inventions, such as the telescope and microscope and his discovery of the phases of Venus, sunspots, the uneven surface of the moon and the nature of the Milky Way as nebulae. Publication of his observations of moons of Jupiter initially provoked accusations of unreliable observation and illusions generated by the lenses, but confirmations by others prevailed in spite of fear of outraging Aristotle, which meant that some professors refused to look through the glass. This Galileo regarded as being disloyal to nature. Viviani remarks that these people 'violated the philosopher's duty not to regard his own statements as true and infallible without further examination.' On a personal note, Viviani explains Galileo's good nature and wit as well as his capacity for

painting and playing the lute. He also enjoyed gardening and, interestingly, knew by heart many Latin authors such as Virgil, Ovid, Horace, Seneca and Petrarch. The book gives readers many fascinating key insights into Galileo's life, work and character.

### ■ The Newton Papers

Sarah Dry

Oxford 2019 (2014), 238 pp., \$19.95, p/b.

This fascinating book traces the history of Newton's papers since his death in 1727 to the present day. He died intestate, and the first investigators were uneasy when they examined the whole collection, deeming them 'unfit to be printed.' We now know that the main reason was his extensive writings on theology and alchemy (also reflected in the contents of his library), which were in tension with his reputation as a supremely rational scientist. The treatment here is chronological, and includes the questioning of his sanity by Jean-Baptiste Biot and a biographical defence by Sir David Brewster, amounting to over 1,000 pages. William Whewell played a key role in the 19th century, during which time George Stokes and John Adams began their cataloguing, while the papers remained with the Portsmouth family until they were obliged to sell them in 1936.

This is where Keynes comes in. The author gives some fascinating background about how he began to collect valuable books as an undergraduate from Gustave David in the Cambridge market, including a first edition of Newton's *Principia* for four shillings (the dealer had paid 4p). At the Sotheby's sale, Keynes bought 38 lots for £554 10 shillings, equivalent to £25,000 today. These related mainly to his alchemical work, which led Keynes to describe Newton famously as 'not the first of the age of reason. He was the last of the magicians, the last of the Babylonians and Sumerians, the last great mind which looked out on the visible and intellectual world with the same eyes as those who began to build our intellectual inheritance rather less than 10,000 years ago.' (usually only the first two phrases are quoted) Here

Newton was trying to read the riddle or patterns of the universe at different levels.

Keynes noted that the theological and alchemical manuscripts were marked by 'careful learning, accurate method, and extreme sobriety of statement' - a phrase that reminds me of Swedenborg. Keynes found these manuscripts impossible to discount, but equally impossible to credit, which indicates the limitation of his and indeed the modern imagination, as the author notes in her conclusion: 'our understanding of him will always be conditioned by our expectations of what a scientist is or should be, and these expectations have, in turn, been shaped by our understanding (or misunderstanding) of Newton's own life.' She adds that in searching for the papers, we are also searching for ourselves. It is a captivating story.

### ■ The Last Butterflies

Nick Haddad

Princeton 2019, 250 pp., £23, h/b.

The author has devoted his life to butterflies and here he considers six of the rarest species as well as the extinction of the British Large Blue and the potential perils for Monarchs as an abundant species of butterfly. Recent reports indicate a 40% overall decline in insect life, of which butterflies are a part, exhibiting both fragility and resilience and offering both gloom and hope. The author asks what we can do to reverse course and prevent impending extinction, as well as the general lessons that can be learned in terms of biodiversity. Among these is the central role of habitat fragmentation and loss in diverse populations. His guiding principle is that humans should not be the cause of the extinction of these extremely rare species by promoting rather than destroying biodiversity - it is a moving personal ecological odyssey.

### ■ 8 Lecons Essentielles sur la Science Quantique

Emmanuel Ransford

Guy Tredaniel 2019, 202 pp., €18, p/b.

Emmanuel Ransford is a brilliant expositor of quantum theory and author of a number of previous books on the subject as it relates to consciousness. Here he gives his take on a number of essential features of quantum physics using some strikingly original metaphors and parallels, explaining how the various features such as 'quantition', quantum leaps and non-locality interrelate as systems move from indefinite to specific due to what he calls a quantum threat (from *flou* to *net*). An original feature of his thinking is the distinction between what he calls exo-

causality as deterministic and endo-causality as inherent and possessing a certain power of initiative and decision manifest at different levels, and ultimately as qualified free will in humans. This makes an elegant connection between the micro and the macro. His striking analogy for complementarity here is the poached egg with its white and yolk, the first representing determinism and the second uncertainty or randomness, concealing the yolk within when cooked (p. 102). Endo-causality is associated with coherence, as explained in the final lesson, after which he moves on to five indications of free will, observing that materialistic science has no room for this concept. Within Emmanuel's system, consciousness and the sentience of plants are both embedded in 'holomatter' with inherent nonlocal connectivity, for which he has his own terminology that is difficult to translate into English. An original and stimulating exploration of the field.

### ■ Deep Time Cards

[www.deeptimewalk.org](http://www.deeptimewalk.org), £19.99

I remember the experience in San Francisco in 1997 at the State of the World Forum of doing the kind of deep time walk recorded in these 58 beautifully produced cards, one for every 100 million years up to the dawn of humans. Each card is beautifully illustrated and explains the history of the period. In addition, there is an overall timeline of the anthropocene with a further nine explanatory cards summarising our present situation, detailing the Earth Charter and assessing our prospects for the future. An app is also available but the cards are already an impressive experience to walk through.

## MEDICINE/HEALTH

### ■ The Power of Vibrational Medicine

Gretchen Weger Snell PhD

Self-published 2019, 115 pp., no price given

- see [www.naturalpathconsulting.com](http://www.naturalpathconsulting.com)

The literature of vibrational medicine has been steadily accumulating over the last 25 years - I reviewed Richard Gerber's book *Vibrational Medicine* when it came out in 1996, although energy medicine goes back much further and is embedded in the Indian and Chinese traditions as well as in homeopathy, where Hahnemann refers to the spiritual force that animates the material body. In the history of science and medicine, this kind of vitalism was defeated by mechanism, which still predominates

today. It is interesting to note an 11th century text by Avicenna postulating the primacy of energy in the causation of disease. Quantum physics provides a context for regarding the world in terms of frequency, vibration and energy, as the author points out. She then gives a background to bioacoustic frequencies and sound therapy, including the fascinating finding of the therapeutic effect of Gregorian chants based on the Solfeggio scale used in ancient Egypt and Greece, which is tuned to 432 Hz instead of the well tempered 440 Hz of Bach - significantly,  $12 \times 36 = 432$ , whereas 440 is not divisible by 12.

The author explains various tools for monitoring the human energy field before going on to describe her research project and its results. This reminded me of the book I reviewed some time back where healers moving forward in time spoke about the importance of light in future medicine. The three measurements she uses are heart rate variability (HRV), autonomic nervous system coherence and electrodermal analysis with acupuncture (EDA). The project involved measuring the effects of targeted bioacoustic frequencies through Sayonic Therapy as the language of frequency. The participants listened through headphones to a 30-minute recording and were tested both before and after for HRV, coherence and meridians. It was a small study, but results were positive, both objectively and subjectively. The significance of the study is primarily the objective measurement, which can potentially be replicated and contribute to a shift in perspective within Western medicine where energy and frequency imbalance are understood to manifest in chemistry and can be treated at that level while also actively involving the patient. The sound therapy CD can be located at <https://store.cdbaby.com/artist/KateHart>

### ■ Food Wars

Tim Lang and Michael Heasman

Routledge 2015, 296 pp., £33.99, p/b.

If you only read one book on the food system, environment and health, this has to be it. I reviewed the first edition in 2004, and this updated version came out in 2015, but has lost none of its relevance and impact. The subtitle - the global battle for mouths, minds and markets - gives a good indication of the content - as politicians try to formulate policy in view of multiple pressures and changing patterns of health. The key theme is the importance of integrating human and environmental health, a position taken by the pioneering organic agriculturalist Sir Albert

Howard in his linking the health of the soil with that of plants, animals and humans. More specifically, the crucial elements are relationships between health, business, consumer culture, society, the environment and food governance. The Food Wars thesis arises from competition to succeed what the authors called the productionist paradigm where the emphasis has been on raising output and a large-scale industrial approach. The two approaches vying to succeed this are what they call the Life Sciences Integrated Paradigm (biotechnology) and the Ecologically Integrated Paradigm (bioecology), both of which are described in detail. The scientific and industrial mainstream is firmly behind the first paradigm and investment in this field is orders of magnitude greater than in the organic approach. The authors rightly identify a fundamentally divergent worldview between these two.

There are detailed chapters on the relationship between diet, health and disease, for instance in terms of trends in obesity, coronary heart disease, cancer and diabetes. For the first time in human history, 1.4 billion overweight and obese exceed the number of malnourished at 0.9 billion, with obvious implications for public health. Then there is the relationship between food, environment and sustainability with implications for the impact of food systems on ecosystems - here the contrast is between an extractive and nurturing approach at a time of rising environmental stakes. The next chapter looks at policy responses to food's role in human and environmental health where an emerging concept is sustainable diets from sustainable food supply chains; there has been a tendency espouse a hands-off approach as promulgated by neoliberalism and largely suited to industry interests.

The authors then analyse the Food Wars business characterised by global consolidation, intense competition and an increasing need to engage with health and the environment. In this context, it is interesting to note that 50% of the world's cultivated food is still produced by 1.5 billion peasants working on 380 million farms, with 30% coming from the industrial food chain and the rest consisting of 7.5% produced by city dwelling peasants and 12.5% from hunter gathering. A highly revealing insight is the proportion of subsidy beneficiaries kept secret by governments (94% in the UK), and it is astonishing to read that Tate & Lyle is at the top of the EU subsidy list. There is surely an overwhelming case for transparency here. Looking to the future, the authors list their priorities as well as

the new agenda for food policy, all of which should be required reading at government level. For the general reader, there can also be no better handbook on the food system.

### ■ Celery Juice

Anthony William

Hay House 2019, 187 pp., \$19.99, h/b.

For readers unfamiliar with Anthony William, he is called Medical Medium and I have reviewed two of his previous books in these pages. He has the ability to read people's medical conditions and tell them how to recover their health, as evidenced by the extensive accolades from many famous people in the front of the book, including Gwyneth Paltrow, Marianne Williamson and Novak Djokovic. The book relates the anti-inflammatory, alkalising and cleansing qualities of celery juice in comprehensive detail. The advice is to drink a 16-ounce glass in the morning on an empty stomach - I started my trial this morning! Anthony explains various factors related to its effectiveness, including sodium cluster salts, cofactor micro trace minerals, electrolytes, plant hormones, digestive enzymes, antioxidants and vitamin C. The next chapter details conditions that can be helped by celery juice, and the reasons why. In a previous book, he explained the prevalence of many different strains of EBV virus, which he thinks is responsible for many chronic conditions. Another important factor is toxic heavy metal and viral load within the system. For those who want to go further, there is a chapter on the celery juice cleanse. Given its apparently extraordinary therapeutic qualities, Anthony anticipates that it will be systematically attacked at some point, but the underlying principles make a great deal of sense to me.

### ■ Psi and Psychotherapy

Alex Tanous, Elaine Schwinge and Andrew F. Bambrick

White Crow Books 2019, 184 pp., £12.99, p/b.

The well-known and highly successful psychic Alex Tanous died in 1990, so this book written with his medical collaborators has been on ice for nearly three decades. The book initially describes their meeting and the development of a combined approach to mental health by a psychic and psychiatrist, where the basic principle is that genetic/childhood experiences are the primary continuous source of influence on a person. The process is rigorously structured in terms of dimensions, focus, goals and evaluation, with three distinct phases. Tanous already had a track record as a healer before

the detailed cases described in this book. His insights are extraordinary, to say the least, and totally specific to the patient involved, for instance in one case identifying the key childhood incident relating to a weight control issue, and in another a connection with fear of being attacked, tracing this back to seeing her father peering at her through the window, again aged eight. The treatment and evaluation are described in all cases and provide a new avenue for collaboration, which may now be more acceptable than it would have been in the 1980s, given the opening to spirituality.

### ■ Essential Energy Tools

Gayle H Kimball PhD

Equality Press 2016, 405 pp., no price given, p/b.

Although the book is subtitled 'how to develop your clairvoyant and healing abilities', it is in fact much more encyclopaedic in its coverage of themes connected with thought, intention, energy and healing. It can either be read through or dipped into, and contains many techniques, experiments, accounts of personal experience and a good deal of scientific and medical background based on the author's reading and experience. It can also be used in a selective self-help fashion with respect to particular recommendations or techniques. Its ultimate aim is to help people become the pilots of their own lives and clear out space in order to come to our fullest potential expression, enhancing the quality of our lives. There is a comprehensive list of resources at the end.

## PHILOSOPHY/ SPIRITUALITY

### ■ A Theory of the Aphorism - from Confucius to Twitter

Andrew Hui

Princeton 2019, 261 pp., £24, h/b.

As a collector of quotations and aphorisms myself, this book was irresistible. One of the first collections I bought was *Le Petit Philosophe de Poche* in Epernay in 1971, which contained many classic French sources including La Rochefoucauld, La Bruyere and Voltaire. The major figures covered here are Confucius, Heraclitus, the Gospel of Thomas, Erasmus, Bacon, Pascal and Nietzsche. An important leitmotif running through the study is the relationship between the hermeneutics of the pithy aphorism or fragment and the grand philosophical system. At the outset, readers are introduced to the various terms and their relationship

to each other - aphorism, precept, maxim, adage, epigram, proverb and apothegm, and the author proposes his own definition of 'a short saying that requires interpretation.' Schlegel also has a nice definition - 'a fragment ought to be entirely isolated from the surrounding world like a little work of art and complete in itself like a hedgehog.' Needless to say, the contrast between the hedgehog and the fox - knowing one thing or many - soon makes an appearance.

Each chapter contains its own subtitle, indicating an underlying theme such as hiddenness in Heraclitus, revelation or gnosis in Thomas and infinity in Pascal. The author explains the genesis and context in each case, noting that the amount of scholarly commentary produced is inversely proportional to the succinctness of the original sayings... It was written of Confucius that his words are pithy, but their meaning without limit. Heraclitus' *gnomoi* are treated within the development of Greek philosophy and contrasted especially with Plato (from Socrates onwards there is no philosophy without proof or argument). The chapter on Thomas is illuminating in contrasting its content and approach with the canonical gospels and parallels with the Greek tradition of knowing oneself. These sayings are not contextualised or set within a narrative framework, nor do they appeal to any written authority: 'they precede and resist the systematisation of the synoptic Gospels and the institution of the early churches... with strict dogma and hierarchical structures.' Parables are also cited as vehicles for hiddenness and inwardness in accessing the divine within. Interestingly, Heraclitus and Thomas are both cited by Clement of Alexandria and Hippolytus in their discussions of heresy, grappling as they do with the same problems.

Erasmus (1466-1536) and Bacon (1561-1626) are treated in the same chapter, the former accumulating over 4,000 adages during his life and likening them to gems or mustard seeds in their potential. They both believed that aphorisms would encourage readers to contemplate and enquire further, but their functions in European culture were very different, and Bacon develops some aphorisms into axioms, using these to explore the relationship between particulars and generalities, and the principles of observation and induction. Pascal's work is contrasted with the clarity and order of Descartes as he sought to reduce words to their essence while also attempting to decipher God. Famously, he reminds readers that the heart has its reasons unknown to reason. Nietzsche produced a huge

output of aphorisms, remarking that his ambition was to say in ten sentences what everyone else says in the book or rather what everyone else does not say in a book. He also refers to the value of uncompleted thoughts in relation to aphorisms. The epilogue reflects on the hermeneutic density of aphorisms in the age of Twitter and the danger of a surfeit of books and reading, going back to the Indian *sutra* and Japanese *koan* as other historical examples of economy of expression pregnant with meaning. Lovers of aphorisms will derive huge pleasure from this elegant and informative book.

### ■ Love Love Love

Stephen Turoff

Clairview 2019, 148 pp., £12.99, p/b.

This book arose from a series of six powerful seminars given in Slovenia and as such preserves the directness of the spoken word. It is a wake up call that many of us spend most of our time on inessentials in view of the common teaching of spiritual masters, who come to remind us of who we really are: embodiments of Love, Truth, Light, Freedom and Compassion. We are not separate from God even if we (the mind) think we are, and the key is to realise this consciously and live every day in the presence of God, even as we breathe, and remembering his main mantra, "Thank You God" as we go about our daily activity. Meditation is a central practice in terms of listening in silence to the truth and realising that we are in God and God is in us - there is only one Soul. Stephen describes quite a number of phenomena and remarkable meetings and healings in his life, and readers can sense a deep authenticity in his message. At the end of the day we can only take our truth or being with us; we cannot change the world, but we can change ourselves and magnetise divine energy in order to transmute our frequencies. This is a precious message to savour and apply, and a timely reminder of our essential spiritual nature and purpose.

### ■ The Essential Path

Neale Donald Walsch

Watkins 2019, 119 pp., £9.99, h/b.

Neale will be well known to many readers for his many books beginning with the *Conversations with God* series back in the 90s - indeed, we devoted a one-day seminar to his work in 1996, attended by 35 people. This latest book, as the title suggests, is a challenge to our species to recognise our true spiritual nature and its implications. At a time of alienation, us versus them, we need to question our basic assumption

of separateness and that survival represents our fundamental drive. Neale proposes that we need to go beyond ideas represented by both traditional religions and materialism to a more transcendent position that combines two insights: *who* we are as spiritual beings manifesting physically, and *what* we are as one essence manifesting individually, hence we are both a Spiritual Being and One Being. This means that We Are All One and can make a decision to embrace this view and live out its implications. Scientific materialists could accept the second proposition, but not the first, if the word life were substituted for essence, so it would have been useful for Neale to have articulated this as a way of appealing to his Group Two, also in terms of ecological connectedness and interdependence. As he says, the implications of fully embracing this view are revolutionary in all spheres of life, but I think different arguments will appeal to different sets of people. However, the succinct case he makes is well worth reading and applying the implications to our lives and systems in the long path towards becoming a more awakened species.

### ■ Reason and Beyond - Knowledge, Belief and Spiritual Transformation

Darrell Morley Price

O Books 2019, 239 pp., £13.99, p/b.

This book by a teacher of *A Course in Miracles* is a profound meditation on the really important things in life, interweaving philosophical reasoning, evocative descriptions of nature, and poetry. Many key themes recur in different contexts relating to the nature of mind, intelligence, consciousness, awareness, life, silence and peace. The author has no illusions about the challenges set by the habitual functioning of the normal mind, reinforced by hedonistic patterns of greed and overconsumption in contemporary society putting us on an unsustainable trajectory vis-a-vis Mother Earth. He is also critical of materialistic assumptions of modern science and philosophy, relating them in turn to consumerism and prevalent mental health problems. The answer lies within, in returning to the essence where we will also find love, beauty and peace. Death is a reminder of our limited time on earth, the time to live and love. The author also reminds us of evanescence - all great civilisations of the past have disappeared, and ours is going the same way, perhaps sooner than we realise, despite our ideas of progress - he likens our situation to the Titanic, thought to be unsinkable until it sank. And since 'Life is a

Unity of Consciousness and Being' our neighbours are ourselves and we should act accordingly out of love and compassion. This is an inspiring extended meditation reminding readers of the essential in life.

### ■ Wrestling with Archons

Jonathan Cahana-Blum

Lexington 2018, 198 pp., \$60, h/b.

Subtitled 'Gnosticism is a critical theory of culture', this scholarly work argues that Gnosticism performed this function in the early Christian period by deconstructing some of the givens of their contemporary world, especially related to tradition and gender, in a similar fashion to the Frankfurt School and others in the 20th century. The author engages with and differentiates his approach from leading contemporary scholars like Karen L King (who maintains that much of what we know is framed by the distinction between orthodoxy and heresy) and April DeConick while acknowledging their respective contributions (DeConick's most recent book is reviewed above). Interestingly, he also argues that proto-orthodoxy was in fact an adaptive reform of Gnosticism. This argument goes back to Walter Bauer and has been advanced by Karen King - heresy is a category created by the early church in order to draw an artificial separating line and present orthodoxy as inherently mainstream and authentic by contrast.

### ■ Jerusalem

Yeshayahu Ben-Aharon

Temple Lodge 2019, 268 pp., £20, p/b.

This profound reflection, subtitled 'the role of the Hebrew people in the spiritual biography of humanity', builds on the work of Rudolf Steiner and consists of six lectures. The title of the first one encapsulates the main theme of the book - evolution of human consciousness and the stages of individuation in the history of the Hebrew people. Central to this is the initiation of Moses and the revelation of God as *Eheje Asher Eheje* - I shall become what I shall become, or I AM that I AM. This indicates the evolutionary path of humanity from image to likeness of God: 'the individuation and indwelling of the being of the divine Supreme Self... This being must be individualised by each person who wishes to fulfil his destiny during the entire evolution of the Earth, from Genesis to Heavenly Jerusalem' (p. 215). This is cosmic consciousness, Self-realisation, divine initiation and rebirth, the joining of heaven and earth, above and below - as in the Star of David.

The author locates this process within the Western spiritual tradition, beginning with Egypt and tracing creative evolution through the initiations of Isaac, Moses and King David, whose archetypal role is embodied in his ultimately redemptive lineage and whose Psalms explore the heights and depths of his soul as he passes through four stages of initiation. An important point for our time is the necessity of the advent of scientific materialism as a stage in the evolution of consciousness, as argued by Steiner and Barfield. The mediaeval intellect worked through faith, having largely relinquished direct spiritual vision, except in the mystical tradition. The role of secularism, atheism and materialism is to achieve self-consciousness and independent existence, separating ourselves from animism. The choice now is between deepening this materialism 'until humanity's nature is completely lost in matter' or to develop 'new fully individualised forces of spiritual cognition, consciousness and awareness, which link humanity anew, but now in a fully conscious way, with the spiritual worlds from which it had separated itself' - a conscious ascent towards spirit, rather than a further descent into matter (p. 70). This also involves freeing ourselves from the ecclesiastical distinction between orthodoxy and heresy, which has migrated from the church into science with similar destructive effects resulting from intolerance and dogmatism. The author notes that, historically, people were persecuted because they represented the principle of creative evolution in terms of knowledge and freedom. This has to be our direction of travel for our mutual social and moral development.

### ■ The Life of St Teresa of Avila - a Biography

Carlos Eire

Princeton 2019, 260 pp., £23, h/b.

This is the story of the *Vida* of St Teresa of Avila (1515-1582), an exceptional woman plagued early in life with severe illnesses leading to what can only have been a prolonged near death experience in 1539, after which she recovered and gradually became a forceful presence within Spanish culture - indeed there was considerable disruptive activity around her incorruptible corpse and relics following her death. The *Vida* is Teresa's attempt to come to grips with her visionary experiences, mainly between 1554 and 1565, but within the context of an apologetic or forced confession so that the authorities could examine her writings for fraud, challenge to authority and orthodoxy. The challenge to readers

then, and even more so now, is her unquestioning assumption and experience that 'human beings can transcend the sensory material world and have intimate relations with the Creator of the universe.'

Teresa was also influenced by earlier works by Augustine, Thomas a Kempis, Francisco de Osuna's *Third Spiritual Alphabet* and *The Ascent of Mount Sion* by Bernardino de Laredo, but her real gateway is mental prayer and recollection, which she explains with a metaphor of the four waters culminating in falling rain where the experience is of pure bliss and infusion by God, the prayer of union. She herself wrote: 'that this is all merely imagined is the most impossible of all impossibilities.' The rest of the book covers the history of the *Vida* from 1600s to the present day, including depictions of St Teresa in art and explanations from every point of view reflecting the existing ideas of investigators in a way similar to interpreting a Rorschach blot. She was canonised already by 1622, and declared only the second female Doctor of the Church by Paul VI in 1970. It is an epic spiritual narrative.

### ■ The Seat of the Soul

Yvan Rioux

Temple Lodge 2019, 227 pp., £16.99, p/b.

This study is the sequel to the author's *The Mystery of Emerging Form* and continues his biological perspective on formative forces creating the body in conjunction with the rhythmic resonant forces from the Sun, Moon and main planets - Saturn, Jupiter, Mars, Mercury and Venus. On the cover, he quotes Novalis as saying that 'the seat of the soul is where the inner world and the outer world meet', while the psyche 'emerges progressively as an inner world of faculties that in timelines to apprehend and understand the outer world.' Rhythm is critical here in terms of frequencies, pulses and vibrations, as are the cycles of expansion and contraction, also noted by Goethe. Each chapter discusses the process corresponding to the heavenly body in terms of senses, nerves, breath, circulation, metabolism, movement and reproduction. Parallels are drawn with the Chinese system of five HUA as pulsing recurring movements of days and seasons. Every chapter also has a corresponding organ, psychic influence and metal, and the author gives recommendations for the health of this particular 'landscape'. Readers come to appreciate the subtle processes involved in the organism's constant movement of self-renewal as well as the need for metabolism

and digestion at every level, including the imaginative involving the psyche. The book carefully illuminates the interfaces between inner and outer in considerable detail.

### ■ On Patience

Matthew Pianalto

Lexington Books 2016, 144 pp., \$29.95, p/b

Part of my interest in this book emerges from my work in character and values education, where young people frequently identify patience as a quality they need to work on. This study is in fact the first extended philosophical examination of patience, drawing on a wide range of philosophical and religious sources from Seneca, Plato, Aristotle, Gregory the Great and the Stoic Epictetus to Nietzsche, Kafka, Shantideva and Simone Weil. One of the author's major concerns is to characterise patience as a disposition rather than a resource and to see it as a support to other virtues. He identifies various aspects of patience such as self-possessed waiting, uncomplaining endurance, forbearance and tolerance, constancy and perseverance. His own definition is 'the disposition to accept unavoidable burdens as well as various avoidable burdens that one can reasonably judge it to be wise to accept.' He considers patience in relation to wisdom, character, courage, hope and anger, as well as the limits of patience and the danger of identifying it with passivity. The reader is still left with questions such as how long we should wait, how much we should endure, and how often we should try again, but I do agree with the author that patience is indeed 'an attitude towards the world and a method of engaging with life's difficulties and opportunities.' This is a valuable and thoughtful contribution to the field.

### ■ From Personality to Virtue - Essays on the Philosophy of Character

Edited by Alberto Masala and Jonathan Webber

Oxford 2016, 272 pp., £53, h/b.

This volume sits at the interface between philosophy and psychology, relating the philosophical concept of character with the psychological idea of personality and responding to recent situationist critiques based on experimental psychology that call into question the traditional notion of character. Character is an ethical concept that has recently become more closely associated with virtue ethics through the work of the Jubilee Centre in Birmingham. The essays range widely over criminal justice,

will, agency and decision-making, character and motivation, character and social context, education, implicit bias, the nature of practical wisdom, character as a form of mastery, and institutional reform. The book is mainly aimed at specialists, but can be read with profit by the interested general reader.

### ■ The Revolution of Values

Ramin Jahnebglou

Lexington Books 2019, 87 pp., \$52.95, h/b.

This is a short and informative book on the origins of Martin Luther King's moral and political philosophy. Some of these roots are well-known and covered in separate chapters on Henry David Thoreau and Mahatma Gandhi, though his Christianity is essential background in this respect, also in generating a moral force for a revolution of values. One person missing here is Tolstoy, whose influence on Gandhi was very considerable with his reading of the New Testament and especially the injunction in the Sermon on the Mount about turning the other cheek. An additional important element is personalism – a commitment to personal dignity and self-respect in promoting democracy as a vital living ideal. The two most important universal principles are love and justice, and it is interesting to read about the influence of Hegel in finding a synthesis in nonviolence beyond acquiescence and violence. Evil must be resisted, but not with violence - here lies the difference between King and Malcolm X, highlighted in chapter 6. It is worth noting that King was also inspired by Jefferson and Lincoln, while Malcolm X drew on the writings Frantz Fanon with his analysis of colonialism as structural violence and domination demanding a corresponding response. King, however, sought a peaceful revolution based on shared ethical values and emancipatory theology. This is still an important message for our time, even if King is not the moral exemplar he once was with respect to his sexual life.

### ■ Queenly Philosophers

Jane Duran

Lexington 2017, 279 pp., \$70, h/b.

Subtitled 'Renaissance Women Aristocrats as Platonic Guardians', this is a fascinating study of five women who lived in England in the 16th and 17th centuries and who arguably played this role: Mary Sidney Herbert, Countess of Pembroke, Katherine Parr, the last wife of Henry VIII, Elizabeth I, Margaret Cavendish, Duchess of Newcastle and finally Aphra Behn. At

that period, aristocracy of class was essential for access to the court, but these women also form an aristocracy of intellect. The context changes considerably between the two parts of the book, with the 16th century focus on the interface between theology and philosophy, whereas this moves to science and philosophy in the 17th century. Hence the concern in the 16th century with penitence and salvation, as exemplified in *Lamentations*, by Katherine Parr; she played a significant role in the upbringing of Elizabeth I, who was already translating *Miroir* by Marguerite of Navarre at the age of 11, and whose prayers make moving reading.

Readers come to appreciate the importance of background concerns through the influence of the work of Luther and Erasmus and the personal immediacy and unmediated relationship with God, but also the factions negotiated by Elizabeth in the transition to Protestantism. The influence of science and mechanistic materialism becomes more apparent during the 17th century, as is also the masculine ethos of the Royal Society. However, all these women were prolific in their output, which included translations and therefore considerations of rhetoric and style. The book fills in a significant gap in the history of philosophy by painting a vivid picture of the times and the writings of these pioneering women.

### ■ The Life and Philosophy of Elizabeth Anscombe

Edited by John Haldane

Imprint Academic 2019, 312 pp., £19.95, p/b.

Elizabeth Anscombe was one of four brilliant women philosophers who were contemporaries at Oxford just before the Second World War – with Iris Murdoch, Mary Midgley and Philippa Foot. She was a pupil and translator of Wittgenstein, and became professor of philosophy at Cambridge in 1970. Midgley speaks for them all when she criticises the style of philosophising that consists of clever young men competing to win arguments based on simple oppositions. The essays cover the range of her philosophical concerns, and will mainly be of interest to academic philosophers. However, the introduction by John Haldane and the excellent essay by Sir Anthony Kenny on Elizabeth Anscombe at Oxford are highly accessible. Kenny was a graduate student at the time, and recalls how it was possible to drop in at any time to initiate a philosophical conversation, in spite of children running about (Anscombe was married to the philosopher Peter

Geach and they had seven children) - others who dropped by included John Searle and Tom Nagel.

John contributes a lucid essay on Anscombe and Geach on Mind and Soul, which will perhaps be of most interest to readers of this journal. Anscombe takes the view that 'the only tenable conception of the soul is the Aristotelian conception of the soul as the form, or actual organisation, of the living body' - elsewhere she refers to the soul as the primary principle. Her Catholicism comes through when she writes that 'there is no reason whatever for believing in a temporal immortality of the soul apart from the resurrection; above all there is no "natural immortality of the soul" that can be demonstrated by philosophy...' She is anti-materialism, but also rejects Cartesian immaterialism, although elsewhere she seems to have some sympathy with the Platonic view, a point which raises questions for John (p. 103). In any event, in contrast to the Oxford and Cambridge philosophers H.H. Price and C.D. Broad, she does not refer to any empirical evidence in this respect, although I believe that this does shed some light on the question.

### ■ Can the Mind be Quiet?

J. Krishnamurti

Watkins 2019, 274 pp., £9.99, p/b.

This book is an exciting publication for aficionados of Krishnamurti, consisting as it does 60 unpublished encounters with people during the 1960s and 70s and arranged under the three headings of exploration into living, learning and meditation. Needless to say, it contains incisive observations, some of which are expressed in dialogue form after an initial descriptive background. I'm reminded that recently I read of the incident where Krishnamurti asked in a lecture if people knew his secret - it was that he didn't mind what happens. The chapter titles give a good indication of the content - why do we divide the outer and inner, pleasure soon becomes pain, what brings about perception, solitude and freedom, the limitations of the intellect and ideas, the undistorted mind and truth, difference between opinion and truth, meditation as intelligence and the movement of greater sensitivity. All this requires intelligence, presence and attention in the moment rather than being stuck in the past - the book is a direct source of insight wisdom, but this must be practised not simply read about.

### ■ Your Meditation Journey

Charla Devereux

Eddison Books 2019, 144 pp., £12.99, p/b.

Charla will be well known to most readers for her many years of dedicated work for the Network, but perhaps less so as the author of books on aromatherapy and dreaming, as well as an earlier one on meditation. This beautifully produced book is an excellent and thorough introduction to meditation. It explains the background in a variety of ancient traditions including not only India, but also mystical Christianity and Sufism. It then moves on to the cultural influence of East on West since the founding of the Theosophical Society and the development of mindfulness over the last 40 years. Charla highlights the stresses of our modern lifestyle as an important factor in the rise of these movements, while emphasising the deeper aspects of the spiritual search, not simply stress relief.

The chapter on meditation, medicine and science is very well informed with over 30 research references, explaining brain studies as well as physiological and emotional effects. The remaining chapters are practical, beginning with the basics of location, posture and breathing and moving on to guided visualisation, single-point meditation, meditations connected with sound, light and nature, and finally the power of silence. I liked the quote from Francis of Assisi: 'what you are looking for is where you're looking from' - I had not come across this before. The explanations of the various exercises are clear, simple and easy to follow; even the seasoned meditator will find suggestions for new practices, for instance by a waterfall or on an empty beach. As it happened, we were watching sunset at the lake just at the point when I was reading exercise 25 on sunset meditation! I liked the fact that a chapter on silence closes the book with its invitation to incorporate the practice at whatever stage we find ourselves on our spiritual journey. As such, the book can be warmly recommended to both beginners and experienced meditators.

### ■ Yoga in the Gospels

Nicholas Cowan (SMN)

The Book Guild 2019, 82 pp., £8.99, p/b.

This book brings together the author's lifelong interest in relationship between Christianity and yoga, using the structure of the four forms of yoga as a framework - *bhakti*, *raja*, *karma* and *jnana*. It is designed as a source of readings and inspiration, using

quotations from the Gospels and from classic yoga texts such as Patanjali, Shankara, the Bhagavad-Gita as well as Christian mystics such as Julian of Norwich and Meister Eckhart. The emphasis is practical in terms of developing spiritual and ethical qualities while giving insight into the deeper meaning and connection between the texts. As such, it also gives guidance for life and universal inner development, bringing together metaphysics and ethics.

## PSYCHOLOGY/ CONSCIOUSNESS STUDIES

### ■ Living Space

Paul Holman

O Books (John Hunt) 2018, 329 pp., £17.99, p/b.

Paul Holman is a widely read doctor with 40 years' experience in psychiatry and psychotherapy. In this erudite book he explores the nature of spatial awareness as a means of experiencing greater openness and freedom and therefore balance. The journey begins with sensing, seeing and paying attention, starting with the body and moving on to the mind. This spaciousness rises within the context of the complementarity of connection/separation, which are very differently experienced by extroverts and introverts. We can all make space to remember, stop, centre, let go and relax but we often forget to do so. The author brings many strands and writings into his narrative, including Marion Milner, Fred Alan Wolf, Jean Klein, Douglas Harding and Iain McGilchrist - of whose book he provides a succinct tabular summary.

He gives many helpful observations for highly sensitive people and quotes Judith Harris with her scheme for a child's developmental process in terms of the relationship system, the socialisation system and the status system. I have observed all these variables in my work with young people, and in the larger social context pecking order and hierarchy are represented by systems of power and control in their competition with love and cooperation. 'Holman's Law' notes that most psychological distress results from or is exacerbated by finding oneself at the bottom of the social hierarchy - he finds no exceptions to this rule in his 40 years of clinical practice.

In meditation, space can also be the void or light, something that is also nothing, the One Substance as Light, experienced by mystics down the ages and manifesting as form in space

and process in time. If we are lucky, we can experience flow within cycles of life and number. The penultimate chapter explains how we have a tendency to get ahead of ourselves in constantly moving forward, which means we actually have to remember to come back to ourselves in order to achieve spaciousness, stillness, silence and even wholeness. This process is perceptively evoked in a series of phrases describing the meditative state, which are themselves meditative. This is a rich tapestry of exploration into an important topic.

### ■ Claims of Reincarnation

Satwant K. Pasricha

White Crow Books 2019 (1990),  
304 pp., £14.99, p/b.

Dr Pasricha is well known for her research into children who remember previous lives and was a close collaborator of Prof Ian Stevenson. This book, first published in 1990, is based on a 1978 PhD thesis in which the author investigated 60 cases in India, comparing the features with a similar number from Stevenson. It is an exceptionally thorough piece of work, beginning with a review of previous work – I had not realised that the earliest studies date back to the late 19th century. The parameters of her study are then described, along with results and an extensive discussion of potential interpretations, both normal and paranormal. These end with reincarnation, which explains more adequately not only the memories and occasional birthmarks associated with them, but also behavioural and skill similarities. The author then describes the research that she has carried out since the book was first published, with her current database of 300 cases. Overall, this makes an excellent and balanced introduction to the field for those not already familiar, while it will extend the knowledge of people who are already acquainted with it.

### ■ Talking about Psychical Research

Mary Rose Barrington

White Crow Books 2019,  
209 pp., £12.99, p/b.

Mary Rose Barrington is a retired lawyer and vice president of the Society for Psychical Research who has given many lectures to the Society and which make up the bulk of this collection. She is open-minded, well-informed and eminently reasonable in her assessments of wide range of psi phenomena. In the second lecture on repeatable psi experiments as a contradiction in terms, she comments that psychical research could be defined as ‘the

study of unpredictable events and uncontrollable effects’ on the basis that psi means effects without an apparent cause. i.e. outside sequential causality, as Jung also observed. One lecture considers more specifically the question of proof and validation of singular events. Here she brings a historical and legal approach to bear, pointing out that there is a great deal more to reality than can be known or proved scientifically. Real-life events, including paranormal ones, are not susceptible to scientific proof or mathematical certainty, but can be approached in terms of observation, evidence and testimony as is customary in history and law.

A number of lectures cite incontrovertible phenomena produced by Stefan Ossowiecki and Alexis Didier, so with respect to the demonstrated clairvoyance of the former in the presence of numerous witnesses, ‘we can be sure that these things happened on the same reasonable grounds, namely, that evidence compels acceptance.’ (p. 129) However, this is not always the case, as the author explains in a lecture on dishonest disbelief explaining the 1847 case of Alexis Didier who knew the cards held by Robert Houdin under the table, as a result of which the latter came away ‘as amazed as it is possible to be, and convinced that it is absolutely impossible that either chance or sleight of hand could ever produce such wonderful effects.’ Despite this unequivocal statement, a 1971 book published by Michel Seldow tries to argue that Houdin did not mean what he said. The author comments that (in spite of sceptics trumpeting their defence of science and reason) ‘once you are committed to a fundamentalist faith then reason melts away. No faith seems to unseat reason more thoroughly than the wilder shores of psi-denial.’ This is all very refreshing and pertinent, as is her discussion of evidence for survival and description of minor events with major implications. I think she is right to contend that ‘our minds are in an oceanic sort of telepathic linkage’ within a universal mind, on the basis of which many experiences she described make sense, along with her postulation of the persistence of the past. The book can be thoroughly recommended to specialists and non-specialists alike.

### ■ Waiting to Die

Kenneth Ring

Wheatmark 2019, 137 pp., \$10.95, p/b.

Ken Ring was the founding President of the International Association for Near Death Studies and author of a number of books on the topic. I

first met him with Caroline Myss in Connecticut in 1984 - and his vibrant personality made an immediate impression. His first two books, *Life at Death* and *Heading toward Omega* helped to define the field, and I read them avidly. Here, 35 years on, he has lost none of his love of life and humour as one can appreciate reading these essays about waiting to die in the light of his research work. His descriptions of bodily ailments and the general infirmities of old age are graphic and telling, but the importance of the book lies in his gentle wisdom and the reminder of what is really important in life, which he first learned from interviewing near death experiencers - as one of them put it, it is love and (spiritual) knowledge. Along the way, we learn of the impact of a mescaline experience in demolishing his previous ontological categories and how he responds to the atheist viewpoint of writers like Philip Roth and Julian Barnes. He distils his rules for ageing and living to 14 key points - including eating as much dark chocolate as possible - ending with the quip that we should not fret about following the rules as we are all human ‘especially you’. An uplifting and refreshing read.

### ■ When Spirits Come Calling

Sylvia Hart Wright

White Crow Books 2019 (2002),  
242 pp., £11.99, p/b.

The author had little interest in survival and after death communication until her husband died in 1983 and began to make contact. Here she approaches the subject as an open-minded sceptic, recognising that, as we know, many scientists are still completely closed off from this kind of evidence and will not consider it seriously. The chapter narratives are very varied and include deathbed coincidences, guidance from the other side, suicide, communication from children who have died, mysterious behaviour of clocks, lights, radios and telephones, symbolic events, animal stories and paranormal dreams. There are many significant case histories that cannot be explained in normal terms and which add to the already considerable volume of similar material. One such example involved the death of a man’s wife in a car crash, where she communicated to him the nature of her fatal injuries before the car was found and any post-mortem conducted. Such case histories should be analysed using a legal approach to evidence, as I argue in my own book *Survival?* I would enlarge on the reference to T.H. Huxley (p. 127) who is quoted as saying that one should sit down before facts like a

little child and be prepared to give up every preconceived notion - which Huxley himself certainly did not do in relation to the spiritualistic phenomena of his day investigated by Alfred Russell Wallace, also a Fellow of the Royal Society. This is a valuable contribution to the field.

### ■ Making Sense of Life

Richard Alabone (SMN)

Independent Publishing Network 2019, 151 pp., no price given.

Richard is a retired engineer whose quest to make sense of life extends over more than 60 years, and here he presents his personal views, principally on biology and consciousness, claiming to explain the role of genes and the nature of telepathy. He repudiates the idea that genes are a blueprint for life and a book of instructions, arguing for a Sheldrake and Hardy view involving morphogenetic fields and a 'psychic stream' respectively - their role in information flow from the previous generation is indirect, while 'life proceeds by direct reproduction of the parents', also involving a Lamarckian inheritance mechanism. Richard uses the analogy of the barcode in his detailed analysis of biological mechanisms and the role of epigenetics, proposing an active role for microtubules. When it comes to information flow in terms of telepathy, most scientists, as Richard observes, sideline the evidence.

His view on telepathy is based on brain sharing, which works well when subjects are close in a laboratory, but is more problematic when effects are observed at great distances - hence the theoretical use of nonlocal models. He defines the terms brain and mind in an unconventional fashion by stating that the brain is the unconscious, while the mind is the conscious part, even though the dividing line is uncertain. (p. 74) I found this theory implausible when applied to Ian Stevenson's research on children who remember previous lives where he hypothesises that the features of such cases can be explained by brain sharing with a stranger who has similar DNA. Rupert Sheldrake proposes a form of morphic resonance with a previous personality, while the children themselves recall many verifiable events that are no longer present in any living brain. While the content of the book is stimulating, informed and wide-ranging in terms of its discussion of evidence that a paradigm shift is required in biology and psychology, the writing and editing leaves something to be desired - Thomas Kuhn becomes Thomas Kung, Charman becomes Sharman, dowsing dousing and formally (p 58 line 2) should be formerly.

### ■ The Pursuit of Dreams

Dragos Bratanu PhD

Hay House 2016, 215 pp., £10.99, p/b.

Dragos Bratanu was brought up in Romania and has a doctorate in satellite-based intelligence. This is the inspirational story of his life and how he persisted against all the odds in following his heart to achieve his dreams, including travelling to the poles, and culminating in the release of his film *The Amazing You*. While sharing his own story and the wisdom he gained along the path from various life changing encounters, he situates his narrative within a context where many people are not following their hearts, so they experience depression and emptiness, often leading to addiction as a way of trying to cope. All this is reinforced by a social environment of fear - he gives a number of examples. The key is to honour the spirit of God within, which is also life, love and truth. Then we realise that we have no excuse for not listening to the call of the spirit. Dragos does not pretend that this is an easy process, describing his own challenges and struggles, especially in connection with the film, where he had to reach out hundreds of times for minimal response.

We should not fall for shortcuts offered by many self-help books but realise instead that worthwhile things take time and that we have to cross the desert, embody grit and live faith. Against the expectations of his friends, the impact of his film turns out to be massive. Dragos is more enthusiastic than I am about the singularity forecast of Ray Kurzweil, uncritically accepting that by 2050 we will upload our minds to computers or transfer them to robots that will replace our bodies. Towards the end of the book, though, he reports a profound conversation with a Greek Orthodox priest who recommends putting the mind's power of creation in the service of spirit, in the service of love. In this way we live in Truth and our actions are aligned with our mind and heart. Dragos provides readers with a workbook consisting mainly of questions that we can put to ourselves to achieve the same alignment. This is a powerful and important message.

### ■ Paravision

Rodrigo Medeiros

6th Books (John Hunt) 2019, 210 pp., £13.99, p/b.

This is a very good introduction to the theory and practice of visual clairvoyance based on the conscientology approach developed by Dr Waldo Vieira from Brazil. The treatment is detailed and systematic, beginning with basic definitions. Here

the reader will find a good many new terms coined to neutralise some of the negative associations arising from older terminology. These include paraperceptiology, energetic coupling, extraphysical beings, energosoma and thosene as an amalgam of thought, feeling and energy as the basis for consciential manifestation. The point of departure is physical visual perception, leading into a description of paravision characteristics, classifications and examples, factors for optimising clairvoyance, then two chapters on clairvoyance techniques and its relationship to other phenomena such as remote viewing. The instructions are clearly set out and easy to follow, so that readers with a serious interest can experiment for themselves, or arrange in the first instance to attend the workshop. The author makes it clear that no special gifts are required, just a desire to extend one's perceptual abilities and a commitment to practice and overall spiritual evolution.

### ■ A Bedside Book About Us

Laura Bafford Leslie

48 Hour Books 2019, 83 pp., no price given.

I met the author of this short book at the recent SAND conference in Italy. She is a therapist focusing on the Internal Family Systems approach to healing, and this book is a series of short articles for a local magazine, written in a simple and accessible style. There are more than 30 articles on a wide variety of topics including acceptance, the seeds of change, happiness, attachment, neuroscience, research on psychedelics, the power of intention and compassion, and the real nature of the self. All this contains much practical wisdom as well as significant reflections and advice for living. One of the most striking series of articles tells the story of Leon, severely neglected as a child and who as an adolescent commits a terrible murder - Laura explores the process leading to this sociopathy, ending with the insight from the mother of one of the girls that he must be broken inside.

## FUTURES STUDIES/ ECOLOGY

### ■ Not Working - Where Have All the Good Jobs Gone?

David G. Blanchflower

Princeton 2019, 424 pp., £24, h/b.

This is a searching and incisive study of the labour market and patterns of work, especially since the financial crash of 2008. It highlights connections between employment,

economic policy, politics and mental health, shedding a great deal of light on contemporary developments and building on earlier insights from Keynes and Beveridge ('misery leads to hate'). Already in 1920 in *The Economic Consequences of the Peace*, Keynes was warning about the effects of hardship at the limits of human endurance, when people will eventually listen to 'whatever instruction of hope, illusion, or revenge is carried to them in the air.' Again in the 1930s, he was advocating government spending to lift the economy and identified the state of 'semi-slump' which we have been undergoing collectively since 2008 - it is forecast that there will be no real growth in wages in the UK between 2007 and 2022, an almost unprecedented situation. Blanchflower argues that the employment figures are deceptive in concealing a large amount of underemployment and part-time work where people would prefer well-paid full-time jobs. The consequence is insecurity and low wage growth, with related mental and physical health issues manifest in figures for stress, unhappiness, depression, hopelessness, low sense of self-worth and suicide - in addition, many communities have been fractured by a large-scale unemployment, resulting in a loss of social cohesion.

Few of these developments have been recognised by experts, and Blanchflower found himself in a minority of one when he was a member of the Monetary Policy Committee of the Bank of England. He argues that society cannot function if everyone is for themselves and the elite is seen to have been feathering their own nests with little regard for growth in inequality that has led to a breakdown of trust seen symptomatically in the votes for Brexit and Trump. Vernon Bogdanor's view on populism is of particular interest in highlighting the consensus within the elite across the political spectrum, and pointing out that the left with its identity politics has not in fact been identifying with the disaffected majority who have been missing out on economic development. As a society, we need to address the deeper underlying causes of helplessness and hopelessness correlated with this deteriorating situation in the labour market.

In addition, we now have the prospect of automation leading to more widespread unemployment - people need a sense of purpose, contribution and meaning, not just security of basic income. This means rebuilding trust and ties that bind, so that people perceive that we are all indeed in it together - as has manifestly not been

the case here in France. In advocating various policies for 'putting the pedal to the metal' and generating full employment, the author advances a number of constructive suggestions, particularly in terms of infrastructure development, but the underlying dynamic of perpetual economic growth in relation to limited resources is not addressed. However, the social and economic situation is urgent, experts are running out of ideas, and we have record levels of debt constraining our room for manoeuvre, not to mention unfulfillable promises made by politicians and leading to a fruitless blame game (there is a very good discussion of immigration in this respect, showing how reality and rhetoric, fact and opinion do not match). Maybe a New (Green) Deal would be a good start.

### ■ Spending Time

Daniel S. Hamermesh

Oxford 2019, 220 pp., \$24.95, h/b.

The author is a distinguished labour economist who has devoted a great deal of study to time as our most valuable resource, based on a wealth of published material, including thousands of time diaries across different nationalities. The phrase cash rich but time poor has become proverbial in relation to the stressful pace of modern life, especially in a corporate setting, and time is an appropriate theme for an economics based on the study of scarcity. By definition, we face constraints and trade-offs in our use of time, with sleeping and working taking up the largest share, followed by watching TV (reading for me). Among the topics studied and illustrated with revealing charts are how much and when we work, differences between men and women (these are narrowing as more women enter the workplace), patterns at different times of life and relating to different levels of wealth.

I was surprised to learn that there is no legal mandate for paid vacations in the US, as there is in other countries, which goes a long way towards explaining why many Americans only take two weeks holiday a year. Girls do more homework and socialising, while boys spend more time on sporting activities and slightly more on TV. Making time for togetherness in couples is significantly correlated with happiness. Overall, 'growth in incomes has far outpaced growth in the time available to us outside work', and better off people tend to feel more rushed unless they have a great deal of domestic help. The author's advice is sound in encouraging us to slow down, exercise, take baths and prevent too much spill-over of work into leisure. We could also trade more

time for money, opting for a simpler lifestyle. He adds a number of policy suggestions and while commenting on the welcome development of a small drop in hours spent working in the US he omits to discuss the future implications of automation for employment, which will represent a wider challenge.

### ■ Good Work

Laurence Freeman

Meditatio 2019, 192 pp., \$18, p/b.

As it happens, I spent the evening with Laurence last week at the new WCCM centre at Bonnevaux near Poitiers, having driven up with a carload of review books from this journal. Starting from the definition then good work is 'work that brings out the best in the people who do it, and brings enduring benefit to those who are influenced by it', this book is about the contribution of meditation to this process. It is based on a series of talks given to the staff at DP Architects in Singapore, who have incidentally offered their architectural services to the rebuilding of Bonnevaux monastery. Laurence has also pioneered popular MBA courses on meditation and leadership at two leading business schools, with interesting and successful results. The first part of the book explains the background and technique of the mantra meditation used by the World Community for Christian Meditation, with very helpful guidance based on many years of experience. Laurence distinguishes between mindfulness and mantra meditation, where the focus of the first is on yourself, while the second seeks to go beyond the ego and attend to others.

Attention is perhaps the key term as it is refined and developed in the course of practice. This is simple but not easy in terms of the discipline involved, where fidelity is required, and there is a shift from a focus on doing to being, or doing infused by being. The benefits and fruits in terms of equanimity, inner peace, presence of mind and improved relationships are clear to see and are indeed articulated in the second half of the book by leaders who have practised the discipline, including a sample of MBA students. There is also an interesting reflection on the relevance of the Rule of St Benedict for modern ideas relating to leadership and responsibility - with the Abbot as the equivalent of the CEO. In an age of distraction and overstimulation, this book is a precious resource on a journey to become more fully human, selfless and perhaps wiser and humbler in the process.

## ■ Reforming Law and Economy for a Sustainable Earth

Paul Anderson

Routledge 2015, 281 pp., £33.99, p/b.

This is a brilliant and seminal analysis of our current systemic dynamic of unsustainable development in relation to the overall issue of global ecological governance. Although we know that in the long run we must achieve a sustainable human society, we prefer to postpone rather than address this fundamental issue and to continue with business as usual as long as possible. The four parts address a reform of international law, a critique and re-diagnosis of the allocation problem, and a proposed way forward in terms of ecological democracy. As the author highlights at the outset, we need to reform human economic and legal practices in the light of their role in global environmental degradation, which has in fact intensified during the period of international environmental law. This leads the author to the conclusion that environmental degradation cannot be resolved within the existing structures of capitalism where it is diagnosed as a price-based market failure, and where accumulation of capital is the main end rather than resource replenishment. In addition, those with power and property will not be willing to give up their existing interests.

Hence the need for a different basis in corrective and distributive justice in relation to the allocation problem, exacerbated as this is by the demographics of growing world population. It is clear that we need an alternative distribution of power or model of governance to reform or replace the core institutions of capitalism, although there is a real challenge in achieving this short of systemic breakdown. Here the author is joined by none other than Amartya Sen in calling for institutions beyond the capitalist market economy. He puts forward deliberative democratic decision-making procedures along with decentralised key resource control in the form of ecological democracy. He sets out the necessary substantive steps that would need to be taken consensually at a UN level or equivalent along with agreement on aims and objectives, principles, rules and instruments required. All this would require unprecedented global coordination and sufficient consensus on how to move beyond market capitalism, which represents an enormous challenge to current operating assumptions. The rigorous logic and considerable significance of the book is undeniable, but policymakers are unlikely to make time to read it, so the author will

need in the first instance to generate opportunities where his excellent ideas can be substantively debated.

## ■ Preparing for a World that Doesn't Exist – Yet

Rick Smyre and Neil Richardson

O Books (John Hunt) 2015, 224 pp., £12.99, p/b.

This US-centric book is about framing a Second Enlightenment to create communities of the future and is based on the experience of Communities of the Future (COTF) since 1989. The term Second Enlightenment was also used back in 2001 by the International Futures Forum with which I have been involved. In our case, this related specifically to the Scottish Enlightenment context and how a new enlightenment could emerge to balance the strengths of the original impulse. Having said this, there is much in common in terms of the diagnosis and approaches to the future both in terms of background ideas and praxis, although a useful addition would have been the IFF Three Horizons model as a way of framing conversations. Both organisations use the phrase transformational learning, but readers will find many other new concepts in this book such as Master Capacity Builder, Creative Molecular Economy, Polycentric Democracy, Weak Signals and Mobile Collaborative Governance - there is a glossary at the end.

The book is invaluable as an agile toolkit that includes a number of strategy proposal worksheets identifying the emerging idea, potential impact, strategies for building capacities and expected outcomes. It is clearly structured, for instance in explaining the living system concepts for a Second Enlightenment (p. 20) where the analysis identifies a pattern from the First Enlightenment, a second for the Second Enlightenment, and an integral pattern for what they are calling Ecological Civilisation, which has to be our ultimate direction of travel, although the key question is how we are going to integrate technology in this scheme, control with participation. The book covers education, economy, politics and healthcare, drawing on wide and deep experience while proposing practical processes and ways forward, finishing with a summary of seven principles of transformational change. It is essential reading for changemakers at every level – see [www.communitiesofthefuture.org](http://www.communitiesofthefuture.org) and [www.internationalfuturesforum.com](http://www.internationalfuturesforum.com)

## ■ The Green Revolution

Patrick Kilby

Routledge 2019, 77 pp., £45, h/b, ebook £13.50.

Subtitled ‘narratives of politics, technology and gender’, this book reviews the Green Revolution from its origins in the 1940s to its application to Africa in the 2000s in the context of political and social processes that produced ‘an amalgam of political expediency, technical innovation and social marginalisation, of which poor women make up the largest group.’ The consequences for women are central to the argument, especially since they are frequently left in charge if the men go into town to work. It is not surprising that the main benefit of the revolution was larger more capitalised farms, and it is interesting to read about the role of the Rockefellers in initiating the process, and how the US government used it in relation to foreign aid. Neoliberalism as a monoculture of the mind dominates the framework with its concern for efficiency and scale, and corresponds to monoculture in agriculture, which tends to ignore local knowledge, diversity and tradition, for instance the development of special maize varieties in Mexico. The catchphrase these days is sustainable intensification, which does not necessarily correspond with the original impulse of the Green Revolution, and indeed the soils of Africa require actual organic material rather than further fertilisers. One size clearly does not fit all, nor should we assume that technology is the solution to all our problems.

## GENERAL

### ■ Homage to Political Philosophy

James R. Flynn

Cambridge Scholars 2019, 418 pp., £67.99, h/b.

Subtitled ‘the good society from Plato to the present’, this book does not simply take a chronological approach, but intersperses detailed treatment of key Western thinkers with analysis of central themes such as men and women, the existence of God, free will and free speech, slavery and race. Assumptions about these topics have changed over time while formulations are historically influenced and contextualised in contemporary life. Politics is seen within the framework of a thinker’s metaphysics, epistemology and ethics, and the author applies the same criteria to his own humanistic views. The approach is analytical, enabling readers to grasp and engage

with the original arguments put forward and to appreciate how we must urgently recover a vision of the common good, especially as 'the market has replaced justice as the ordering principle of society' (see Anderson review above). Flynn has a very good chapter on humanising the market, identifying five great tensions - with justice, self-realisation, fellow feeling, between private endeavour and the common good, and between power and morality. He sets out an agenda for moral debate, and takes the strong view that our humane ideals define who we are and that these can be freely chosen and maintained with integrity. For him, this has also meant criticising excessive moralistic intervention in American foreign policy after having arrived at the conclusion that 'the main role of patriotism is to rationalise militarism.' This is a rigorous and vigorous set of reflections and call to individual political action.

### ■ The Sense of Reality

Isaiah Berlin

Princeton 2019 (1996), 442 pp., £22, p/b.

Sir Isaiah Berlin was one of the leading intellectual historians of the 20th century, and this book, subtitled 'studies in ideas and their history' was the last collection published during his lifetime. This new edition updates the context of his ideas, highlighting the relationship between the outer world and inner questions involving freedom and choice. In the title essay, Berlin discusses the impossibility of fully entering into the minds of the past, although one can selectively approximate this through imaginative insight and empathy. One of his principal interests is to understand the categories in which people think and the ways in which these change over the centuries by trying to penetrate to a deeper level to unfold the implicate and implicit dimensions of ideas. Thinkers like Descartes and Kant provided new frameworks for thinking, as do the prevalent metaphors - principally that of the machine since the 17th century. Applied in the second essay to political judgement, this is less a question of understanding universal laws as entering into the climate of thought and opinion.

This leads to a larger theme in these essays, namely universal truth and law in relation to individual cultures. This comes into essays on philosophy and government repression, socialism, the romantic revolution and the final piece on the end of the ideal of a perfect society - a brilliant essay not previously published. The idea of a

universal pattern or truth dominated societies until the 18th century, when it was still largely taken for granted until questioned by Herder. The role of philosophy and ideas is central, and Berlin defines philosophy conceptually as 'an attempt to find ways of thinking and talking, which, by revealing similarities hitherto unnoticed, and differences hitherto unremarked, cause a transformation of outlook sufficient to alter radically attitudes and ways of thought and speech' (p. 81) - with concomitant practical implications. One such transformation was the Romantic revolution that questioned the whole notion of a universal human nature and therefore of universal values, since, they believed, values are created rather than discovered and may not necessarily harmonise. Questions of value were no longer regarded as a species of questions of fact. Inner authority is substituted for outer in the truly free agent, so motive matters more than consequence.

Berlin returns to this theme in the final essay, which I read over coffee this morning on my terrace by the river. The perfect society is first articulated by Plato, and is based on the notion that we know what people need along with the true nature of justice, virtue, freedom, good and right - so we can work out the ideal society based on natural law. Moreover, if there is only one truth, then error is deviance and should not be tolerated, as we have seen in the history of persecution in the name of ideologies, whether religious or secular - this attitude is still very much in the Chinese Communist Party with its surveillance totalitarianism (toleration only becomes a virtue in the 18th century). Herder and Vico question the universal view held by the French philosophes, arguing against cultural hegemony and for cultural specificity - which may in turn mean that ideas and ideals are not compatible and cannot be harmonised. Berlin also points out that the incompatibility of values is the source of tragedy - there is always loss involved by choosing one over another, as Antigone found in having to choose between love and honour. For liberal societies, this entails compromise and 'an exceedingly precarious' equilibrium as we are witnessing in the current political landscape with simplistic slogans prevailing over complex and subtle compromises. Perhaps these brief reflections will persuade you of the importance of reading what Berlin has to say.

### ■ Reading – A Very Short Introduction

Belinda Jack

Oxford 2019, 136 pp., £7.99, p/b.

It is a nice form of reflexivity to be reading a book about reading, and this book does indeed make fascinating reading. It begins by considering the nature of reading itself in terms of making sense of things, moving on to a history of reading as it developed out of oral traditions and the transition from reading out loud to silent and indeed solitary reading in the 13th century. Readers appreciate the magnitude of the effects of the invention of printing, also in relation to the growth of cities and later of democratic literacy. The author considers the development of the novel in relation to individualism, and also highlights reading patterns of educated women in the 18th century. The later chapters discuss censorship and forbidden reading, the role of literary criticism and the value of rereading – an altogether riveting read.

### ■ Temenos Academy Review 21

Temenos 2018, 278 pp., no price given. Email [spo@temenos.myzen.co.uk](mailto:spo@temenos.myzen.co.uk)

Temenos Review is always a rich read to look forward to every year, with a wide range of articles along with extended book reviews, poetry and some art. In a short review, one can only highlight a few items. The editorial by John Carey emphasises the difference between learning about and learning from, adding that the Temenos impulse emphasises the latter without diminishing the importance of the former. Every issue contains a contribution from the late founder, the poet Kathleen Raine, in this case a fascinating account of the roots of her poetry. Her father was an English teacher, and she read natural sciences at Cambridge since literature and poetry were part of life rather than an academic subject. She observes that of all the arts, the living of a life is perhaps the greatest, with poetry not an end in itself but rather in service of life and 'enabling human lives to be lived with insight of a deeper kind, with more sensitive feelings, more intense sense of the beautiful, with deeper understanding.' There is a very good speech by the Prince of Wales on harmony and the land, an essay on CS Lewis as the imaginative man and a profound reflection from Joscelyn Godwin on music as esoteric practice. In the light of my review of the book on vibrational medicine above, it is interesting to read a defence of pure intonation against tempered tuning that interprets a slightly wrong tone as a right one and disrupts our sound classifying mechanism.

■ **The Motivation Manifesto Cards**

Brendon Burchard

Hay House 2019, \$19.99.

Brendon Burchard is one of the leading figures in personal and professional development, and from whose work I have benefited considerably. I reviewed the book of the same title a few years back, and here, after an initial card with the nine declarations, are a series of inspirational cards that can be drawn at random on a regular basis.

Here are some samples:

- Those who have won major victories realise that all the resources to win are *within*, and that most knowledge needed to succeed is acquired *after* action
- We are not slaves to our history; we can be freed by our conscious thoughts and disciplined habits
- Nothing remarkable in our personal growth can be achieved without opening to love and unleashing its joyful fire into the world
- We do not need to await more resources; we need to act and we will find that abundance comes to us

- We do not need more time; we need a stronger reason to act so that we use time more effectively

■ **The Magical Sexual Practices of Ancient Egypt**

Judy Hall

O Books 2019, 184 pp., £10.99, p/b.

Although ‘sex is the most potent force in the universe’ and sacred sexuality can be a gateway to the divine, this path has not been highly developed in West due to our religious history – sex is secular and hidden. People have been obliged to look to Tantra and Taoism, and more recently to Barry Long, Osho, David Deida, Dieter Duhm and Sabine Lichtenfels. This text, based on an ancient Egyptian manuscript, gives a practical guide to the alchemical raising of sexual energy, leading ultimately to mystic marriage of the masculine and feminine, as well as with the higher self and the Divine. It is based on the 19th century work and experience of Paschal Beverly Randolph adapted for a contemporary readership and ultimately aimed at a serious readership in this field.

■ **Leo Tolstoy – A Very Short Introduction**

Liza Knapp

Oxford 2019, 146 pp., £7.99, p/b.

This is a superb short work highlighting the essence of Tolstoy and his contribution, including specific chapters on war and peace, love, death, what Tolstoy believed and what he believed people should do. His passionate hope was for the end of war and the enactment of brotherly love, about which he wrote both in his novels and his religious work related to the New Testament. He experienced war at first hand, and his descriptions of the wounded are brutally gruesome. Death features both in War and Peace and also searingly in Ivan Ilyich. He developed a philosophy of nonviolence from the teaching of the Sermon on the Mount, extracting five rules for living (p. 72). Later in his life, he was concerned with questions of social justice and became a vegetarian in 1892, also giving up smoking and drinking. There is much moral inspiration and vision to be derived from his later works, as Gandhi found out.



**Living Waters**

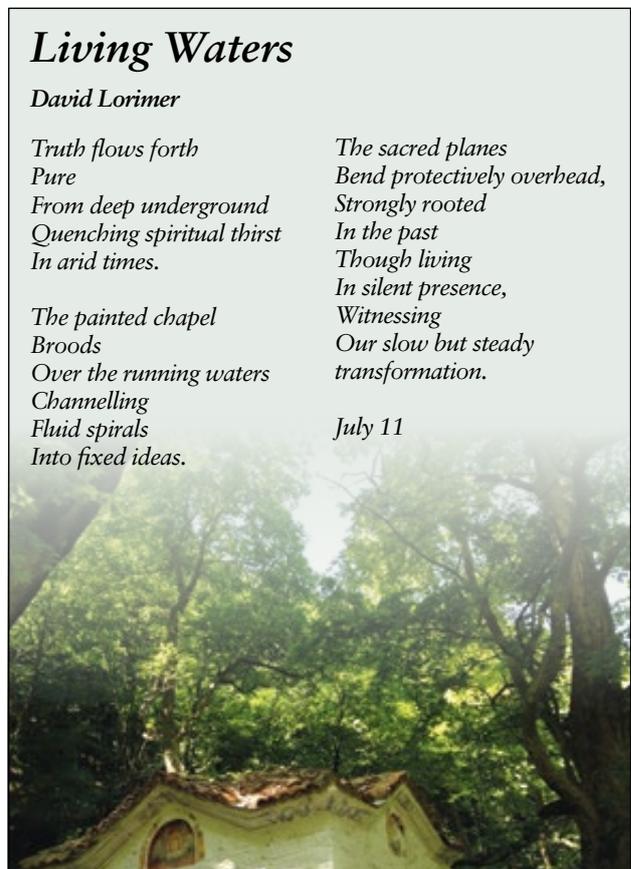
David Lorimer

*Truth flows forth  
Pure  
From deep underground  
Quenching spiritual thirst  
In arid times.*

*The painted chapel  
Broods  
Over the running waters  
Channelling  
Fluid spirals  
Into fixed ideas.*

*The sacred planes  
Bend protectively overhead,  
Strongly rooted  
In the past  
Though living  
In silent presence,  
Witnessing  
Our slow but steady  
transformation.*

July 11



The Scientific and Medical Network with  
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2<sup>nd</sup>-3<sup>rd</sup> November 2019  
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The Scientific and Medical Network is a leading international forum for people engaged in creating a new worldview for the 21st century. The Network brings together scientists, doctors, psychologists, engineers, philosophers, complementary practitioners and other professionals. The Network is an educational charity which was founded in 1973.

### The Network aims to:

- *challenge the adequacy of scientific materialism as an exclusive basis for knowledge and values. See [www.galileocommission.org](http://www.galileocommission.org)*
- *provide a safe forum for the critical and open minded discussion of ideas that go beyond reductionist science.*
- *encourage a respect for Earth and Community which emphasises a spiritual and holistic approach.*

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