Jack Hunter, *An Introduction to Ecology and Spirituality* (Lampeter: Sophia Centre Press, 2023)

Foreword: The Ecological and the Spiritual

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Jack Hunter's introduction to ecology and spirituality is a timely account of the scholarship and teaching we are currently pursuing at the University of Wales Trinity Saint David especially, for me, the exploration of the ancient and classical concept of Harmony, with a capital 'H', in relation to sustainability, a concept based on the premise of universal interconnectedness.[1] The question before us is how do we human beings live on our planet, knowing that we are an integral part of a single system of quite extraordinary complexity.

My own route into the complexity of the natural world has always been through simple observation: sit still, watch, and we can see some amazing phenomena. Anyone who has ever contemplated a solitary spider building a web, or a column of ants carrying food to their nest, will know that intelligence is spread throughout the animal world amongst creatures who have nothing resembling the brains that human beings, or most animals, possess. Once it was thought that only human beings have a thinking, reflective, consciousness, or what is sometimes called reason. This philosophy, or religious belief, if we like, is the essence of anthropocentrism, the doctrine, inherited from the creationist, monotheistic religions, that human beings are special, unique, and set clearly apart from the natural world. According to this world view, animals are purely reactive, unable to think or plan, and devoid of any sense of a past or future. The entire non-human animal world, it is believed, is governed by instinct, an ill-defined concept designed to explain how animals could act while having no capacity to think.[2] However, complex animal behaviour, from spiders creating webs and ants collecting food, to a pack of lions hunting an antelope over distances too great for them to maintain visual contact with each other, or a flock of birds forming astonishing patterns, such as the as yet unexplained murmurations of starlings, surely challenges the lingering belief that animals cannot think, collaborate, or plan.[3] Rather than concluding that they cannot think, though, it might be more profitable to find an alternative solution – that they think, but in ways we cannot comprehend. If one bee can learn from another how to access sugar-water, then we are surely in what, for standard models, is uncharted

[1] Nicholas Campion, ed., *The Harmony Debates: Exploring a practical philosophy for a sustainable future* (Lampeter: Sophia Centre Press, 2020); David Cadman, 'Principles of Harmony', in Campion (ed.), *The Harmony Debates*, pp. 43-5.

[2] See Paul Griffiths and Stefan Linquist, 'The Distinction Between Innate and Acquired Characteristics', *The Stanford Encyclopedia of Philosophy* (Spring 2022 Edition), Edward N. Zalta, ed., https://plato.stanford.edu/archives/spr2022/entries/innate-acquired/.

[3] For spiders, see Fiona R. Cross and Robert R. Jackson, 'The execution of planned detours by spider-eating predators', *Journal of the Experimental Analysis of Behaviour* 105, no. 1 (18 January 2016): pp. 194–210; for ants, see Antoine Wystrach, 'We've Been Looking at Ant Intelligence the Wrong Way', *The Conversation*, 30 August 2013, https://theconversation.com/weve-been-looking-at-ant-intelligence-the-wrong-way-17619 [accessed 20 March 2023]; for lions, see Jason G. Goldman, 'Lions are the Brainiest of the Big Cats', *Scientific American* (1 December 2016), https://www.scientificamerican.com/article/lions-are-the-brainiest-of-the-big-cats/ [accessed 20 March 2023]; for starlings, see Royal Society for the Protection of Birds, 'Starling Murmurations' https://www.rspb.org.uk/birds-and-wildlife/wildlife-guides/bird-a-z/starling/starling-murmurations/. [accessed 20 March 2023].

territory of animal cognition.[4] This is before we even come on to the recently much-publicised evidence for plant cognition, which is dramatically eroding the commonly accepted boundaries between plants and animals.[5] It is over a century-and- a-half since Charles Darwin effectively collapsed the notion that human beings are not part of the animal world and set us on a new path to understanding the complexities of the natural world: his great work, *The Origin of Species*, was published in 1859. It was in the wake of Darwin's work that Ernst Haeckel introduced the term 'Oecologie' in 1866.

Ecology is, arguably, the most important science of our times. The term science has various meanings so, to clarify, here I am talking about critical and evidence-based research with the aim of expanding our knowledge. Ecology may not have the dramatic profile of space technology, the massive social consequences of the computer revolution, or the likely hugely imminent disruptive impact of artificial intelligence, but it is the only form of science which starts from the fundamental premise that all things are interconnected. This understanding is of huge consequences for our relationship with the physical environment, for it requires us to recognise profound interrelationships between the tiniest microscopic organisms and insects, larger animals, biological processes, plant life, geology and topography, mountains, valleys, deserts, forests, air, water, heat, light, cold, dark and seasons on both local and global level, along with the rhythms, cycles. and pulses of time. We can look at small patches of ground or the whole planet, but ultimately everything exists in a relationship with everything else. And human beings are an intimate part of those relationships. Nothing is outside the system. Human beings as individuals are part of it, as are their thoughts, feelings, emotions, aspirations and actions.

In modern terms, adapted from the language of electromagnetism, everything is part of a field. Arne Naess, who formulated the principles of Deep Ecology in 1973, adopted the field metaphor when he described Deep Ecology's first principle as

> Rejection of the man-in-environment image in favour of the relational, total-field image. Organisms as knots in the biospherical nest or field of intrinsic relations.[6]

Everything, Naess concluded, is relational: nothing can be said to exist except in relation to everything else, a concept which now pervades anthropology. Phillipe Descola, for example, talks about human-animal-planet ecologies as 'an ecology of relations', or a relational ecology.[7] Andrew Benjamin proposes a 'relational ontology' in which we can only understand being – or existence – if we recognise that nothing exists in itself, only in relation to everything else.[8] Kenneth J. Gergen presents relationality as central to human experience and well-being,

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[4] Bees learn and 'teach' others, *Nature* 538, 293 (2016), https://doi.org/10.1038/538293b.
[5] Daniel Chamowitx, *What a Plant Knows: A Field Guide to the Senses* (London: Scientific American / Farrar, Straus & Giroux, 2017 [2012]); Eduardo Kohn, *How Forests Think: Toward an Anthropology Beyond the Human* (Berkeley, CA: University of California Press, 2013); Stefano Mancuso, *The Revolutionary Genius of Plants: A New Understanding of Plant Intelligence and Behavio*r (New York: Atria Books, 2018).
[6] Arne Naess, 'The Shallow and the Deep, Long-Range Ecology Movement', *Inquiry* 16, no. 1–4 (1973): pp. 95–100 (p. 95).
[7] Philippe Descola, *Beyond Nature and Culture* (Chicago, IL: University of Chicago Press, 2005), p.307.
[8] Andrew Benjamin, *Towards a Relational Ontology: Philosophy's Other Possibility* (Albany, NY: SUNY Press, 2015), p. 2

coining the phrase 'the relational self'.[9] Manuel da Landa explored the ways in which matter is central to existence, relating to, and acting on, each other, shaping the world as they do so. This model, termed the 'New Materialism' or 'New Materiality' has been taken up at the University of Wales Trinity Saint David, for example by Luci Attala in her work on water.[10]

Naess himself was deeply influenced by Albert Einstein and the concept of time and space as interdependent and in 1985 he met the physicist Øyvind Grøn, with whom he collaborated on an attempt to make the mathematics of relativity accessible to a general audience. Together, Naess and Grøn considered the consequences of Einstein's theory of relativity for vector fields. Using wind as an example, they wrote:

> When we are outdoors in the wind, the moving wind fills the region around us. There is a measurable velocity of the air everywhere in the region… The velocity [of the wind] has a magnitude and a direction. It is a vector. Thus, a velocity field is linked conceptually with every point of the region. These abstract vectors are everywhere. If one can think of God as omnipresent, then one might also be able to think of the factors as omnipresent. In such a region there is said to be a vector field.[11]

Every single thing, then, participates in a field, perhaps many fields, in which it connects with all other things in the field to the extent that it is impossible to be sure that a single thing actually exists. Einstein's influence pervades modern thought, encouraging ideas of interconnectedness across different disciplines and specialities. The French philosophers Gilles Deleuze and Félix Guattari came up with a version of interconnectedness rationalised by the rhizome, a plant which sends out horizontal roots which, in turn send out new shoots. Fungi are perhaps the most familiar example of a rhizome. The rhizome has no central trunk, which for Deleuze and Guattari signified that nothing has a real centre. This is how they put it:

> A rhizome ceaselessly establishes connections between semiotic chains [chains of meaning], organizations of power, and circumstances relative to the arts, sciences, and social struggles.[12]

Deleuze and Guattari take the rhizome as biological plant and make it a universal metaphor for human society and politics, arguing that there are neither centres nor hierarchies, only relationships which encompass everything. We may perceive hierarchies and centres of power in particular situations, and we may indeed need to deal with them in order to resolve social, economic and political issues, but, from a wider perspective, we are mistaken. When we see the totality of existence on our planet as a single thing, rather than many things, then everything, from the smallest and most transient, to the largest and, seemingly most permanent, is interdependent.

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[9] Kenneth J. Gergen, *Relational Being: Beyond Self and Community* (Oxford: Oxford University Press, 2009).p. 60.
[10] Luci Attala, *How Water Makes Us Human: Engagements with the Materiality of Water* (Cardiff: University of Wales Press, 2019).
[11] Øyvind Grøn and Arne Naess, *Einstein's Theory: A Rigorous Introduction for the Mathematically Untrained* (New York: Springer, 2011), p. 3.
[12] Gilles Deleuze and Félix Guattari, *A Thousand Plateaus* (London: Bloomsbury 1999 [1988]), p. 6.

Such interdependence takes us to the somewhat problematic distinction made in post seventeenth-century western culture between things which are conscious and alive on the one hand, and things which are not, on the other. Modern biology holds that things which reproduce are alive, and things which don't are not, so stones, water, soil and air are therefore not alive. The conventional modern position added an additional layer, that only human beings are conscious. Safe to say, this was the dominant intellectual position in the West for most of the nineteenth and twentieth centuries.

Yet the dominant position in the West *until* the seventeenth century, and other cultures until they began to import western ideas, was quite the reverse, and held that there is no clear boundary between biologically reproducing organisms and those things that don't reproduce. Neither is there any part of the world which is not alive and therefore not part of the conscious universe. The standard manifesto of this world view is Plato's dialogue *Timaeus*, written around 350 BCE and available to western scholars, at least in part, without a break since then. One passage which every literate person in medieval and Renaissance Europe from the end of the Roman Empire up to the seventeenth century would have been familiar with is this:

> But we shall affirm that the Cosmos, more than aught else, resembles most closely that Living Creature of which all other living creatures, severally, and generally, are portions. For that Living Creature embraces, and contains within itself, all the intelligible Living Creatures, just as this Universe contains us, and all the other visible living creatures that have been fashioned.[13]

The English translation may smack of that slightly old-fashioned style so often favoured by modern classical scholars, but the meaning is clear: the entire world is living and conscious. The post-seventeenth-century western distinctions between what is alive and what is not, and between what is conscious and what is not, is therefore a recent deviation from the standard view and increasingly looks like a failure of perception. The logic of ecology is so challenging because it takes us straight back to the previous way of thinking.

Perhaps it is time to turn to Timothy Morton, who Jack Hunter quotes extensively. Morton talks about the fundamental principle of ecology being to 'join the dots and see that everything is connected'.[14] But this is not enough, he says. What he calls *the* ecological thought has to do with

> love, loss, despair, and compassion…capitalism and what might exist after capitalism… amazement, open-mindedness, and wonder… doubt, confusion, and scepticism.… concepts of space and time… delight, beauty, ugliness, disgust, irony, and pain… consciousness and awareness… ideology and critique...reading and writing…race, class, gender…sexuality… ideas of self, and the weird paradoxes of subjectivity… society… [and] coexistence'.[15]

Ecology, therefore, deals with everything: nothing is outside its remit. It is the ultimate interdisciplinary discipline.

This then takes us to the thorny question of spirituality, a word with particularly uncertain and ill-defined meanings. Jack Hunter deals with this ably and effectively in chapter 2. A common

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[13] Plato, *Timaeus*, trans. R.G. Bury (Cambridge, MA, and London: Harvard University Press 1931), 30 C-D.
[14] Timothy Morton, *Being Ecological* (London: Pelican, 2018), p. 1.
[15] Morton, *Being Ecological*, p. 2.

view is that spirituality is a kind of flexible, undogmatic and often individualistic version of religion. However, as scholars in the field know, many religions require a spiritual dimension. One solution to the problem of definition was proposed by Paul Heelas and Linda Woodhead and their colleagues, who acknowledged that the common usage of the terms religion and spirituality might overlap in that, for example, Christians can have a spiritual devotion to Christ. Yet, Heelas and Woodhead propose a distinction between the two concepts in which religions require obedience to a greater authority, while spiritualty, as they write, 'sacrilizes subjective life', subjectivity being the experience or perception that there is something greater and beyond material existence.[16] Of course, Heelas and Woodhead adopt the objective-subjective binary model in which the former refers to phenomena which are real, and the latter to those which are only thought to be real, a distinction which is constantly shifting in terms of western science as new research opens fresh understandings of the world, as evidenced by the latest findings in plant intelligence. It is also at odds with most spiritual traditions themselves. Is there something more in the natural world than physical matter? Actually, much of the latest science says there is. And is consciousness more than a biproduct of physical processes? Well, a substantial current of western philosophy, let alone the worldviews of non-western cultures, assumes that it is. The question of, and inquiry into, spirituality therefore becomes a logical extension to the need to comprehend humanity's place in the world, and therefore of our understanding of ecology. And this is why Jack Hunter's book is essential reading.

[16] Paul Heelas, Linda Woodhead, Benjamin Seel, Karin Tusting and Bron Szerszynski, *The Spiritual Revolution: Why Religion Is Giving Way to Spirituality* (Oxford: Blackwell, 2005), p. 5.

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