

Shifting Perspectives

ON THE INTELLIGENCE OF THE LIVING WORLD

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Pondering our experience of the Living World

I have always loved hearing tales of people's connection to the land, the sea, sky and the world around them. Deeply felt experiences like those captured in Nan Shepherd's *The Living Mountain* or Rob MacFarlane's *Wild Places*, and the wonders of reciprocal relationships within the living world, explored in Robin Wall-Kimmerer's *Braiding Sweetgrass*.

More recently, I listened to farmer / author Tim Parton speak of how he loves to "feel a field with his feet", sensing the vitality of the soil through the "sponginess" beneath his toes - and of the importance of engaging all the senses - smell, sight, touch and even taste - in understanding the soil, and the land he farms. Deep insights arise from a particular kind of knowledge: one cultivated through close relationship with place, attentive observation, and years of lived experience – forms of understanding not necessarily captured by measurements alone.

Many things become possible when we learn to pay closer attention to the living world, and it is fascinating to consider the astonishing diversity of intelligences that begin to reveal themselves. Yet such ways of knowing sit somewhat uneasily within dominant modern understandings of intelligence. We tend to imagine intelligence as something located within individual minds: the capacity to reason, analyse and solve problems. Intelligence is generally assumed to belong primarily, almost exclusively, to humans (or at least to those with a brain)...

This has not always been a neutral assumption. For centuries, Western thought has often understood life through hierarchies that placed humans above and apart from the rest of nature. Aristotle's *Scala Naturae*, or *Ladder of Nature*, imagined a great chain of being stretching from minerals and plants (lowest ranking) upwards to animals, humans and ultimately the divine. Although the details have changed over time, the notion of human exceptionalism and the assumption of separateness that often accompanied that elevated position, have remained remarkably persistent.

The consequences of this worldview have been profound. Seeing ourselves as separate from, rather than participants within the wider community of life has shaped not only how we understand intelligence, but also how we relate to the living world itself.

At a time of ecological crisis, there is perhaps an urgent need to revisit these assumptions – to reawaken our curiosity and consider what forms of intelligence might become visible if we looked beyond the human?

More-than-human intelligence

What if intelligence is not an attribute possessed by isolated individuals? Or those with "centralised processing systems"?

What if it is something embodied within the living world itself?

And what if it is something that emerges through relationship?

What if... intelligence finds expression in the wild, diverse and often astonishing ways living forms reveal their agency – if we just knew how to listen and see, to feel and perhaps understand it?

It is precisely this question that cultural ecologist and philosopher, David Abram has spent much of his life exploring. He has developed a deep understanding of the "animism, power and potency of the living world." Known for his research into the ecology of perception and sensory experience, he seeks to explore, "the instinctive rapport between our animal senses and the animate earth around us". In the early 1990s, he coined

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the now widely used term "more-than-human" – not a supernatural concept, but a way to speak of the all-encompassing living world, "as a realm that thoroughly **includes** humankind (and all our cultural productions), yet always necessarily **exceeds** humankind."[1]

His work invites us to consider whether intelligence might be less of a possession of individual minds than something expressed through the countless relationships that animate the living world. Something that flows through all living beings, in their connection with each other and the world around them. Abram constantly pursues new perspectives on relationships that aren't necessarily quantifiable in modern science, written text or dominant western mindsets.

Considering some of the extraordinary creaturely migrations across the planet, he cites the Monarch butterfly whose journeys involve wayfinding feats that leap across multiple generations, or the 'flood of wings' of the Sandhill cranes drawn southwards each autumn to a "tiny oasis of moist bottomland in the vastness of the New Mexico desert".

"What is this dynamic alliance between an animal and the animate orb that gives it breath? What seasonal tensions and relaxations in the atmosphere, what subtle torsions in the geosphere, help to draw half a million cranes so precisely across the continent? What rolling sequence or succession of blossomings helps summon these millions of butterflies across the belly of the land? What alterations in the olfactory medium, what bursts of solar exuberance through the magnetosphere, what attractions and repulsions…? For surely, really and truly, these migratory creatures are not taking readings from technical instruments nor mathematically calculating angles; they are riding waves of sensation, responding attentively to allurements and gestures in the topographical manifold, reverberating subtle expressions that reach them from afar. These beings are dancing not with themselves but with the animate rondure of the Earth, their wider flesh."[2]

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The intelligence of plants

In recent years there has been a flourishing of research into the world of plant behavioural science. Australian research scientist and author Monica Gagliano has been opening up new spaces in our understanding of the plant world. Her pioneering work explores plant responsiveness, communication and cognition, drawing insights from both contemporary science and dialogues with Indigenous and Traditional Ecological Knowledge. She seeks to challenge "our embedded conditioning around intelligence", allowing plants to reveal themselves in their own ways… often finding that "the story to be told is not what you think"[3]…

In one of her remarkable experiments in the Italian Dolomites, physicists and engineers installed an intricate network of sensors to record the bioelectrical activity of a stand of spruce trees. The research was designed to observe how individual trees responded to changing environmental conditions. Then something unexpected happened. During a partial solar eclipse, the trees' electrical signals briefly became synchronised. Intriguingly, it was the oldest trees that responded first, followed by the younger ones. Once the eclipse had passed, each tree gradually returned to its own rhythm.

The findings pose as many questions as they answer, but they hint at something both mysterious and yet familiar; the idea forests are not simply gatherings of individual organisms but part of interactive communities whose relationships only become visible when we learn how to observe them.



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The intelligence of relationship

Delving deeper into subterranean worlds, British mycologist and multi-award winning author Merlin Sheldrake explores the hidden relationships that sustain life. His work reveals the extraordinary, interconnected world of fungi and mycorrhizal networks through which ecosystems exchange nutrients and chemical signals...

"Mycelium is ecological connective tissue, the living seam by which much of the world is stitched into relation. In school classrooms children are shown anatomical charts, each depicting different aspects of the human body. One chart reveals the body as a skeleton, another the body as a network of blood vessels, another the nerves, another the muscles. If we made equivalent sets of diagrams to portray ecosystems, one of the layers would show the fungal mycelium that runs through them. We would see sprawling, interlaced webs strung through the soil, through sulfurous sediments hundreds of meters below the surface of the ocean, along coral reefs, through plant and animal bodies both alive and dead..."[4]

These interconnected webs stretch far beyond the reach of our eyes, yet they sustain the living world and us in innumerable ways. They respond to changing conditions, nourish plants, connect forests and through symbiotic partnerships such as lichens, even give rise to entirely new forms of life. What appears at first to be a collection of separate organisms begins to dissolve into a living network of relationships. And as our perception shifts from individual organisms towards these relationships, perhaps our understanding of intelligence shifts with it...

"I think about the ways that the modern sciences are now talking much more about the relational aspect of the living world; that the world is made up not so much of individuals but of relationships between entities, which themselves are bundles of relationships."[5]

The Living Forest

In the Sarayaku territory of Ecuador, the Kichwa communities hold a distinct understanding of the forest: not as a collection of resources or separate organisms, but as a living community of beings in which humans participate. Their concept of *Kawsak Sacha*, or the Living Forest, encompasses relationships between humans, animals, plants, rivers, soil, fungi and other beings, including spiritual and cosmic dimensions.

Leader of the Kichwa people of the Sarayaku, Angun (José) Gualinga observes,

"The forest is alive: the animals, the trees, the rivers and even the rocks speak in their own languages. You just have to listen to them."[6]

For the Sarayaku, the forest is not simply a place in which life exists. It is itself alive.

Through their declaration of *Kawsak Sacha*, the Sarayaku seek to define a framework to enable them to protect their living territory from extractive interests. The declaration describes a world understood as conscious and interconnected:

"KAWSAK SACHA is a living conscious being made up of all the other beings of the rainforest, from the smallest ones to those supreme ones - the Guardians - that protect the forest. It includes within it, beings



The Sarayaku territory of Ecuador. Credit: Photography by Misha Vallejo Prut - www.michavallejo.com / www.secretsarayaku.net

from the animal, vegetal, mineral, as well as spiritual and cosmic realms. The ongoing communication these beings maintain with us revitalizes us emotionally, psychologically, physically, and spiritually, and, more generally, it helps reestablish the energy, life and equilibrium of indigenous peoples."[7]

In 2022, mycologist Merlin Sheldrake joined an interdisciplinary expedition into the Ecuadorian Cloud Forest, working alongside members of the Kichwa community, activists, leaders, mycologists, evolutionary biologists, legal scholars, writers and musicians. At its heart was an encounter between different ways of understanding the living forest, captured in part in the documentary *Allpa Ukundi, Ñukanchi, Pura* (Underground, Around, and Among Us).

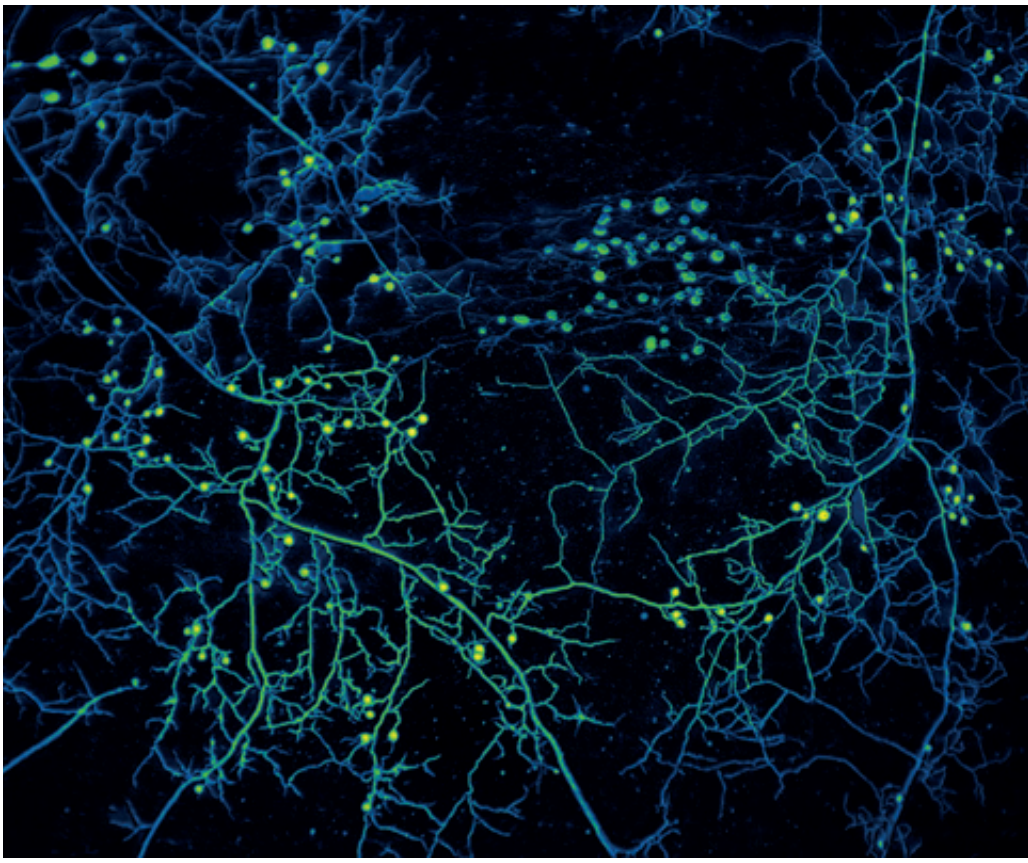
In the documentary, team member Toby Kiers - ED & Chief Scientist at SPUN (Society for the Protection of Underground Networks) states,

"We're in an age right now where that concept of what is an individual is sort of starting to disappear. And even science is starting to appreciate how connected different species are in nature. I'm an evolutionary biologist and I've always studied these partnerships in nature and how they evolve, and the powers, the superpowers that organisms get by collaborating with each other, whether it's for exchanging nutrients or protection - and that's sort of what builds all of this biodiversity." [8]

César Ródriguez-Garavito, NYU legal scholar and founder of the More Than Human (MOTH) Life Collective, considers the roots of this deep interconnectedness ...

"Fungi for me are the closest instance of interrelation, radical interrelation in nature and in social and natural systems... It also inspires a whole way of thinking that can teach a lot to human beings and society... " [9]

This understanding is not purely philosophical. It is lived through the ways indigenous communities cultivate and care for their territory. A 2025 ecological survey demonstrated the extraordinary fungal diversity supported by Sarayaku lands, including within their chacras (lands used for subsistence farming, cultivated using ancestral traditions), where fungal diversity rivals that of the surrounding primary and secondary forests. An astonishing achievement.



Fungi form extensive networks of mycelium in soils, where they establish intimate associations with plant roots. Credit: LORETO OYARTE GÁLVEZ - VU AMSTERDAM, AMOLF, SPUN.

"The findings show that the Sarayaku's agricultural systems not only sustain this remarkable biodiversity but also enable the soil to recover rapidly in harmony with both the visible and invisible beings of the forest."[10]

Perhaps what is most interesting is not that one way of knowing confirms the other, but that these encounters can make different aspects of the same living reality visible.

It seems the vivid and extraordinary intelligence of life can reveal itself in myriad unexpected ways, through voices and beings that we are not always attuned to hearing or seeing.

Perhaps intelligence is something we encounter not by standing apart from the living world, but by becoming more attentive participants within it. By shifting our perspectives. By cultivating a deeper sense of curiosity and wonder, relationship and reciprocity. And by learning to notice what we might otherwise overlook.

Perhaps it begins simply with paying attention - and maybe getting close enough to feel the living world around us and beneath our feet. And by learning to listen.

Mill Snell is a Trustee of the Biodynamic Association.

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