

**What your biology teacher didn't teach you;
Reclaiming our indigenous relationship with nature for a mechanistic world**

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When my alarm clock went off this morning, it seemed the sunlight was strangely different. I dozed for another hour, and then woke up more fully and looked at the time. That can't be right? My body felt strangely out of sorts, and I wondered what had happened yesterday to make me feel this way. Nothing of significance. Other than waking up today as a father, and now grandfather, in a world that has lost its mind. At a time when it feels like we have been hurtling towards the abyss of ecological catastrophe in a bus that is out of control, where the driver is asleep at the wheel.

Then I remembered: today we are now in official British Summer; the clocks have 'gone forward'; the start of my working day has been brought an hour closer to my natural waking time, and I have less time to listen in to my body through my morning yoga and meditation practice. My body does not automatically reset itself, as do my electronic devices. There is a dissonance between clock time and the reality of my body's attunement to the world. This dissonance, which we may barely notice, is an example of the difference between how western, educated, industrialised, rich and democratic worlds think and how nature actually works (Bateson, 2010; Diamond, 2012).

Belief in clock time is a human phenomenon – a mechanist solution that subjugates our felt senses and marginalises systemic patterns of natural order, such as the sleep of babies and new mothers, the dawn chorus and even the cycles of the sun. This way of thinking also marginalises all other ancient and contemporary cultures that do not operate on clock time. It smuggles in an implicit colonial view of the world. The South African professor Morgan

Ndlovu describes how colonial thinking creeps into our imagination with the assumption that the world cannot manage 'without the thinking of a western subject' (Ndlovu, 2014). My day will be organised by my clock, not by the experience of my body. To move beyond this colonisation of the imagination requires what Professor Nelson Maldonado-Torres describes as a 'de-colonial turn' (Maldonado-Torres, 2004).

Narrative collapse

The latest Intergovernmental Panel on Climate Change (IPCC) report describes the most devastating picture of the climate and ecological emergency to date, the catastrophic current state of the world and the fact that the climate crisis is now inevitable, unpredictable and irreversible (IPCC, 2022). The emergency of the climate crisis has been almost impossible to grasp and has been subsumed by other crises that are more concrete and easier to understand and worry about: the global coronavirus pandemic and now the unfolding conflict and ensuing humanitarian crisis in Ukraine. We are facing not only an ecological crisis but also a narrative collapse: a breakdown in our capacity for sense-making (Schmachtenberger, 2020). I would argue that the world is now too complex to be understood from a mechanistic or teleological perspective. We need to update our way of understanding.

This state of the world cannot be separated from the implicit stories about nature that we have been taught in the western education system: the notion that we can learn about the world by dividing it into different subjects – maths, geography, history, chemistry, physics and biology. Contrary to the narrative of school physicists, the world is not made of atoms; it's made of stories (Rukeyser, 1968), and the ancient and complex stories of the relationship between humans and nature cannot be reduced to merely biology. Both Carl Jung and James Hillman believed that it has been the use of reason and 'directed thinking'

that has led western culture into this process of separation from nature. It has allowed we humans to regard the non-human world as a collection of raw materials and commodities, and cultures as merely groups of mindless consumers (Cheetham, 2015 p.65).

The story that currently organises our biological understanding of nature, and also our destructive ecologic practices, is based, not on our relationship with nature, but on rationalism. The ‘modern synthesis’ of biology has reduced the field to a mathematical framework: a taxonomic process of identifying species and benchmarking their ecological advantage or fitness against Darwinian theories of evolution; one that is embedded in linear cause-and-effect thinking (Dawkins, 2006). Darwinian evolution is premised on a belief that the creative drive for survival is the highest contest marker of any relationship in nature, that evolution is a game of winners and losers – an idea that Darwin borrowed from Victorian social norms (Barad, 2007, p.496). Nature is part of an objective reality ‘out there’, a complicated mechanism that can be captured and explained by human thinking.

In western culture, children are taught to develop emotional connections with animals through stuffed toys and cartoons. Popular culture and children’s films are populated by talking animals, often presented in the form of caricatures with human expressions and character traits, with little resemblance the real animals. Most biology teaching is totally divorced from direct, embodied experience of nature; rather, it is the communication of stories about how we think nature works. And, crucially, this way of describing nature, despite the massive popularity of David Attenborough’s TV documentaries, has done nothing to halt the ecological destruction of the earth with its consequent detrimental impact on human mental health.

Systemic complexity

The western economic model of Darwinian competition and continuous growth that drives our destruction of nature only makes sense if nature is understood purely mechanistically. But nature is not only more complex than we think; *it is more complex than we can think* (Bateson, 1979).

Our world leaders and the individuals driving continuous economic growth are very likely to have been only ever taught a mechanistic story of nature, where nature can be manipulated and controlled. The current desperate state of the world has followed directly from this modernist narrative that refuses to acknowledge any other story as plausible. I want to explore here the difference between human *semantic narratives* and nature’s *imaginal narratives* – the difference between the world created by this mechanistic western view and the natural world that emerges out of systemic complexity.

As a systemic psychotherapist, I have been working with young people with complex development trauma for more than 10 years. During this time, our understanding of trauma has progressed rapidly, from seeing it as a mental health problem, a disorder of the mind, to recognising it as a chronic state of stress affecting the whole body. The American psychiatrist Bessel van der Kolk has, along with other body-based psychotherapists, described how trauma is best approached through the body, and the ‘bottom-up’ approach in contrast to the usual approach in psychotherapy of working with the mind, ‘the top-down’ approach (van der Kolk, 2014; Dana, 2018; Ogden & Minton, 2006). The title of van der Kolk’s influential book, *The Body Keeps the Score* (2014), says it all.

When working systemically with families who have experienced trauma, it is essential to look beyond their stories and see them as semantic narratives that the family uses to make sense of complex difficult and overwhelming emotional issues. Deb Dana (2018) describes

how these stories are organised by the internal state of individuals who have suffered from trauma, so the story follows from the state.

The stories or narratives we tell ourselves about the world reflect not the reality of the world but our own inner feelings, of which we are largely unaware. Children and adults who have experienced unsafety or aggression will tend to see the world as unsafe and potentially threatening, mirroring their unconscious inner state. In this way trauma, if unprocessed, can determine who we think we are and how we behave. Research indicates that a tendency towards offending behaviour, self-harm, addiction and drug use can almost always be traced back to early childhood trauma and loss of a sense of psychological belonging (Alexander, 1996; Felitti, 1998).

Trauma psychotherapist Resmaa Menakem has explored the legacy of racial trauma in the body (Menakem, 2020). Menakem explains how trauma in a person, when it is decontextualised over time, comes to look like personality – an idea that might be unsettling to people who have not trained in or experienced psychotherapy. Likewise, he proposes, trauma in a family, decontextualised over time, looks like family traits – entrenched, unconscious patterns of behaviour. And trauma in a people, decontextualised over time, looks like culture.

This observation opens a whole new perspective: cultures, as well as individuals and families, can also be psychologically unwell, and Menakem suggests that this understanding might help us perceive and challenge the legacy of colonialism. He describes how the roots of colonisation might lie in historic trauma and the deep legacy of systemic broken attachment and oppression, dating back to the Roman times in Europe. Mac Macartney (2018) describes how the Romans overcame the indigenous Celtic peoples in Britain by severing their sense of belonging and, thereby, their culture. The invaders' first strategic

strike was the destruction of the ancient mystery school at Mona (today's Anglesey), symbol of the sacred attachment of the people to the land. This deliberate act of severance of indigenous people from their land, combined with the cultural epistemicide of indigenous world views and languages, has been used by subsequent colonising forces throughout the world to the same end.

Tentacular thinking

In her book *Staying with the Trouble*, feminist biologist and philosopher Donna Haraway describes how the cultural and ecological problems we now face cannot be solved or even addressed simply by gathering more information (2016). She believes it is not helpful to allow ourselves to be drawn into apocalyptic despair and dissociative flights of fancy about technological fixes and escape. Both these responses keep us firmly embedded in teleological Darwinian thinking about failure and success.

Haraway argues that we need to think in a way that is '*tentacular*' – entangled, systemic and non-linear; we need to 'think with' rather than 'think about' nature. Tentacular thinking reaches into deeper issues. When we pick up an item from the supermarket shelf, it appears to be a discrete object, but, like an octopus, it has multiple tentacles attached to multiple complex imaginal narratives. A food product has tentacles into farming practice and soil health, agricultural wage structures, petrochemical food miles, oil extraction and world politics. The packaging may have tentacles into open-cast bauxite mining, indigenous land rights, recycling processes, land fill and oceanic plastic pollution. The idea that the world can be compartmentalised into separate, autonomous entities is an illusion. The tentacular aspect of the ecological crisis connects us with and entangles us in issues that involve not only nature but also culture and ways of knowing or not knowing that are woven into the fabric of our western cultures and ideas.

Haraway's story of the First Nations Black Mesa Navaho women weavers illustrates the difference between rational, semantic narrative and imaginal narratives. Although the women of the Navaho nation had been weaving blankets since the 16th century, when the Navaho-Churro sheep were introduced by the Spanish, Navaho blankets only became identified and commodified by settlers as objects of commercial value in the early 1930s. The blankets then became highly sought after and were sold by weight, like animal skins or raw wool. But the objectification of the blankets as a resource or commercial product also objectified the invisible imaginal narratives connected with them: the lives of the Navaho woman weavers, the ancient craft, the sheep, and the Navaho nation's perception of the complex interaction between their culture and the environment.

This objectification and commodification is what drives the social and ecological destruction wreaked by global capitalism to this day: the idea that nature can be objectified, extracted and exploited as a means to gain wealth. From this way of seeing, the woven blanket is just a blanket, trees are just wood, whales are just meat, mountains are just minerals – there for the taking, processing and selling. This ontology has subjugated and eradicated almost all other ways of experiencing the world through the systemic process of education and colonial epistemicide – the killing of languages and ways of describing the world that do not fit the paradigm of the western world view. It is a process that privileges the rational and the known over the emergent, the imaginal and the tentacular.

The Navaho women weavers were not engaged solely in the production of saleable commodities. The attention of the Navaho weavers was not on the production of the blanket, but the on the relationships and connections between people, patterns and fibres,

family lineages, sheep husbandry and landscape. These blankets were the physical expression of a myriad complex tentacular imaginal narratives and the connections between them. Haraway terms the weaving a 'situated worlding' – a daily ceremonial practice of cosmological significance; a process of 'material semiotics', making sense of a complex world through engaging in skilled practical work (Haraway, 2016, p.91). From this perspective, the weaving can be seen as an embodied process of sense making; a way of accessing nature's role as an ontological classroom. Animals, culture and human activities become manifestations of imaginal processes and relationships that can teach us to understand the world in new ways (Duncan, 2021).

Embodied learning

Indigenous cultural learning has always been a deeply social and embodied process, embedded in the systemic complexity of cultural and natural ecosystems. I am defining an indigenous relationship with nature as a relationship where cultural 'sense making' is based on *direct experiences* of nature, rather than just human *thinking about* nature, where nature is seen as a gateway into a deeper reality (Shepard, 1998).

Jared Diamond (Bringham, 2009; Diamond, 2012) describes how children in indigenous cultures often had unrestricted access to natural experiences, such as tools, fire and animals, and also to the wider community of adults and elders, and to ancestors, no longer alive but who were understood to have a powerful influence on living generations. These children's learning acknowledged the complexity of emergent inner and outer wildness and was supported by narratives from ancient stories that could be understood at multiple levels at the same time.

Stories might describe familiar activities like fishing or hunting, but would also draw on complex social patterns of relationships, deep ecological knowledge, animal and human

migrations, ancient geological events, and the activities of the ancestors in the spirit world.

Robert Bringhurst (2009, p.42) writes of how the First Nations poet Skaay, from the Haida Gwaii islands off present-day British Columbia, described humans as 'plain ordinary surface birds'. This was to contrast us with creatures with more power, such as killer whales, loons, grebes and sea lions, who had the capacity to dive, not only below the surface of the water but also below the surface of perceived reality. Humans could be invited by the animals to learn how to dive and to go with them below the surface of things and to enter the world of the mythic, to encounter the cross-species communication with the natural world and come back speaking poetry.

European settlers heard similar stories from indigenous Australian cultures of this dive below the surface of reality to encounter the source of all nature. They named this world the 'dream time', which Aboriginal scholar and artist Tyson Yunkaporta has re-translated as a 'superrational interdimensional ontology' (Yunkaporta, 2020, p.19).

Learning about the complex multi-dimensionality of nature does not come from biology textbooks; it comes through a long, slow process of transgenerational mutual exchange. It is a process that can not understood by the mind alone; it requires experiential learning through doing and making (Yunkaporta, 2020) – the embodied, the haptic, the material and the semiotic. This way of learning has sustained the dynamic cultural stability of indigenous people over millennia – in the case of the aboriginal Australians, for between 40,000 and 160,000 years. (Lawlor, 1992). The common factor in these cultures is a close and sophisticated reading of nature as a teacher, through embodied participation with nature, where the whole environment is encountered subjectively and where plants and animals are understood to be elements of a message requiring symbolic interpretation (Duncan, 2018; Shepard, 1998).

Seen from this perspective, the crisis in adolescent mental health in the western world today could be almost entirely linked to developmental and transgenerational trauma. Our current social support structures – mental health services, social care and education – are no longer adequate to facilitate future generations of children and young people to become the generative, altruist and ecologically integrated adults required to face the social and ecological challenges of the future.

The current environmental destruction and climate change denial in western culture may well have resulted from the culmination of centuries of alienation from the nature. The accumulated grief of these overwhelming losses has had the effect of closing down our innate sophisticated emotional intelligence in favour of an objectified intellectualism and dissociative detachment from feeling. This is a way of relating that we recognise in psychotherapy as linked to trauma. This trauma is now so endemic in western culture that it is difficult to recognise and has become absorbed into the myth of technological progress. You might argue that the idea of individual mental health no longer makes sense in world that has lost its mind.

What can psychotherapy do?

What your biology teacher taught you was not really about nature at all; it was a story to justify and manage the trauma of hundreds of years of the human soul living in exile, an outcast in our modern material world, cut off from its true home in the imaginal world (Corbin, 2015). The creative evolution of both nature and the human mind predates human thinking, and both emerged from the same matrix of systemic intelligence that still communicates with us, using a curious language of the imaginal world that 'has no things in it but only differences and relationships' (Bateson & Bateson, 2004, p.191). This comes from

an older understanding that both nature and human mental wellbeing are two entangled aspects of the *animus mundi*, the soul of the world.

Systemic family therapists may be familiar with the process of searching through people's narratives to find the underlying, hidden, systemic patterns, acknowledgement of which can allow healing and insight to emerge. It is a similar practice to that of the Navaho weavers – one of simultaneously observing what is now while weaving yet-to-be-born worlds into existence through a type of deep listening (Duncan, 2021) that calls forth new patterns from the unknown – a process that Nora Bateson terms *Aphanipoiesis* (Bateson, 2020).

It can be difficult to think about what the role of psychotherapy might be in these troubling times – how might we make a difference? But perhaps that role is to work within the old structure, but bring new ideas and innovative cultural practices. It is probably impossible to change or repair existing social structures that have grown out of the legacy of colonial thinking. But we were all once indigenous peoples, and it may be possible to learn how to reclaim this indigenous perspective in a post-mechanistic world. The emerging fields of ecopsychology, ecopsychotherapy and ecosystemic psychotherapy may have the potential to reconnect the siloed and separate fields of ecology and psychology as a route to the reclaiming of a subjugated indigenous relationship that will be necessary for this ecosystemic return (Duncan, 2021; Rust, 2020; Fisher, 2019).

We now face the unbearable hopelessness of the heart-breaking realisation that western culture has failed to respond to the climate crisis and that current generations will likely witness some form of catastrophic ecological collapse and the implosion of many of the established structures of western modernity.

However, our understanding of the neuroscience and the polyvagal system provide ways of identifying and healing trauma through the body and preventing this being passed on to subsequent generations (van der Kolk, 2014; Dana, 2018). The healing of body-based trauma can free us from limiting and destructive thoughts, emotions and behaviour and allow for a more sophisticated and complex ecosystemic understanding of ourselves and nature. Emotional healing opens the possibility of changing our way of experiencing the world from the gaining of intellectual knowledge through to Gnosis, a heart-knowing that transforms the knowing subject. This is the process that is at the core of the work of Carl Jung, James Hillman and Gregory Bateson (Cheetham, 2015; Duncan, 2018).

The healing of trauma and the openness to insights from Gnosis are two essential prerequisites for the ancient cultural healing practice of soul centric initiation. This is a process of facilitating communication between the systemic intelligence of nature and the human soul within the imaginal world. Contemporary nature-based rites of passage and soul initiation practices can be found in the work of soul craft guides, such as Bill Plotkin, who explores ways to connect with the imaginal in nature (Plotkin, 2021). Developing research and practice suggests psychedelic psychotherapy offers a way to connect the imaginal with the human soul (Razvi & Elfrink, 2020; Strassman, 2001; Carhart-Harris et al., 2014).

To summarise

It is now becoming increasingly clear that the contemporary western lifestyle not only has a negative impact on the ecosystems of the earth but also a detrimental effect on human health and psychological wellbeing. It is also an unarguable fact that climate change is the consequence of human influence and that addressing these issues will require 'rapid and

far-reaching unprecedented changes in all aspects of society'. I have argued the need to abandon our current mechanistic thinking and reconnect with systemic and heart-based ways of knowing through the adoption of eco-systemic cultural practices, re-engagement with ancient indigenous systemic ways of understanding nature and the development of psycho-technologies that can facilitate this, through connecting with the imaginal. I am, in short, inviting the westernised reader to radically reimagine how we might reconnect human thinking with the ecosystems of the earth and in so doing reclaim our lost and stolen indigenous relationship with nature.

For the psychotherapy profession, perhaps the emerging fields of ecopsychology and psychedelic psychotherapy might offer ways to break the western cultural addiction to seeking solutions within rational, semantic narratives and their hollow ghosts in social media. Might they encourage new structures and practices that facilitate the much older practice of listening for super-rational and interdimensional imaginal narratives as a way of communicating between the human soul and the soul of the world?

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