Since the beginning of time, Omama [creator spirit/deity] has been the center of what the white people call ecology... For the shamans, these have always been words that came from the spirits to defend the forest... In the forest, we human beings are the ‘ecology’. But it is equally the xapiri [spirits], the game, the trees, the rivers, the fish, the sky, the rain, the wind, and the sun! It is everything that isn’t surrounded by fences yet...

If the forest were dead, we would be as dead as it is! But it is truly alive. The white people may not hear it complain, yet it feels pain just like we humans do.

Davi Kopenawa, The Falling Sky (2013:393, 382)

Davi Kopenawa, a Yanomami shaman from the North West Brazilian Upper Amazon, in his biography eloquently speaks of how the spirits are the regenerators and preservers of the forest and how to communicate with them through a sacred psychedelic substance. He has seen the coming of the Europeans to his forest in his lifetime with the disastrous result for the survival of his people and for the survival of the forest that we know happened with the first contact in the 16th century. Kopenawa often wonders why those he calls ‘the whites’ do not believe in the spirits and thus do not call them. He remarks on the white’s perception of the Yanomami shamanic ceremonies as ‘losing one’s mind’ and asks himself why they cannot realize that this is how one communicates with the spirits of the forest and the rest of the world.

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1 Written with French anthropologist Bruce Albert who has worked for decades with the Yanomami and become fluent in their language.
2 Called ‘yakoana’ extracted from the resin of a certain tree and containing DMT.
Indigenous Amazonian peoples have been able to achieve results in the field of agriculture and healing that often surpass what modern humanity has been able to achieve. Given the centrality of shamanism with its ability to access knowledge through permeable, non-rational consciousness we are led to recognize that there are other modalities of cognition than the analytic and rational mind that focus with laser precision on some well-bounded aspect of reality. Analytic reasoning leads us to believe that the boundedness of the object of study is inherent to it rather than a result of our focusing on it or our observing it.

It’s serendipitous, therefore, that the frontiers of western science are beginning to dovetail with the indigenous worldview of sentience and meaning in nature. The belief in a “reality out there”, utterly distinct from human observers, is beginning to give way to a different modality.

In fact, the following statement by quantum physicist and feminist philosopher Karen Barad, “Meaning is not an ideality; meaning is material. And matter isn’t what exists separately from meaning,” declaresthat meaning and matter are not two distinct, separate realities, the former belonging to humans and their minds and the latter to an unconscious material non-human world.

In her ground-breaking book *Meeting the Universe Halfway*, Barad extends Niels Bohr’s profound insight that the observed and measured object cannot be separated from the measuring and observing apparatus. Barad shows that what we humans observe and measure is not an independent, given nature out there but rather is what she calls an “agential reality” namely an entanglement of observer and observed, of object and subject. In this extension of Bohr’s work,

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3 I mention only those two fields not because they are the only ones, but only the ones I know best. The architectural feats of Inca constructions are well known and there are other such instances. See details about the pre-Columbian Amazonian anthropogenic soil known as Terra Preta do Indio in Brazil in F. Apffel-Marglin *Sacred Soil*, Ch. 3, 2017.

Barad shows that nature as existing completely separately from humans’ observation of it simply “disappears”.

As Michael Pollan puts it, referring to quantum physics, “matter might not exist as such in the absence of a perceiving subject.” (2018:413) This sentence comes from his new book on psychedelics. On that same page he also states the following:

One of the gifts of psychedelics is the way they reanimate the world, as if they were distributing the blessings of consciousness more widely and evenly over the landscape, in the process breaking the human monopoly on subjectivity that we moderns take as a given. …Psychedelic consciousness overturns that view, by granting us a wider, more generous lens through which we can glimpse the subject-hood – the spirit! – of everything, animal, vegetal, even mineral, all of it somehow returning our gaze. Spirits it seems are everywhere. New rays of relation appear between us and all the world’s Others. (Ibid:413)

The human monopoly on consciousness Pollan speaks about is a legacy of the worldview bequeathed to us by the scientific revolution. The modern worldview was constructed on the ashes of the destruction of Anima Mundi – the Soul of the World - during the Burning Times. Anima Mundi interrelated everything in the cosmos including our own souls and was pervaded by the divinity and hence sacrality. Anima Mundi was replaced by a mechanical, dead world of objects. Consciousness departed from the world and shrunk to the interiority of human minds and the cosmos ceased pulsing in our bodies and in our souls.5

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5 For a more thorough treatment of this topic see my book *Subversive Spiritualities*; chapters 1-4.
The loss of the world soul may have been necessary to establish a new neutral basis upon which to reconstruct a shattered certainty, shattered by the wars of religions. This neutral basis – disenchanted mechanical nature – had to be thoroughly cleansed of all traces of anything remotely religious or spiritual or metaphysical; it had to be entirely neutralized and materialized to build upon it a certainty that would be free of interference from the ongoing murderous religio-political chaos.  

The end of the 30 years’ war - the international expansion of religious conflicts between Protestants and Catholics - was sealed with the invention and creation of the Nation State in mid-17th century in Western Europe. Today the Nation State is ubiquitous. As Prasenjit Duara formulated it for our conference on the Living Earth: “the nation form has been the dominant mode of identity for most of the world over the last two centuries and it is structured to engage in a competitive race for global resource domination…[and] the ravaging of the global environment…[It] is built around the self-other binary.” The ‘other’ being not only other nation states but nature itself. This collective self-other binary of the Nation State required citizen members equally equipped for competition and equally equipped for controlling, managing and dominating nature and all those humans seen as closer to it and thus wild, savage, or animal like since dominant humans’ rationality entirely occulted for many of us the fact that we too are animals. Indigenous peoples and other colonized peoples as well as women were all seen as lower on the evolutionary scale by being closer to nature, closer to ‘animals’.

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7 For the link between the creation of the Nation-State and the rational exploitation of an insentient nature and “natural resources” see especially James Scott Seeing Like a State,1998. For the link between the nature/culture dualism and domination/colonization of nature and people see especially Val Plumwood Feminism and the Mastery of Nature.
As Prasenjit Duara pointed out, this competitive race has led to two world wars, the ravaging of the earth and the biosphere labelling our epoch as the Anthropocene. The Nation State requires a citizenry equipped for competition and control. However today, the citizenry is itself being ravaged by growing epidemics of addictions and mental illness with catastrophic loss of lives.8 The ecological crisis is not only ‘out there’ in the non-human world but it is simultaneously ‘in here’, devastating our psyches, our souls and our bodies. It is a devastation that does not directly result from the devastation of nature, and one that is indifferent to a person’s wealth or lack thereof, afflicting equally blindly the rich, the poor and the not-so-rich. Seemingly paradoxically, those more affected are found in the Global wealthier North where ever-growing proportion of those who are better insulated and protected from the ecological ravages of the earth become victims of addiction and mental illnesses.

To try and unravel this seeming paradox, I turn to many of the other participants besides Prasenjit Duara in the Living Earth gathering at Oak Spring in October of 2018. As David Abram reminded us so eloquently and poetically: “Cranes and butterflies would have little use for a separated re-presentation of the earth’s surface for they have never torn themselves out of the encompassing presence of the wide earth.” He reminds us that representation – a way of knowing at the heart of modern knowledge – involves a separation of the human knower from the known, in this case the earth. Modernity has separated humans from the rest of the world. It is what Paul Waldau called ‘human exceptionalism’ which he calls ‘the dominant narrative of our time’. He also made clear that this exceptionalism in fact is reserved for the few since “formal education continues to hold in place the privilege of only some humans.” He pointed out

8 The rate of suicide has attained unseen numbers: 40 million deaths in the European Union and is rising in the US annually. NPR NewsHour (11/13/18) announced that for children between the ages of 10 and 19, suicide is the second cause of death. More and more high schools in the US now offer suicide prevention training to their teachers and students. Pollan cites 43,000 suicides in the US every year, more than death by breast cancer or car accidents. (2018:335)
that many of the Western wisdom traditions are otherwise than the dominant narrative and cited Viktor Frankl and Thomas Berry as examples. Unfortunately, those have not become the dominant narratives (yet).

The act of separating humans from the earth took the brutal form of “settler-colonial authorities focused on breaking the relationship between language and the land by forcibly relocating people far away from their territories” in Marc Turin’s words. Breaking this relationship has led to the near catastrophic endangerment levels of indigenous languages according to Turin. The depth of the violence of such colonial policies can be appreciated when we listened to Jeannette Armstrong’s resonant and startling statement: “the land is us.” Jeannette is a land speaker in Okanagan territory in Canada (as well as a professor at the University of British Columbia) and has had the good fortune of being raised and trained on her ancestral territory in her native language as a land speaker, a profession inexistent in the dominant society and probably incomprehensible for many.

David Haskell, a biologist and creator of “Contemplative Studies of the Natural World” writes that in those contemplative acts in living communities such as forests, “we partly ‘unself’ into the network gaining a deep sense of beauty that transcends the self.” The startling verb to “unself” vividly makes us aware that our modern self needs undoing or loosening. It makes us aware that the boundary of this modern self, has become dangerously rigidified and closer to a cage.

Samara Brock refers to the work of both James Scott and Bruno Latour in showing “the view from above enabling abstraction, measurement, calculation, accumulation by experts at centers of calculation and power”. This view from above signals the separation of the modern self from the rest of the world, a separation required to rationally know and represent it. And Mitchell
Tomashow reminded us of von Humboldt’s words on the use of imagination to “soothe the wounds that reason created.” Those wounds have deepened and festered into today’s raging epidemics of addiction and mental illness since von Humboldt’s time. The type of reason that has created such a deep and growing human devastation – together with the devastation of the earth – is one that requires us to separate from what we want to know. To place ourselves outside and above what we want to understand through our reason creates the illusion that we humans are essentially different from a purely material earth and everything on and in it.

That such a state should lead to growing epidemics of addiction and mental illness should come as no great surprise to Heather Eaton. Inspired by the teachings and writings of Thomas Berry, she states unequivocally that: “We evolved from and are a conscious part of the living Earth… It is more than a perception of the universe within the self. It is an encounter that arises from the depth of continuity between the cosmos and humans, a fusion between interior and exterior.” The sundering of this continuity between us and the cosmos and the breaking apart of the fusion between interior and exterior has broken something fundamental in us. The resulting self is cut off from the life-giving earth and has given rise in modern humans – especially Global Northern humans where this sundering is oldest – to a pathological self. This pathology is not only that of the mentally ill or addicted self, but that of the more normative self in pursuit of his or her own self interest and in pursuit of a knowledge requiring the locating of a dispassionate self above the world.

David Haberman’s beautiful portrait of the Braj Goudiya Vaishnava tradition where bhava (love) is the way “one comes to know the true nature of an entity, in a way that exceeds mere intellectual knowledge” and a “loving realization of the divinity in everything” is in striking contrast to this modern self. This passionate road to knowledge/wisdom seems the very opposite
of the wounding reason von Humboldt spoke about. I should point out that in the tantric streams that cut across the many Indic traditions (or religions) there is a similar emphasis on sacralizing this world. This is achieved by making \textit{samsara} (the phenomenal world) and \textit{nirvana} (the transcentent world) coincide in contrast to \textit{advaita vedanta} where the self’s absorption in transcentent reality is the ultimate goal. This absorption in transcendental reality is called \textit{moksha} (liberation) and has led to a certain devaluation and hence indifference toward the fate of \textit{samsara}, this phenomenal world. The achievement of such a coincidence of \textit{samsara} and \textit{nirvana} in the various Tantric streams is spoken of as the union between sky and earth.

Mary Evelyn Tucker, in her portrait of the Confucian worldview found in China, Korea, Japan, Taiwan and Singapore, speaks beautifully of \textit{qi}, through which “the world is alive with a depth of mystery, complexity and vibrancy that can never be exhausted. The sensual world \textit{is} the spiritual world. \textit{Qi} is the gift of the universe, an endlessly fecund life force, a daily miracle of hidden joy. The restorative dance of the universe inviting us into its endless mystery.” In this worldview, the “continuity of self, society and cosmos is paramount”. In other words, a portrait of a worldview diametrically opposed to the modern western view of the self as separate from or above the cosmos/world. She also reports the very hopeful news that the Chinese minister of the environment is committed to a revival of this traditional Chinese Confucian worldview as being central to addressing the ecological crisis in China.

John Grim attempts through foregrounding Sensing, Minding and Creating “to bridge the divide between the human and natural world, between culture and nature” where sensing becomes a key mode for humans to understand the world. He attempts what I might call a healing of the modern pathology of the self, repositioning sensing – which I am tempted to gloss as eros - as central and thereby implicitly rejecting the dispassionate reason so normative in modernity.
Listening to and reading Willis Jenkins, who brings us into a novel underwater way of listening to the earth, I was deeply struck by his citation of the scholar of Christian mysticism, Douglas Christie:

> It is here that the contemplative traditions of thought and practice, especially those that risk confronting the darkness, have so much to teach us… It invites and perhaps even helps create in us a posture of humility: a willingness to listen, receive, and respond to all that is unfolding before us. But it also brings with us a great risk, inviting a relinquishment of self so profound it is in fact a kind of death.

This last sentence points toward the need for a relinquishment of self – the modern encapsulated self – so deep that it amounts to a kind of death. It is striking for me that Sean Kelly in his remarks spoke of a global near-death experience through our cataclysmic ecological disaster as an initiation to a new planetary subjectivity which he calls Gaia subjectivity. That “the earth might wake up as Gaia, involving all the spheres of Gaia: lithosphere, aquasphere, atmosphere, biosphere and anthroposphere” with the emergence of wisdom, compassion, love and care/concern.

Both Jenkins and Kelly recognize the initiatory role of the experience of the death of the personal human self and of the collective self. Davi Kopenawa in his autobiography routinely and rather off-handedly speaks of taking their traditional psychedelic as dying. This is how he speaks of the effect of taking their psychedelic, called yakoana:

> White people are surprised to look at us become spirits with the yākoana. They think that we are losing our minds… Yet, if they understood our language and cared enough to ask…they might understand the words that the xapiri (spirits) bring us from the edges of
the earth, the sky’s back, and the underworld they come from. But […] white people prefer to remain deaf because they find themselves too clever with their paper skins, their machines, and their merchandise. (2013:418)

Michael Pollan extensively interviews most of the scientists that since the late 1990s have started again scientifically studying the effects of psychedelics on the human brain.⁹ He has also himself taken many of those psychedelics to have a first person understanding of their effects. Pollan’s own unforgettable account of the death of his self/ego finds scientific confirmation in the neuroscientists he has interviewed. Pollan’s own experience is one of the disintegration or death of his ego. The scientific account of such an experience – typical with psychedelics – speaks of the disintegration of the Default Mode Network (DMN) in the Posterior Cingulate Cortex (PCC), a node of the DMN concerned with self-referential processing.

Pollan’s scientist interlocutors deem that the DMN is the seat of the self or ego and of rational analytical thinking. The ego and more broadly the DMN patrol the boundaries between self and world. The DMN is created by repeated neuronal pathways made during one’s life that constrain the brain’s ability to perceive and think in new ways, along new pathways. The DMN is the equivalent of what Pierre Bourdieu has called a ‘habitus’.¹⁰

By ingesting psychedelics, these well-worn pathways get swept away or cleansed. Pollan uses the verb ‘defrag’ to refer to this cleansing. Through such defragging the boundaries between self and world suddenly fall away. He calls this a ‘psychic death’ opening the doors to mystical experiences of a sacred, unitive, consciousness of infinitude and blissfulness. He also calls it a ‘death rehearsal’. Pollan insists that those experiences cannot be explained in terms of our usual

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⁹ Such scientific studies began in the 1950s but with the classifying of psychedelics as Schedule One drugs in 1970 all research came to a halt.

¹⁰ Pierre Bourdieu Outline of a Theory of Practice.
conceptual categories. That those experiences transcend the brain’s capacity for understanding. Those experiences are spiritual experiences that Pollan sees not as opposite to a ‘material’ realm but rather to a type of self he names ‘egotistical’.\(^1\) This is the self evoked by so many of the participants in the Living Earth gathering cited above. A self separated and above the world whose boundaries have rigidified. A self closer to a cage than to a porous receptive self, continuous with the world, with the cosmos.

One of Pollan’s most forceful statements refer to the fact that the modern tool-kit to treat addiction and mental illness is broken. He cites Tom Insel, the former director of NIMH to that effect as well as many other mental health specialists. The results of trial studies are unanimous and striking: psychedelics cure most varieties of mental illness, especially depression and PTSD as well as addiction in a way that standard treatments are unable to do.

Under expanded states of consciousness, we can access knowledge otherwise beyond our reach. Shamans in the Upper Peruvian Amazon receive this knowledge directly from the plants via their spirit. The plant shows them the cause of the malady as well as what the treatment should be, specifying dosages and other protocols.

A similar reverence is shown in the practice of agroforestry, where one must prepare oneself to enter the forest by taking certain purges, including with psychotropic plants. As the leader or Apu of an indigenous community with which my center collaborates stated to me:

> [The forests] are our markets, our house, because there we find everything: medicines, food plants, animals, material for construction, and the forest is also a sacred space where we pray and ask permission and do rituals. One does not enter the forest just like that, one

\(^1\) Pollan 2018: 386-390.
needs to take certain plants to purge and purify oneself so as to be in contact with the animals and be able to see the spirits. (Apu Lisardo Sangama Salas) 12

By taking psychedelic plants, Amazonian indigenous people can receive knowledge from the various elements in the forest: trees, other plants, earth, fungi as well of course from animals; in fact, from any element be it water, air, fire, rocks, or the soil.

As did our pre-modern European ancestors, Amerindians hold the non-human world as full of beings having consciousness and knowledge and prepare themselves carefully to enter into communication with these. No activity is undertaken without consulting with the spirits of the place, of the forest. These communications are always respectful and tinged with an aura of sacrality since the whole forest is a sacred place. Even a Westerner such as myself, trained in modern universities, can receive extremely precise and clear knowledge while taking certain healing plants during shamanic forest retreats. I know from personal experience that the knowledge can be extremely precise, to the point, and transformative. 13

We can state with confidence that similar ways of accessing information from what we moderns label ‘the environment’ is what has produced the stupendous achievement that terra preta represents – and to a priori disregard these ways of intra-action in the face of modern society’s initiating an ecological crisis of global proportion is simply foolish. Terra Preta do Indio (black earth of the Indians) being the Portuguese name for the anthropogenic pre-Columbian Amazonian soil re-discovered by archeologists in the last century and declared by soil and other

13 I refer the reader to Jeremy Narby The Cosmic Serpent as another source of evidence for the exact nature of shamans’ knowledge as well as the impossibility of acquiring such knowledge through a process of trial and error.
scientists to be the most sustainable, fertile soil ever and one that furthermore can sequester greenhouse gases from the atmosphere in the very substantial amount of 20%.

The new quantum physics opens a door to the view that non-modern, non-Western peoples have been able to co-create ecosystems, soils and medical healing – among other things – that in some ways distinctly surpass our modern Western approach of mastering or managing an insentient mechanical nature. The view that they did not achieve these things through an empirical process of trial and error but rather through receiving information from the spirits can now be understood as their ability to recognize that matter and meaning are always entangled. Furthermore, to label such source of information ‘spirit’ or ‘deity’ or other such non-empirical being and give them names represents an acknowledgement that we are of the same stuff as they, the stuff of matter and meaning. It opens up the possibility that we co-create the world, since we and it are of the same stuff.

The cosmologist Brian Swimme shares a revealing personal story about cosmological discoveries and attempts to communicate them. When describing his feelings when entering into the new cosmological findings and orientation, people often asked him if he used drugs. His initial reaction was to somewhat angrily reject such a suggestion which he associated with his listener’s equating the feelings cosmological discoveries induced in him with tripping and all the negative consequences that came with drug addiction. However, upon reflection Swimme came to very different views. He concluded that alcohol and drugs are an intrinsic feature of consumerism, necessary for its sustainability. Consumerism is based on the basic assumption of the modern world view, namely that the world is made of dead objects. These objects are, in Swimme’s wry words, mostly ‘unmanufactured consumer goods’. The deliriously abundant
glory of the natural world, of the cosmos, is reduced to an inert mechanism. Humans are of this world, created from and with it, and this western modern paradigm cuts us off from the extraordinary expressiveness of this living, sensuous, numinous world. We are left alone among our kind, bereft of this numinous and exuberantly varied part of ourselves. The non-human world, the cosmos has agency, sentience and more.

These and other such findings among several scientists have barely percolated within academia, let alone the wider society and culture. Most of the institutions of modern society are based on the old Classical Scientific paradigm, one that gives certainty and power over the non-human world and all those humans perceived as being closer to it. So, all those institutions are not going to welcome with open arms the kind of news some scientists are bringing us lately. The reaction is what the neo-Jungian psychologist James Hillman calls ‘collective ego-defenses’ of the repressed unconscious of modernity. Modernity is still overwhelmingly in the grip of this dead world which is also a deadening, pathological world. Swimme thinks that “hoping for a consumer society without drug abuse is as pointless as hoping for a car without axle grease.” In what follows he explains why:

When humans find themselves surrounded by nothing but objects, the response is always one of loneliness…But isolation and alienation are profoundly false states of mind. We were born out of the Earth Community and its infinite creativity and delight and adventure. Our natural genetic inheritance presents us with the possibility of forming deeply bonded relationships throughout all ten million species of life as well as

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14 Although Pollan has found a vast network of psychedelic givers existing under the radar in both the US and Canada. He attributes this to the fact that legal treatments are basically unable to treat many addictions and mental problems.

throughout the nonliving components of the universe. Any ultimate separation from this larger and enveloping community is impossible, and any ideology that proposes that the universe is nothing but a collection of pre-consumer items is going to be maintained only at a terrible price. (1996:33-34)

Today this ten million of species has been severely diminished with the largest extinction of species since the disappearance of the dinosaurs, and one caused by humans, giving our geologic era the label of the ‘anthropocene’. We are all in deep mourning, depressed and bereft whether we are aware of it, or of its deep lying causes or not, or whether we have repressed all of this to our collective unconscious.

For me the imperative of our times is the need to heal ourselves, help heal our children and our ravaged earth, in other words the need for integral ecological healing, healing the split between nature and culture and between mind and body and mind and heart. In this endeavor, we need to avoid the Charybdis of fundamentalist rationality and materialism and the Scylla of unquestioningly accepting the received wisdom through parents, school and community. We also need to recognize that spirituality is at the very core of such an endeavor.

So here at the field campus of my non-profit organization Sachamama Center for Biocultural Regeneration in the Peruvian Upper Amazon where I wrote some of these lines, I have tried to create a space where this split can be healed.

Indigenous spirituality here is a union between ancestral shamanism and Catholicism. It seems to me that with Pope Francis’s ecological encyclical *Laudato Si* as well as his apology to indigenous peoples of the Americas, the horrendous history of the brutally enforced introduction of Catholicism here has been transformed into a fecund union. With this encyclical Catholicism
has re-invested the non-human world with not only intrinsic value but also with numinosity. For the indigenous and mestizo curanderos here, Catholicism and ancestral indigenous spirituality are not experienced as antagonistic nor as separated. This is certainly one of the blessings of living in an oral milieu where this history has lost its horror or whose memory has blunted to the vanishing point.

References


