



Perverse particles, entangled monsters and psychedelic pilgrimages: Emergence as an onto-epistemology of not-knowing

Bayo Akomolafe and Alnoor Ladha

abstract

In contrast to the relative equilibrium and mechanical conservatism at the heart of mainstream articulations of emergence, we ‘see’ emergence as errant, monstrous, ironical, nonlinear and indeterminate. Progress is not emergence. And emergence is not an arrow. There is a spontaneity at work that undermines the fundamental tenets of Calvinian teleology – one of which is the story that the world is captive in an unending progression towards grander sophistication, a process ineluctably steered by men (or to be more precise, ‘educated’ white men). In this playful interdisciplinary analysis of emergence, using ‘new’ insights into the ‘perverseness’ of the quantum world, and drawing from psychedelic research, popular culture, and Indigenous wisdoms, we reimagine emergence as a radical indeterminacy that unsettles the grounds upon which the exclusionary discourse/practices of neoliberal expansionism as emergence are built. In doing this, we point to other spaces of power, where new embodied forms of justice (in form of different ethico-epistemo-political imaginaries) might thrive.

Introduction

If to write is to unsettle old assumptions, to hint at the unexpected, to form trajectories to the effaced and inappropriate, and to make room for radically new embodiments of justice, then the burden of this essay is truly an ethical intra-vention¹ (Barad, 2007) – a thought experiment into the embryonic *elsewheres*

¹ We mischievously coined this word, pace Karen Barad’s neologism of ‘intra-action’ to undermine the notion that we speak from a vantage, exterior point. In her book,

tugging at our frames of the present. Jumping playfully from charged visions of queer, self-birthing particles and ubiquitous, psychedelic compounds that destabilize the primacy of a local, three-dimensional reality to considerations about complex adaptive systems, climate justice, shamans and unwieldy sentences and footnotes, we write to wrestle with the stabilized visions and fantasies of *emergence* held by corporate hegemonies. We suggest that emergence is not the inevitable march of Western progress denoted by trivialities such as GDP growth, corporate revenue expansion, technological innovation or any other form of ‘achievement’.

The purpose of this interdisciplinary article is concerned with ethics: to open up radical spaces of possibilities once we accept the possibility of not-knowing. The aim is not to articulate a political manifesto that replaces capitalist accounts of emergence with something as equally fictitious. We are not trying to supplant one blueprint for another. Rather, we write to disturb convenient ways of reading the world. We do this by pointing to other places of power – broadening the spectrum of what is considered permissible. Jumping from here and there. Or making here and there by jumping.

If one were interested in linearity, this essay proceeds from the context of the climate change struggle to the root causes of this struggle – the deadening ideology of late-stage capitalism and its corollaries of patriarchy, rationalism, white supremacy and anthropocentrism. We draw on the concept of entanglement as a primary metaphor for emergence, and an unfurling of the ‘other’ as a mirror into our own souls, abandoning the fixity of any theoretical outside or of monsters under the bed. We invoke quantum physics, neuroscience, behavioural psychology and complexity economics as haptic heirs to their dualist counterparts, pointing to a new direction of messiness, intra-action, and symbiotic evolution with Nature and the universe itself. We pose paradoxes in order to challenge our notions of agency and causality, to re/discover the potency of liminal edges, and of other places of power where meaning and matter are intra-twined.

The context: COP21, climate change and other crises

Produce less climate change and more stuff!

Get satisfied (cartoon illustration by Mike Swofford)

Meeting the universe halfway (2007), Barad writes about intra-action (not interaction) to illustrate how entanglement precedes thingness. In other words, there are no things, just relationships, and these ongoing relational dynamics are responsible for how things emerge. Similarly, an intra-vention is how we posit our complicity in perpetuating the very circumstances we strive to disrupt.

We do not do our writing in a void, but in a charged political space defined by passive aggressive back-and-forths between Russia and Turkey and threats of angry reprisals and economic sanctions (Al Jazeera, 2015); by the looming shadows and inexplicability of ISIS and Boko Haram; by the escalating tensions brought about by a Euro-migration crisis without convenient answers; and, by the replicated masculinities and reinforced hopes of techno-rationalistic urgency (perhaps best embodied by Bill Gates' investment of billions of dollars in an 'innovative' private-public venture to create 'clean' technologies that mitigate the climate crisis). As we write, the flickering pixels of the television screen are animated by excited infographics about what is touted to be the most important gathering on climate change – the COP21 (Conference of the Parties) summit (November 30 - December 11, 2015) in Paris, a city still reeling in the eddies of an unprecedented series of devastating attacks stemming from a legacy of crusades, colonialism, xenophobia, Islamophobia, institutional racism and other entanglements that defy causality.

Dancing flags, firm handshakes, sturdy lecterns, bold speeches and cut-away shots to an 'appropriate' audience are all featured. 'We have been presented with two options and we need to choose', the Prime Minister of Saint Lucia announces to 150 other heads of state; '[w]e either condemn our planet to further destruction... or we save it' (Hamilton, 2016). Commentators juggle the hefty consequences of a successful summit, envisioning an international climate deal that ensures nation-states move towards reducing carbon emissions, and eradicating dependence on fossil fuels.

And yet, the very nature of the COP talks (which started in 1995 in Berlin) are the site for the reproduction of the normative values, anthropocentric assumptions, Western hegemony and phallic patriarchy that have contributed to ecological destruction and necessitated climate action in the first place.

Climate change is not simply a political/environmental issue, something that can be resolved in the sparkling glare of cameras and behind the forced smiles of world leaders after a few carbon commitments. It is a spiritual crisis, an existential crisis, an epistemological crisis. And to meet it, we must come face-to-face with the noxious heap of ideologies we have swept under the carpet of orthodoxy. We must confront what it means to be human, the ironies and impossibilities of growth for growth's sake², the impasses of human agency, the linearity and limitations of

² See an earlier issue of *ephemera* 17(1), February 2017 for a detailed discussion of the post-growth economy (Johnsen et al., 2017).

capitalist teleology. The substructures of our experience as a species in these moments of charged transitions need to be upturned.

Even if the highest ambitions of the talks are achieved, and reticent nations (which directly correlate with the largest carbon emissions, as in the case of the US) strike an unprecedented deal to drastically reduce carbon emissions (while providing funding for ‘emerging’ nations like India), it most likely would not acknowledge the marginalised and excluded among us, who are indeed the vast majority of humanity. And of course, these talks and their ‘outcomes’ will reinforce the dominance of one-way-of-knowing, leaving the capitalist trajectory intact.

The materiality of the talks contain an inner momentum towards replication, not radical difference. The historical ‘phallogocentrism’ (Derrida, 1978: 20) of the COP talks exemplify just how resolute its anthropocentric concerns are – how resoundingly the discourse on emergence derives from capitalism, and excludes other political modalities that do not coincide with the creed of commodity production.

To truly meet the climate crisis is to confront patriarchy unfettered, the phallogocentric authority of science and its (not-so-)quiet delegitimization of multiple cosmovisions and cacophonous nonhuman (transhuman, inhuman, other-than-human) agencies, the Cartesian epistemology that believes in the givenness of the subject-object dichotomy, and, among other entangling concerns, the humanism that says ‘man makes everything, including himself, out of the world that can only be resource and potency to his project and active agency’ (Haraway, 1991: 297).

In a nutshell (not that we presume anything could ever be resolved or spoken about so conclusively!), to make space for a more ravishing climate justice, to ‘redeem’ emergence from a stultifying hall of mirrors, a deadening capitalist linearity, is to contemplate the nature of Nature. And nothing short of a reconfiguring of our familiar understandings of causality, locality, agency, intentionality, individuality, choice, and subjectivity will constitute a potent ethical intra-vention.

In contrast to the relative equilibrium and mechanical conservatism at the heart of mainstream articulations of emergence, we ‘see’ emergence as errant, monstrous, ironical, nonlinear and indeterminate. Progress is not emergence. And emergence is not an arrow. Emergence can ‘best’ be understood in terms of entanglement, in terms of crisis, of shifting alliances and strange dalliances and morphing identities. There is a spontaneity and indeterminacy at work that undermines the fundamental tenets of Calvinian teleology – one of which is the story that the world is captive in an unending progression towards grander

sophistication, a process ineluctably steered by men (or to be more precise, ‘educated’ white men).

In place of this certitude, in this article we articulate an onto-epistemology³ of not-knowing (with the help of Karen Barad and Niels Bohr), which is to say much more than that there are critical limits to our abilities to access reality as it is. It is to say that reality is indeterminate (as the paradoxes of studying particulate matter eloquently suggest). It is to suggest that we re-situate ourselves

as spontaneously responsive, moving, embodied living beings – within a reality of continuously intermingling, flowing lines or strands of unfolding, agential activity, in which nothing (no thing) exists in separation from anything else, a reality within which we are immersed both as participant agencies and to which we also owe significant aspects of our own natures. (Shotter, 2014: 306)

It is to say the world unfurls not according to the predetermined logic of growth or progress, not according to the marketplace, and certainly not around ‘us’. Such geocentric and anthropocentric assumptions are caving in and hollowing out giving birth to queer, troublesome visions that disturb our confident humanism, make room for the perverse and return the gaze of the ‘other’ back upon ourselves.

The monster isn’t under the bed

I’ll be back!

Arnold Schwarzenegger (as ‘T-800 Model 101’ in *The Terminator*, 1984)

There’s nothing more toxic or deadly than a human child. A single touch could kill you. Leave a door open, and one can walk right into this factory; right into the monster world.

Henry J. Waterhouse (voiced by James Coburn in Pixar’s *Monster’s Inc.*, 2001)

The tragedy of the monster is a recurring trope and energetic motif in modern cinematic history. Whether it is the time-travelling cyborg in *The Terminator* (1984), whose flesh (or living tissue) cleaves to metal, or the endearing animated story about extra-dimensional creatures learning to exploit the fear of human

3 Karen Barad coined this term (2007). Onto-epistemology means what is in the world (ontology) and how we know what is in the world (epistemology) are not separate, but emerge materially in an ongoing dynamic. That is, the nature of reality and the nature of knowledge are entangled, not fixed or final or determinate. In a fuller sense, none of these can be divorced from power and what we find valuable or just, so to write about an ‘onto-ethico-politico-epistemology’ is probably more appropriate, but no less infuriating.

children to power their own economy (in *Monsters Inc.*, 2001), or the gripping narrative of a psychopathic serial killer's vicissitudes with emotions and a normal suburban American existence (in the television series *Dexter*), our fascination with monsters seems everlasting.

Invading aliens, melancholy moons that turn accursed persons into werewolves, Frankensteinian contrivances (like bio-engineered super-dinosaurs or artificial intelligence) whose 'unnatural' ferocity quickly teaches an audience that one should not 'play God'. These monsters touch tensions about the safe divides between the essential and the adulterated, between what is natural and unnatural. The image of a giant King Kong perched precariously on a New York skyscraper, holding on to the object of his barbaric affections, Ann Darrow, as if she is his shibboleth to a more humane existence. His cure from his gargantuan rage is a poignant testament to our own collective quests for purity, for stable grounds. Politically, and more contemporarily, the monster manifests as the teeming population of Syrian refugees lingering at the barb-wired borders of nation-states – inspiring anxious legislation and whispered questions about 'who to let in'. Or a transsexual showing up in a hyper-evangelistic Christian community.

The monster is Outside. That is his Luciferian place. To indwell the festering swamplands outside all that is actually ordained. To melt through Cartesian categories. To inhabit the unthought and the unthinkable. To sin. However, the reserved area we allocated to monsters is shrinking, and we are coming to terms with just how absent an 'outside' really is (Barad, 2007). The 'world out there' – the eminent subject of representationalist scholarship – no longer lies at a distance from us. We are very much in touch with the world, and produce it via techno-scientific, cultural and political practices. The world is *performed* (*ibid.*); 'our understanding of phenomena is inseparable from the instruments we use to measure them' (Doyle, 2015: online), which means we do not have the luxury of indifference or victimhood when we encounter monsters. We are entangled with them.

The more we excavate our assumed pureness in search of firm grounds – of a Cartesian kind – the more we run into irony. The more we get into turbulent, riddling spaces. The more we find just how monstrous /complicit/adulterated/impure/nonhuman/chimeric we are, so that the tale of Ann Darrow and King Kong becomes not a narrative of beauty and the beast, but a politics of mutual beastliness. Reminding us of one aspect of this beastliness, Dorion Sagan (2011: online) reminds us how biologically compromised we are:

Ten percent of our dry weight is bacteria, but there are ten of 'their' cells in our body for every one of 'ours,' and we cannot make vitamin K or B12 without them.

Vernadsky thought of life as an impure, colloidal form of water. What we call ‘human’ [is] also impure, laced with germs. We have met the frenemy, and it is us.

Just before we turn our attention away, he adds, driving the knife into the body of essentialism even further:

[B]efore leaving this point of the pointillist composition that is our Being made of beings, please notice that even those cells that do not swarm in our guts, on our skin, coming and going, invading pathogenically or aiding probiotically – please notice that even these very central animal cells, the differentiated masses of lung, skin, brain, pancreas, placental and other would be strictly human tissues that belong to our body proper – even they are infiltrated, adulterated, and packed with Lilliputian others. The mitochondria, for example, that reproduce in your muscles when you work out, come from bacteria. We come messily from a motley. Indeed we literally come from messmates and morphed diseases, organisms that ate and did not digest one another, and organisms that infected one another and killed each other and formed biochemical truces and merged.

Sagan’s point is that the human body or even ‘human nature’ is not some distinct Platonic category, but an ongoing admixture of weird becomings – an interspeciated emerging deconstruction with no denominating logic or principle. There is no golden rope through the mush, no guiding hand, no Promethean agenda. Not even Darwinian teleology – and its presumed internal mechanism of natural selection by slow mutation – touches on the radical ‘hospitality’ and strangeness of being/becoming human/nonhuman.

However, the trouble we are encountering is not cosmetic. It is not merely bone-deep or cell-deep; it strikes at the ‘heart of things’ – undoing the haughty distance modern man supposed he had achieved by harnessing the power of the electron. Particulate matter, like T800, is ‘back!'; it is more monstrous than anything we can imagine. And it may be us.

Persistently perverse particles and the monster in us

You are something the whole universe is doing in the same way that a wave is something that the whole ocean is doing.

Allan Watts, ‘The real you’ (2014)

At the turn of the 20th century, as our conventional notions of linearity, cause and effect, and the inner workings of the human body were radically being upturned, classical physics also began to run out of steam. It was fast becoming an incomplete account for how the world works, and rumours were now rife that the revered Newtonian/Einsteinian faith in the fundamental existence of a positivist, objective world populated by discrete ‘things’ (with pre-set values that are

consistent with or without an observer) was imploding. There are many ways to map the historical uncoupling of classical physics – its inadequacy in the face of black-body spectral emittance, for instance. However the site of our concern is simultaneously the *smallest* and the *largest* space in our modern mattering: the quantum.

The controversy surrounding quantum theory was really a high-stakes debate on the nature of reality, and no other figures loomed large over the quantum landscape like Albert Einstein and Niels Bohr, arguably two of the most compelling thinkers of the Western world and 20th century physics (Howard, 2009). As Howard (*ibid.*: 3) avers, ‘both Bohr and Einstein understood early and clearly that the chief novelty of the quantum theory was what we, today, call “entanglement”, the non-factorizability of the joint states of previously interacting quantum systems’.

At one end of the discourse was Einstein, who maintained the ‘thingness’ of things, insisting that there was a spatial discretization of systems. It was necessary to Einstein for a *separation principle* to exist. Physics – the entire enterprise of science – was otherwise unintelligible. Bohr however adhered to an understanding of entanglement and, drawing ideas from Chinese philosophy, articulated the principle of complementarity and ontic indeterminacy⁴.

For Bohr, there were no *things* (Howard, 2009). Identity is not inherent or mutually independent, but entangled with the experimental circumstance or the specific measuring apparatus. *Thingness*, the quality of being a ‘thing’, emerges as a feature of indeterminate entanglement. Whether an electron behaves like a wave or a particle – whatever value ‘it’ may take – is inseparable from (and/or complementary to) the specificity of the measuring ‘paradigm’, and not an intrinsic, predetermined feature.

The site of this contest about the nature of particulate matter (and therefore the ‘nature’ of emergence) was the dual slit experiment or two-slit apparatus.

4 The central question of ontology is what a thing really is – independent of opinion, outside of interaction, in a neutral state. The matter behind the matter, if you will. Bohr fashioned the concept of ontic indeterminacy, in effect rejecting the idea that things have properties in themselves ‘outside’ of the myriad relationships and complex web that grant them being. Ontic indeterminacy evokes the provisionality of the world and the vagueness of boundaries (Barad, 2007). Karen Barad’s concept of ‘intra-action’ is premised on ontic indeterminacy, which is the understanding that the identity of a thing, its properties, the features that grant it its ‘thingness’, are not fixed or inherent, and only emerge in the context of relationship. Light is not inherently a wave or a particle; what it ‘is’ depends on how it is performed in concert with other agencies (*ibid.*).

Otherwise known as Young's experiment (since it was first performed by Thomas Young in the first years of the 19th century – long before quantum mechanics – to demonstrate that light behaved like a wave), the apparatus was a simple way to demonstrate whether an entity was a particle or a wave (Barad, 2007).

Bohr and Einstein agreed that entities would exhibit wave-like patterns once diffracted through the double holes of the initial barrier: the experiment had been performed many times before, and the results always showed an interference pattern on the final screen. Their contentious disagreement arose from a thought experiment, a *Gedanken*: what would happen if the experiment were modified so that the particular entity, say, a photon (a quantum of light) traveling through the slit, could be determined? What if we knew which slit allowed the entity to pass – that is, what if we could observe the entity pass through the slits? Would the final screen still measure a diffraction pattern, showing conclusively that the real nature of light is wave-like?

Einstein felt that the results would be the same – that a diffraction pattern would be recorded on the screen, and that if the passing entity could be detected, it would be caught behaving like a particle at the slits – thus exposing the deficiencies of quantum theory. Bohr took a radically different path, rejecting his colleague's classical ontology, insisting that the nature of an entity is not fixed or inherent, but 'emergent' – changing with the apparatus in place to determine its nature, and intra-acting with meaning. Light is not inherently a wave or a particle. There are no inherent objects with predetermined properties. Instead of a diffraction pattern, Bohr predicted, a hypothetical 'which-slit' experiment would show the 'solid-looking, bam-bam-bam hits behind the individual slits on the final barrier that measures the impacts' (Lanza, 2010: 211).

As it turns out, Bohr's prediction has been confirmed in hundreds of varying 'which-slit' experiments performed ever since:

[W]hen a which-slit detector is introduced, the pattern does indeed change from a diffraction pattern to a scatter pattern, from wave behaviour to particle behaviour... this finding goes against both Heisenberg and Einstein's understandings, and strongly confirms Bohr's point of view, for it can be shown that the shift in pattern is the result of the entanglement of the 'object' and the 'agencies of observation'. That is, there is empirical evidence for Bohr's performative understanding of identity: Identity is not inherent (e.g. entities are not inherently either a wave or a particle), but rather 'it' is performed differently given different experimental circumstances. (Barad, 2010: 259)

Bohr's 'dazzling proof that we live in an indeterministic universe' (Bard and Söderqvist, 2014: 134) disturbs the classical view that the world is a collection of solid stuff, an arrangement of fixed attributes, subservient to physical law. It draws

together the outside and inside, the monstrous and the proper, King Kong and Ann.

We are no longer bounded 'I's whose task it is to study natural 'laws'; we are inside the frenzied equation. 'We' are an entanglement – always emerging. The very materiality of the world is inescapably entangled with epistemology and justice (or 'justice-to-come'). Karen Barad explains entanglement in terms of intra-activity, or the ongoing dynamic of emergence that reconfigures everything:

Entanglements are not intertwinings of separate entities, but rather irreducible relations of responsibility. There is no fixed dividing line between 'self' and 'other', 'past' and 'present' and 'future', 'here' and 'now', 'cause' and 'effect'. (Barad, 2010: 265)

Since there are no dividing lines, there are no fixed exterior positions, except that which has been excluded or cut out due to the specificity of a circumstance or practice/performance. In Barad's reckoning what gives an object its 'specificity', its properties, is an entanglement 'between' things.⁵ Entanglement implies that the ontic unit of reality is not a 'thing', but a congealed configuration of cacophonous agencies. Nature is wild, precarious and exploratory, lacking the sort of firmness and phallic permanence upon which an immutable grounding of capitalist teleology can take place, and undercutting the foundational assumptions that seems so central to the Western project. The Cartesian assumptions that undergird the binary givenness of the world are undone. Even with an appreciation of the notion that there are no individual things with fundamentally discrete and pre-relational properties, it is easy to miss the quantum weirdness and profound preposterousness of matter.

Dominant rationalist thought tells us, for instance, that cause always precedes effect; that 'things' – boundaried and 'featured' and separate – are local (that is, they cannot be situated in two places at the very same time); that what a thing 'is' – its fundamental nature – is fixed; that time flows 'forward', so that the distinction between 'past', 'present' and 'future' is rigid; and that reality is composed of infinitesimally small individual bits of 'matter'.

Quantum theory discombobulates these classical notions, showing how at quantum levels⁶ these Apollonian artefacts of 'time' and 'space' and 'self' and

5 Barad's theoretical stance can be described as 'agential realism' – a non-representationalist, post-humanist account of how the world materializes.

6 According to agential realism, the binary distinction between micro-reality and macro-reality is intra-actively co-constituted, not 'given'. So the usual retort that reality is essentially weird at more basic levels, but adheres to a classical trope at macro-

‘other’ and ‘this’ and ‘that’ are already threaded through with ‘interferences’ and infinite alterities, so that an entity is ‘an infinite sum over all possible histories’. What we are talking about here is not that an electron, for instance, is a gradual product of reverberating moments already past, but that an electron straddles the fuzzy lines that distinguish past and future, playing with im/possible possibilities, touching itself and perverting order.

It is this ardent spontaneity at the ‘heart’ of matter that, queerly enough, is the condition for all forms of materialization and all forms of bodies. The classical idea that nothing really comes to touch anything else – that what we feel in our hands when we hold a book is not the ‘book’ but electromagnetic activity (similarly charged particles repelling each other) – is replaced by quantum theory’s submission that electrons are not tiny billiard balls hoisted in a vast space of nothing-ness, but inseparable wanderings of the void. We learn that:

the electron not only exchanges a virtual photon with itself, it is possible for that virtual photon to enjoy other intra-actions with itself – for example, it can vanish, turning itself into a virtual electron and positron which subsequently annihilate each other before turning back into a virtual photon – before it is absorbed by the electron. And so on. This ‘and so on’ is shorthand for an infinite set of possibilities involving every possible kind of interaction with every possible kind of virtual particle it can interact with. (Barad, 2012: 9)

Emergence, construed along the lines of ontological indeterminacy, does not happen along pre-given trajectories. It is a wild madness. We are confronted with the spectre of our bodies, with the perversity of electrons – noting that these already entail an infinite alterity, ‘so that touching the other is touching all others, including the “self”, and touching the “self” [an unfathomable multitude] entails touching the strangers within’ (Barad, 2012: 7). In a time when the figure of a monster/alien/abomination is still arguably the most magnetic cinematic draw, how appropriate it would be to showcase the Other with muted visuals and no commentary, but with the eminent reminder: the monster is ‘us’.

Haunted bodies and hidden ghosts

You talkin’ to me? You talkin’ to me? You talkin’ to me? Well, who the hell else are you talkin’ to? You talkin’ to me? Well, I’m the only one here. Who the f-k do you think you’re talkin’ to?

Robert De Niro (as Travis Bickle in *Taxi driver*, 1976)

everyday levels is ‘itself’ a practice of denying the significance of entanglements between the ‘two’.

As quantum physics has maddeningly shown us the multi-faceted mirror of monsters and denied the plausibility of the 'other', neuroscience, the other pinnacle of the natural sciences, according to the rationalist's own hierarchies, has shown us the power of the unconscious, and that there is no 'I' that is in theoretical control. At any given second, we consciously process only sixteen bits of the eleven million bits of information our senses send to our brain, leading Tor Nørretranders, the Danish science writer, to describe human consciousness as the *user illusion*. He states:

There are no colors, sounds, or smells *out there* in the world. They are things we experience. This does not mean that there is no world, for indeed there is: the world just *is*. It has no properties until it is experienced. At any rate, not properties like color, smell, and sound. I see a panorama, a field of visions, but it is not identical with what arrives at my senses. It is a reconstruction, a simulation, a presentation of what my senses receive. An interpretation, a hypothesis. (Nørretranders, 1998: 293)

Neuroscience is revealing the primary metaphor for the brain to be the elephant and the rider. Our conscious mind is simply a passenger sitting upon a greater essence that is directing the elephant/rider complex, or more aptly, the elephant/rider entanglement, while allowing the rider to hold onto its illusion of control, mastery, directionality and fixity.

As the pillars of Cartesian logic crumble from the calcification of false assumptions, as we start to feel the presence of our self-induced veils, as we see our host environment disintegrate in the face of our techno-utopian hubris, new 'evidence' is coming from every crevice of life, even from the very halls of power that deny subjectivity, reminding us how intra-relational we really are. In a sense, Robert De Niro's character Travis Bickle in the film *Taxi driver*, asks an evocatively critical question: when we stand before a mirror, who indeed are we talking to? Our bodies are no longer 'ours', haunted as they are by the 'other', disturbed by 'ghosts' of restless entities whose feet have traversed preposterous times, worlds and possibilities.

The social sciences are revealing that human beings are highly contextual, indeed, intra-contextual. From the famous Stanley Milgram experiments of the 1960s where subjects would torture strangers with an electric shock, simply because an authority figure made the request (Romm, 2015), to the Good Samaritan studies (Darley and Batson, 1973) where theologians and moral philosophers would walk past bleeding subjects on the street if they were late for a sermon, we are being shown that the 'fundamental attribution error', the belief that character traits are fixed (as if such fixity could exist!), is giving way to the primacy of circumstance. Or, queerly put, the primacy of non-primacy. Context comes before reality. And

perhaps reality is simply context and intra-context subjectively witnessed by entangled complexes and monsters within.

In the realms of economics, almost every tenet of neo-classical economics has been falsified. Complexity economics, the branch of economics that finally incorporated the second law of thermodynamics, has shown that there cannot be a perfect equilibrium in a world of entropy. The self-evidence of wealth concentration, regulatory capture and the arbitrage of high-velocity trading, have shown us that 'perfect information', the Cartesian dualists *ex deus machina*, is as elusive as a theory of everything. Behavioral economics, in many ways one of the few 'credible' branches of modern economics, has shown that human beings are highly irrational, prone to all sorts of biases from information framing to temporal ordering.

What is clear is that a 'thing' is only a 'thing' in 'context' of relationship. This includes us. If we change the relationship or the context, the 'thing' changes. We may be 'rational' in some contexts, and not in others. In other words, there are no 'things', only entanglements, and, by definition, an entanglement is not an already determined value. It is an ongoing promiscuity that makes thingness possible, the waltz of a thousand im/possibilities.

How does one enter the plateaus of radical possibility rather than deadening winnows of scientific reductionism or 3D banality? Our ancestors had many avenues into the infinite, to non-ordinary states, from trance-induced dancing to pack-hunting to the ingestion of hallucinogenic plants. They understood that there was no 'other', no 'outside'. In practice, they understood that we are Nature and plants are Nature (whether psychedelic or not). They understood that communing with teacher plants, as they are still known, allows us to create new neural synapses and activate latent cells of potentiality.

Even the pagan traditions of Western Europe, the Indigenous Peoples of the 'Old World', were deeply immersed in ritual and honoured sacraments to achieve these states before the Crusades of Christianity forced the monoculture of the mind upon all who survived their 'rationalistic' cleansing (Lash, 2006). Every complex civilization has had a symbiotic relationship with plant medicines of some form: the Mayans and Aztecs worked with psilocybin, the Incas with ayahuasca, the Ancient Egyptians with blue lotus, the Vedic Indians with ganja and the elusive soma, the Ancient Greeks with ergot and other plants in the mystery schools of Eleusis (Hancock, 1995).

The psychedelic philosopher, Terrence McKenna, famously proposed the 'Stoned ape' theory of human evolution where he suggested that psilocybin, the active

ingredient in magic mushrooms, assisted in the human development of speech among other major evolutionary developments. He argued that physical evolution is a slow process, therefore we were capable of language thousands if not tens of thousands of years before we actually used our latent physical potentiality (McKenna, 1994). According to him, since psilocybin is one of the only psychedelics found on every continent, it operated as a mycelial network, both providing information and connecting this newly acquired wisdom to other societies across the planet. This would explain why there are *Axial Ages*, where exponential explosions of novelty take place, demonstrated by the earliest cave art, cuneiform language, complex governance structures, the invention of the wheel, and other ‘innovations’ appearing simultaneously on multiple continents. This theory is the anthropological equivalent of quantum entanglement.

McKenna uses the language of ‘synesthesia’, the blurring of boundaries between the senses which is caused by hallucinogens, which then leads to these developments. McKenna helped to elucidate the link between psychedelics like psilocybin and dimethyltryptamine (DMT), a naturally occurring compound in many plants and animals, including humans, which is a structural analog of serotonin and melatonin. Although humans produce DMT, the psychonauts⁷ among us claim that DMT floods the human body in both the birth canal and during the death process. As such, DMT has been called the *spirit molecule* by psychiatrist Rick Strassman (1994). DMT can also be ingested as a psychedelic in its own right. Strassman has stated that the ‘most intuitively satisfying’ explanation for the DMT experience is that DMT allows a person to perceive genuine ‘parallel realities’ inhabited by independently existing intelligent beings (*ibid.*).

During a 1998 workshop entitled the *Valley of novelty*, McKenna (2006: online) explains:

Psilocybin and DMT invoke the Logos, although DMT is more intense and more brief in its action. This means that they work directly on the language centers, so that an important aspect of the experience is the interior dialogue. As soon as one discovers this about psilocybin and about tryptamines in general, one must decide whether or not to enter into the dialogue and to try and make sense of the incoming signal.

In McKenna’s book, *True hallucinations*, he explains what the ‘spirit of the mushroom’ has spoken to him directly on many occasions. Here is a direct quote from the mushroom entity:

⁷ A psychonaut is someone who utilizes altered states of consciousness to explore a wide range of activities.

Symbiosis is a relation of mutual dependence and positive benefits for both of the species involved. Symbiotic relationships between myself and civilized forms of higher animals have been established many times and in many places throughout the long ages of my development. (McKenna, 2006: online)

Now what is one to believe? Did mushrooms teach us to speak? Do they interact with other species? Are they extra-terrestrial spores that we have been in symbiotic relationship since the dawn of our ape ancestors? Are there parallel realities occurring simultaneously that can be accessed through chemicals that exist in our own bodies?

We do not ask these questions to simply invoke the *Heyokah spirit* – the sacred clown that Indigenous cultures like the Lakota people of the Turtle Island⁸ actively conjure, in order to interject humor and disrupt the pathos of hubris. We pose these riddles in order to challenge our reconfigurations of agency. To re-direct our gaze towards the excluded edges and other places of power, where story and meaning are created and uncreated.

Perhaps these counter-narratives offer deeper truths that acknowledge perverse particles, microbial symbiosis, cognitive biases, unconscious riders, haunted bodies and hidden ghosts. Perhaps the scientific, rationalist worldview that would tell us that 93% of our DNA is ‘junk DNA’ simply because we are yet to understand it is as unlikely a scenario as speaking with extraterrestrial mushrooms. And perhaps any claim of a positivist, objective reality that denies quantum physics, separates us from Nature and tells us that selfishness will lead to a market equilibrium is less useful than the notion of parallel realities. So what then shall emerge?

Whither emergence?

God is ridiculous – but if you’re going to have one, make a good one.

Frederich Neitzche (1882)

We’re not in Infinity, we’re in the suburbs.

Jason Schwartzman (as Albert Markovski in *I heart huckabees*, 2004)

To see what is emerging, one must ask what has emerged to date. The very same logic that has produced our climate crisis appears to be the logic that claims the ability to solve what it has begotten. On what grounds then do we situate and legitimize the capitalist meta-narrative of emergence? What is emerging? Surely

8 Turtle Island is now known as the North America.

China, India, Nigeria, South Africa are not emerging, in any meaningful sense. Just as they are not 'developing' in any sense outside of the economic relativity of richer nations. If Nature withholds her sceptre, and cannot endorse the imperative of growth, the typography of emerging markets and Comtean trajectories, what does that augur for the sanctity of neoliberalism? Even more pressingly, what socio-politico-economic imaginaries have we lost to allow the foreground of frenzied commercialism and social hierarchy to matter?

As Luther Standing Bear, the Lakota elder, reminds us in his description of an *original wisdom* and understanding that was trampled over by Western cannibalism, linear ideals of progress, and a rationalism that could not see other ontologies as part of a broader emergence:

We did not think of the great open plains, the beautiful rolling hills, and the winding streams with tangled growth as 'wild'. Only to the White man was nature a 'wilderness' and only to him was the land infested by 'wild' animals and 'savage' people. To us it was tame. Earth was bountiful and we were surrounded with the blessings of the Great Mystery. Not until the hairy man from the east came and with brutal frenzy heaped injustices upon us and the families we loved was it 'wild' for us. When the very animals of the forest began fleeing; from his approach, then it was that for us the 'wild west' began. (Standing Bear, 2006: 22-23)

Perhaps we have permanently forgotten our other ways of knowing. Yet there seem to be entangled possibilities in the idea of ancient futures; one can hear their comforting murmurings on a quiet day. One may wonder whether the act of invoking the plurality of tongues and myths may itself lead to emerging pathways to different political imaginaries, without the fixity of linear time.

Surely, if the monster is us there must be an alternative (with apologies to Mrs. Thatcher). The neoliberal capitalist perspective of emergence as progress defined by GDP growth, technological advancement and material accumulation is laden with commodification, extraction and self-interest. Not only does it talk about 'emerging markets', it also contains the idea that history is the gradual mobilization of Nature for anthropocentric uses, and that commodity production is the most beneficial aim of the collective politico-economic system.

How can we recast our gaze, as the Russian Cosmists did when they described humans not as earthlings, but as 'heaven dwellers' (Young, 2013)? The emerging onto-epistemology from quantum physics to evolutionary psychology is showing us the severe limitations of our rationalistic, dualistic, Enlightenment model.

When we accept the simultaneous entanglement and limitations to traditional ontologies and epistemological world views, we may conclude that we will not arrive at the 'base theorem' or the final stream of logic; no political vision will be

entirely adequate. Even ‘enemies’ are part of a tapestry of becoming. There is no end point, no underlying motif, no bass tone, no hidden embroidery around which we must stitch. There is a rich spontaneity that froths at the edge of action, and accounting for this beyond the simple tropes of choice and intentionality is a matter of justice. A deepening of responsibility might look like deep reflection or it might look like communing with five grams of dried magic mushrooms in a dark room. And/or it may look like an emerging form of revolution surpassing all fixed notions of linearity.

Even among the intra-actions, the decision is not between action and non-action, the vehement activist or the passive Buddhist. These dualities no longer serve us. We can simultaneously recognize the pain of the world in non-amputation and full feeling, while delegitimizing the capitalist system and overthrowing the imperialist tendencies of in/humanity that is within us all. Action is the movement of multitudes and multiple realities; it is not a solitary act. We can reclaim the colonized notion of emergence and engage in an autopoietic dance of creation and surrender, action and reflection, intra-action and observation.

Pyotr Kropotkin, the formative anarchist philosopher, reminds us that just as our crisis is not simply a political crisis, but a metaphysical crisis, the coming shifts and desire for radical change will not be one-dimensional, but rather intra-relational:

One feels the inevitability of a revolution, vast, implacable, whose role will be not merely to throw down the political ladder that sustains the rule of the few through cunning, intrigue and lies, but also to stir up the intellectual and moral life of society, shake it out of its torpor, reshape our moral life and set blowing in the midst of the low and paltry passions that occupy us now the livening wind of noble passions, great impulses and generous dedications. (Kropotkin, 1992/1879-1882: 7)

This brings us back to the deafening banality of COP. Although the negotiators in Paris do not represent the best interests of the planet in any meaningful sense (how could they when they are intoxicated with the memetic virus of growth-at-all-costs?), we are still entangled with their cosmologies and their pathologies. We are enmeshed in a system of late-stage capitalism based on profit-maximization, detached individualism, and deadly consumerist logic. Yet there is no ‘solution’ in the tidy activist sense. No final answers.

As the great anarchist mystic and trickster spirit, Hakim Bey, boldly claims:

In one sense, the sons and daughters of Gaia have never left the Paleolithic; in another sense, all the perfections of the future are already ours. Only insurrection will ‘solve’ this paradox – only the uprising against false consciousness in both ourselves and others will sweep away the technology of oppression and the poverty of the Spectacle. In this battle a painted mask or shaman’s rattle may prove as vital

as the seizing of a communications satellite or secret computer network. (Bey, 2003: 46)

The Biblical text tells the story of a famous ziggurat, the so-called Tower of Babel (Genesis 11:9), as a mythical insurgency of men against the feminine profligacy of Nature. In the wake of an Earth-shattering deluge, with men still trembling from the echoes of such a devastation, it was decided that a tower was to be built – to mitigate (a favourite word of climate change proceedings!) the impact of unsavoury weather:

Come, let's make bricks and bake them thoroughly'; then they said, 'Come, let us build ourselves a city, with a tower that reaches to the heavens, so that we may make a name for ourselves; otherwise we will be scattered over the face of the whole earth. (Genesis 11:4)

Their hopes for ascendancy were summarily dashed when God introduced confusion and turbulence to their project:

Now the whole world had one language and a common speech... [But the Lord said] Come, let us go down and confuse their language so they will not understand each other. (*ibid.* 11: 7)

The escape from telluric grounds, the attempt to instigate a less than radical openness to the world and enclose the modern self away from its spontaneous entanglement with the *outside*, was thus halted by confused speech. By trouble.

In a time when moral lessons are eschewed with postmodern cynicism, perhaps there is something ethically vital to note here: it is that Nature resists fixity or the foundational stability of emergence-by-commercialization. No matter how much we try to escape it, we are part of a cacophonous parliament of things.

As we recognize emergence as entanglement, as trouble, as a haptic involution, and we see modernity as some kind of epistemic incarceration from the wildness of things – as a practice of denying the significance of our already in-touchness, we will create more room for emerging counter-narratives and mythologies – for the multiple primacies of psilocybin and the shaman's rattle and our grandmother's epistemology and the soft embrace of other dimensional beings, diminishing the monologue of political emergence as correspondent with an inherent scheme of things. Only then we will create the capacity to activate 'junk DNA', surrender to diffraction, embrace a politics of not-knowing and birth emergent futures worth living.

references

- Al Jazeera (2015) 'Putin: Turkey will regret jet shooting "more than once"', *Al Jazeera*, 4 December. [<http://www.aljazeera.com/news/2015/12/putin-turkey-regret-downing-jet-151203071324354.html>]
- Barad, K. (2007) *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Durham, NC: Duke University Press.
- Barad, K. (2010) 'Quantum entanglements and hauntological relations of inheritance: Discontinuities, spacetime enfoldings, and justice-to-come', *Derrida Today*, 3(2): 240-268.
- Barad, K. (2012) 'On touching – The inhuman that therefore I am', in S. Witzgall (ed.) *Power of material/Politics of materiality*. Zurich: Diaphenes Press.
- Bard, A. and J. Söderqvist (2014) *Syntheism: Creating God in the internet age*. Tyresö: Stockholm Text.
- Bey, H. (2003) *TAZ: Temporary autonomous zones: Ontological anarchy, poetic terrorism*. New York: Autonomedia.
- Darley, J. and C. Batson (1973) 'From Jerusalem to Jericho: A study of situational and dispositional variables in helping behavior', *Journal of Personality and Social Psychology*, 27(1): 100-108.
- Derrida, J. (1978) *Writing and difference*. Chicago: The University of Chicago Press.
- Doyle, M.R. (2015) 'What do we touch when we visualize data?', *Contour*. [<http://contour.epfl.ch/?p=536&lang=en>]
- Hamilton, K. (2016) 'Two degrees of climate change and a triple bottom line'. [<https://www.linkedin.com/pulse/two-degrees-climate-change-triple-bottom-line-kimberly-hamilton>]
- Hancock, G. (1995) *Fingerprints of the Gods*. New York: Three Rivers Press.
- Haraway, D. (1991) 'The promise of monsters: A regenerative politics for inappropriate/d others', in L. Grossberg, C. Nelson and P. Treichler (eds.) *Cultural studies*. New York: Routledge.
- Howard, D. (2009) 'Revisiting the Einstein-Bohr dialogue', *Science2.0*. [http://www.science20.com/don_howard/revisiting_einsteinbohr_dialogue]
- Johnsen, C.G., M. Nelund, L. Olaison and B.M. Sørensen (eds.) (2017) 'Organizing for the post-growth economy', *ephemera*, 17(1): 1-21.
- Kropotkin, P. (1992/1879-1882) *Words of a rebel*. Quebec, Canada: Black Rose Books.

- Lanza, R. (2010) *Biocentrism: How life and consciousness are the keys to understanding the true nature of the universe*. Dallas, TX: BenBella Books.
- Lash, J. (2006) *Not in His image: Gnostic vision, sacred ecology, and the future of belief*. Vermont: Chelsea Green Publishing.
- McGreal, S. (2014) 'DMT: Gateway to reality, fantasy or what?', *Psychology Today*, 30 August. [<https://www.psychologytoday.com/blog/unique-everybody-else/201408/dmt-gateway-reality-fantasy-or-what>]
- McKenna, T. (1994) *True hallucinations*. New York: HarperOne.
- McKenna, T. (2006) 'Podcast 027 – "In the valley of novelty" (Part 1)'. [<https://psychedelicsalon.com/podcast-027-in-the-valley-of-novelty-part-1/>]
- Nørretranders, T. (1998) *The user illusion: Cutting consciousness down to size*. London: Penguin Books.
- Romm, C. (2015) 'Rethinking one of psychology's most infamous experiments', *The Atlantic*, 28 January. [<http://www.theatlantic.com/health/archive/2015/01/rethinking-one-of-psychologys-most-infamous-experiments/384913/>]
- Sagan, D. (2011) 'The human is more than human: Interspecies communities and the new "facts of life"', *Cultural Anthropology*, 24 April. [<https://culanth.org/fieldsights/228-the-human-is-more-than-human-interspecies-communities-and-the-new-facts-of-life>]
- Shotter, J. (2014) 'Agential realism, social constructionism, and our living relations to our surroundings: Sensing similarities rather than seeing patterns', *Theory and Psychology*, 24(3): 305-325.
- Standing Bear, L. (2006) *Land of the spotted eagle*. Canada: Bison Books.
- Strassman, R. (2001) *DMT: The spirit molecule*. New York: Park Street Press.
- Watts, A. (2014) 'The real you'. [<https://www.youtube.com/watch?v=IGERLlhUr2o>]
- Young, G.M. (2013) 'Navigating spaceship Earth: Four Russian cosmists', *Quest*, 101(3): 105-108, 120.

the authors

Bayo Akomolafe holds a PhD in Clinical Psychology from Covenant University in Nigeria. He is author and editor of *We will tell our own story* with Molefi Kete Asante and Augustine Nwoye and *These wilds beyond our fences: Letters to my daughter on humanity's search for home*

Bayo Akomolafe and Alnoor Ladha Perverse particles, entangled monsters and psychedelic pilgrimages

(in press; North Atlantic Books, 2017). He sits on the boards of the Mutual Aid Network (USA) and the Real Economy Lab (UK).

Bayo lives in Chennai India with his wife EJ and their two children Alethea and Kyah.

Email: bayo@bayoakomolafe.net

Alnoor Ladha's work focuses on the intersection of political organizing, systems thinking, storytelling, technology and the decentralization of power. He is a founding member and the Executive Director of *The rules (/TR)*, a global network of activists, organizers, designers, coders, researchers, writers and others dedicated to changing the rules that create inequality, poverty and climate change around the world.

He is a Board Member of Greenpeace International USA and the P2P Foundation, a leading think-tank for commons-based alternatives. Alnoor holds an MSc in Philosophy and Public Policy from the London School of Economics.

Email: Alnoor.ladha@gmail.com