

# LIFE MATTERS

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*'What happens when human exceptionalism and bounded individualism, those old saws of Western philosophy and political economics, become unthinkable in the best sciences, whether natural or social? Seriously unthinkable: not available to think with.'*  
Donna Haraway, 'Tentacular Thinking: Anthropocene, Capitalocene, Chthulucene', *e-flux Journal*, no 75 (September 2016).

We are living in an age of revolutionary re-vitalism – when broadly accepted ideas of what constitutes life are being challenged. Common understandings of consciousness, intelligence and matter, which were central to Western definitions of life, are being overturned and a boundless array of new possibilities is opening up.

Troika's ecology of ever-evolving artworks, known as *Untertage*, is an exploration of the alternate possibilities that welcome a reinterpretation of life and vitality. The project is playfully premised on an imaginary that suggests there is another consciousness and intelligence shaping our world – namely, the natural mineral and crystal, Salt.<sup>1</sup> *Untertage* explores the evolution of Salt and its agency, from its various physical manifestations to its role in driving humanity towards a shared apocalyptic future. The project highlights Salt's infiltration into the very concepts humans use to assert their own will and position within nature's hierarchy. Throughout the series of works pre-

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sented in *Untertage*, Troika questions the forces that give life to matter, what is intelligent life and consciousness, what is artificial intelligence, and where human beings' beliefs, knowledge and understanding sit within these enquiries.

The floor sculpture, *Pile of Salt* is part of Troika's exploration of salt crystals as a driving force in humanity's evolutionary history. A pyramid of salt conjoins with a cone of salt, both emerging as if from each other, both perfectly formed and yet still distinct in their individual geometry: together (a)part. It is one of the few times in the *Untertage* project where salt appears in its crystal form. The idea behind the work is that salt has gifted us, among many other things, mathematics and geometry. For example, when salt is poured it arranges itself, as if by its own design, into a perfect conical pile. For *Pile of Salt*, salt is poured freely onto an aluminium square and circle base, and arranges, due to the laws of physics, into a pyramid and cone respectively. This work hints at an inherent order beyond human control; it is partly how Troika unearths the hidden history of Salt's covert takeover of human existence, showing how the mineral possesses a hidden agency that humankind has never noticed – until now.

This conceptualisation of a world in which Salt has made a grand takeover resonates, to a certain extent, with the philosophy of vital materialism. This philosophy, coined by Jane Bennett, introduces the idea that all existing things, whether sentient or not, human or rock, active or inert, have equal validity on our planet, both materially and virtually.<sup>2</sup> Positioning Salt as an active agent fits with this perspective in

<sup>1</sup> Salt is the ultimate insider/outsider. It exists as a crystal or rock outside of us, is eaten by us, yet already exists inside us naturally. It occupies spaces in an endless exchange of being, forming and reforming. It is both geology and biology, rock/crystal and human. It is also a mineral that is soluble and can exist either as a liquid or as a solid rock and in crystal form. Its very existence is based on transmutation.

<sup>2</sup> Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010). Scientific discoveries are beginning to show that non-sentient beings have their own systems of intelligence: for example, trees and fungi can communicate with one other.

which all matter is endlessly intra- and interacting, and entangled, affecting one another in multiple ways.<sup>3</sup> After all, as particle physics shows us, everything material in our world came from the same source – the moments after the ‘Big Bang’ 13.8 billion years ago when matter won over antimatter, and the material world in which we exist came into being. We are all intimately connected in a network of ‘beingness’ and it is only we humans who have created a false hierarchy that isolates and elevates humanity above other living and non-living entities. This false hierarchy is ultimately detrimental to the natural world and our connection with it. According to Bennett:

‘The image of dead or thoroughly instrumentalized matter feeds human hubris and our earth-destroying fantasies of conquest and consumption. It does so by preventing us from detecting (seeing, hearing, smelling, tasting and feeling) a fuller range of the nonhuman powers circulating around and within human bodies. [...] The figure of an intrinsically inanimate matter may be one of the impediments to the emergence of more ecological and more materially sustainable models of production and consumption.’<sup>4</sup>

This destructive human drive features clearly in the series *Obsolete Landscapes*, which highlights the material impact of extractive technology created by humans. *Obsolete Landscapes* draws on the iconography of Apple’s operating systems, which borrow their names and desktop wallpaper images from North American landscapes of mountains, deserts, islands

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and coastlines – Yosemite 10.10, El Capitan 10.11, Sierra 10.12, High Sierra 10.13, Mojave 10.14, Catalina 10.15 and so on. Here, nature is reduced to a marketing tool in order to extract money from consumers of the product, a tactic that is compounded by the operating systems’ built-in obsolescence. *Obsolete Landscapes* renders these iconographic landscapes featureless by cutting the land and water masses out of the wallpaper photos, so that they are reduced to mere outlines, leaving only the different skies, which are printed on aluminium panels: the landscapes are in effect ghosted. These large panels are then vertically arranged and stacked on their sides, so that they lean against the wall. They are like discarded jigsaw pieces, waiting to be arranged in many different configurations, but never joining up to make a whole.

The series also invites viewers to consider the landscape genre on a broader scale. The word ‘landscape’, from the Dutch *landschap*, was used by artists in the sixteenth century to describe paintings that featured the countryside as their primary subject. The word was then adopted by geographers. So the very notion of the ‘landscape’ was created and framed by artists, and is an artificial, human construct that denotes a particular perspective of nature as a distanced object to be studied outside ourselves.

The artifice of the landscape is made all the more apparent in *Obsolete Landscapes* and is marked by the very absence of what viewers expect to see in an image of, for example, Yosemite National Park. Without nature’s resources, tech companies like Apple would not exist, since they are founded upon silicon-based hardware: as media-theorist and art histori-

<sup>3</sup> One of the main influences on vital materialism and the way in which matter intra-acts with and influences each other is outlined in the seminal book by the physicist-turned-philosopher Karen Barad: *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007).

<sup>4</sup> Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham: Duke University Press, 2010).

an Jussi Parikka writes, ‘Computers are a crystallization of past two hundred to three hundred years of scientific and technological development, geological insights, and geophysical affordances.’<sup>5</sup> Furthermore, the development of technology is never divorced from the consequences it has on our planet; it is created by the extraction and exploitation of natural resources that are then bought and sold at Earth’s expense, despite the risk of depletion.

The multimedia installation *Terminal Beach* presents the consequences of such extractive industries via the image of a bleak, desolate landscape, in which a curious, circuitous form of agency is at play. What appears to be the last tree on Earth is relentlessly hacked at by an axe-wielding ape-like KUKA robot covered in shaggy fur. The fur, which swings and sways with every stroke of the axe, bestows upon the robot a clownish appearance – a playful aesthetic that directly contrasts with its repetitively destructive and deadly activity. Troika trained the robot featured in the animation using AI and motion capture, digitising the action of chopping down the tree. Thus, real life and virtual life are conflated – and the robot is doomed to fulfil humankind’s desire to extract resources. As Bruno Latour says, technology is an extension of the human – it is not separate from it.<sup>6</sup> Yet *Untertage*’s narrative centres around Salt’s domination of human will, revealing human intelligence as

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but an extension of Salt’s, and thereby of technology as well. To turn to Donna Haraway’s 1985 ‘A Cyborg Manifesto’: the cybernetic organism is defined as ‘a hybrid of machine and organism, a creature of social reality as well as a creature of fiction’.<sup>7</sup> *Untertage* seems to question when the fiction begins.

The acoustic backdrop to the piece mirrors the uncanny animal-like appearance of the KUKA robot. The sounds from the future bear a resemblance to bird calls, but they are in reality a collage of Earth’s natural radio emissions – including signals generated by lightning strikes and geomagnetic storms driven by the Sun – captured by the British Antarctic Survey at its Halley Research Station on the Brunt Ice Shelf in Antarctica. These recordings are normally used to study the science of space weather storms and understand the potential impact of space weather on Earth’s climate system.<sup>8</sup> Both interpreting the robot as ape-like and the human ear’s willingness to hear weather systems as biological sounds speak to our tendency to zoo- and anthropomorphise non-living entities suspected of agency. It’s a characteristic explored in nineteenth-century debates about vitalism and the ‘spark’ of life; an idea that went against the mechanistic view of the universe promoted by Newtonian physics. These debates were drawn together in Mary Shelley’s 1818 horror novel *Frankenstein* in which a corpse is sewn together using the body parts of others and is given

5 Jussi Parikka, *A Geology of Media* (Minneapolis: University of Minnesota Press, 2015).

6 Bruno Latour, ‘Love Your Monsters: Why We Must Care For Our Technologies As We Do Our Children’, *Breakthrough Journal*, 2 (Fall 2011).

7 Donna Haraway, ‘A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century’, *Socialist Review*, 15, no 80 (1985).

8 Nigel P. Meredith, ‘Turning the sounds of space into art’, *Astronomy & Geophysics*, 60, no 2 (April 2019). During Troika’s research project with Cambridge University they met Space Weather Research scientist Dr. Nigel Meredith from British Antarctic Survey who shared his findings with them.

‘the spark of life’ by Dr. Victor Frankenstein; a monstrous being is brought into existence. In much the same way as Frankenstein’s monster was used as a vehicle to play out ideas of consciousness, morality, gender and the virtue of the human soul, *Untertage* is an evolving body of work through which to contemplate and critique what constitutes intelligent life.

Troika takes this ‘spark of life’ and applies it to the process of making the series *Solid State Fiction*, which is inspired by ‘chemical gardens’ that were first observed and described by the alchemist and chemist Johan Rudolph Glauber in 1646. When a metal salt is added to a liquid sodium silicate solution, the salt crystals appear to move as if blown by invisible winds – the inorganic seemingly blending with the organic, forming miniature landscapes of plant-like structures.<sup>9</sup> In the nineteenth century, crystals were believed to hold the clue to the formation of organic life.<sup>10</sup> Indeed, the German philosopher Friedrich Schelling, who was a leading proponent of German idealism, known as Naturphilosophie (nature-philosophy), was so convinced that crystals were part of the secret of life that he went so far as to posit that diamonds were in fact an example of carbon coming to its senses via crystallisation.<sup>11</sup>

For *Solid State Fiction*, Troika made chemical gardens, inside which crystals were grown, then photographed using focus stacking, a method commonly used in microscopy.<sup>12</sup> Once photographed, the colours and forms of the crystal growths are then

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digitally manipulated and printed onto semi-transparent, veil-like sheets of fabrics. Hung from the ceiling, the images of the crystal structures present as vast, ghostly, submerged landscapes.

In this sense, *Solid State Fiction* draws attention to how, in the twenty-first century, our ideas of scale have been totally transformed. The way we look at, and may even encounter landscapes for the first time, is often through the medium of technology, which renders them contextless. This is very different from the Romantic era (1800–50), when the human body was considered both the scale and tool by which landscapes were perceived, experienced and measured. The use of microscopy to photograph the chemical gardens removes and detaches them from their true scale, to suggest they are much larger territories than they are.

The artificial landscapes of *Solid State Fiction* are beguiling, and there is an ambiguity about their beauty that suggests a liminal, in-between state of being. *Solid State Fiction* hints that Salt no longer occupies and manipulates a world that still has a semblance of organic life in it. Salt may have created these fictional landscapes via silicon-based technology, but where do the landscapes – and indeed Salt – go from here?

*Untertage* presents an alternative history of the world, and a future in which life – indeed reality – is no longer defined by human consciousness. The philosopher Timothy Morton argues that ‘you are already a symbiotic being entangled with other symbiotic

<sup>9</sup> Mark Cheetham writes, ‘Crystals are compelling because they are indexical of existential questions, poised at the crossing point of life and death. While their perfect forms appear lifeless, they suggest life because they “grow” and move.’ Mark A. Cheetham, *Landscape into Eco Art: Articulations of Nature Since the '60s* (University Park: Penn State University Press, 2010).

<sup>10</sup> Esther Leslie, *Liquid Crystals: The Science and Art of a Fluid Form* (London: Reaktion Books, 2016). Leslie points out that the theory of crystals as a source of life stretched into the twentieth century; even Erwin Schrödinger (of Schrödinger’s cat fame) voiced a theory in his 1943 Dublin lectures (‘What is Life?’, published 1944) that an ‘aperiodic crystal’ was a part of the living cell that carried genetic information,

which would inspire later insights into DNA.

<sup>11</sup> Friedrich Schelling, in his doctrine known as Naturphilosophie, defined the entire natural world as a system of invisible powers and energies, including spiritual energy, and all physical objects ‘aspired to become something higher’. Richard Holmes, *The Age of Wonder: How the Romantic Generation Discovered the Beauty and Terror of Science* (New York: Harper Press, 2009).

<sup>12</sup> Solid-state is a common descriptor used to refer to electronic components, devices and systems based entirely on semiconductor materials such as silicon, germanium or gallium arsenide.

beings... you are breathing air, your bacterial microbiome is humming away... because you are ecological.’<sup>13</sup> This interconnectedness, which breaks down categories and boundaries is reflected in *Untertage*. As demonstrated by Troika’s work, art is also, arguably, alchemical – it challenges the boundaries between disciplines and belief systems, engaging with philosophy, science, technology, as much as the spiritual, sensual, magical and imaginative. During the Enlightenment, alchemy – considered irrational – was banished from the sciences, which as a whole favoured objectivity and systems of logic.<sup>14</sup> Yet alchemy laid the groundwork for philosophy and the natural sciences, and sought to reveal the mysteries of life by exploring different dimensions both inside and outside the physical realm. In this sense, Troika presents a new perspective on the world’s ecosystem – it takes the visible and invisible worlds and puts them into the crucible of its imagination to forge new meanings, new questions and new narratives, in which humans’ limited understanding of reality is uncovered. *Untertage* reveals that Salt is beneath all that we believe to be real in our world. Salt is the catalyst for humanity’s motivations. When will we realise that we’re not the ones who are in control after all?

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<sup>13</sup> Timothy Morton, *All Art Is Ecological* (London: Penguin Classics, 2021)

<sup>14</sup> For a full explanation about alchemy and how it was banished to the margins by the rise of science to create a more controllable version of reality, see Federico Campagna’s *Technic and Magic: The Reconstruction of Reality* (Bloomsbury Academic, 2018).