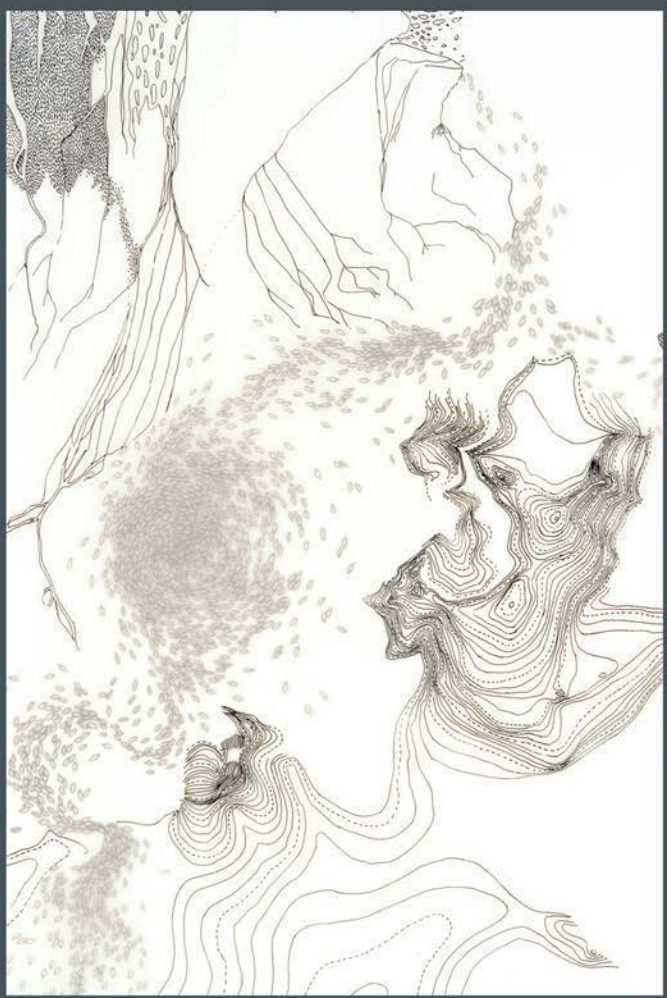
Grzegorz Czemiel

Speculative Cartographies

Material Ecopoetics and Weird Mappings



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Introduction: Ship of Fools

In Alain Badiou's "hypertranslation" of Plato's *Republic*, masterfully brought into English by Susan Spitzer, not only does the French philosopher move the dialogue's stage to contemporary reality but also updates the imagery and references, adapting them to the twenty-first century.[1] It features mentions of figures like Marx, Lacan and Emily Dickinson, while examples are drawn from television and the internet. Among these, one particular image strikes an important chord in light of the ongoing climate crisis.[2] In the original version, one of the parabolic stories told by Socrates concerns a ship that metaphorically stands for Athenian democracy, an image representative of the "ship of state" convention widespread in Greek poetry at the time.[3] The point is that the shipowner, who is ailing yet manages to keep the vessel afloat, yields before a rebel group of mariners who think themselves worthy of taking the helm but in reality have no idea what they are doing, confusing the position of power with that of knowledge. Plato's vignette is set within broader discussion of political philosophy as outlined in Book Six, exemplifying his contempt for direct democracy driven by emotion and demagoguery. Badiou's rendition further elaborates on this image, expanding it and remodeling certain vital details.

To begin with, the "ship of state" is translated as "an oil tanker" that is further afflicted by an additional problem: "a hole in the oil tank, so the ship was leaving a big trail of oil behind it"; the ensuing brutal mutiny turns the vessel into a debauched "opium den, a saloon, and a brothel," with everyone's attention fo-

1 Susan Spitzer, "Translator's Preface," in Alain Badiou, *Plato's Republic. A Dialogue in Sixteen Chapters, with a Prologue and an Epilogue*, trans. Susan Spitzer (Cambridge: Polity Press, 2012), xxiv.

2 See: *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, eds. H. Lee and J. Romero (Geneva: IPCC, 2023), https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf.

3 Roger Brock, *Greek Political Imagery from Homer to Aristotle* (London: Bloomsbury, 2013), 156.

cused on the short-term proceeds they may reap by selling the cargo at the nearest port; then, Badiou's description zooms out, depicting the oil tanker as it "zigzagged […] like Rimbaud's drunken boat" and "ended up running aground in a filthy bay, and its hull burst and the viscous oil killed thousands of birds up and down the coast."[4] The degree of detail added here by Badiou in comparison with Plato's ironic model is quite striking, although such additions are plentiful in the French hypertranslation. In this particular instance, however, the introduction of oil as protagonist reconfigures the political positions in the debate, which must now account for an ecological crisis that is unfolding not just as a backdrop to politics but also as a significant factor in it, bringing the non-human world into discussion, even though the hapless crew certainly have no idea about the consequences of their actions and refuse to take stock of the above ramifications in their composition of the political field. Badiou's modernization of this image thus emerges as far more than mere redecoration. Just like Plato in his time, Badiou breathes new life into a convention that resonates with today's concerns, rekindling interest in philosophy as a domain that keeps track of vital developments suggested in the discussed image: global oil trade, organization of labor, forms of government, and anthropogenic environmental catastrophes. Still, it is the figure of the "pilot" or "navigator" that emerges as crucial in today's context. The drunken sailors have neither the knowledge and navigational skills, nor the vaguest idea of any course they may take otherwise than to immediately push for profit. "No need to have any ideas," Badiou concludes, "Dangerous, even."[5]

The sense of destabilization and loss of navigational imagination aboard the "ship of state" in the face of socio-political storms also emerged in the late mediaeval period, as evidenced in two works: the painting *The Ship of Fools* (ca 1490–1500) by Hieronymus Bosch and Sebastian Brant's long poem *Das Narrenschiff* (1494; English rendition by Alexander Barclay, titled *The Shyp of Folys of the Worlde*, was published in 1509). As Michel Foucault notes in *Madness and Civilization*, these works are expressive of the "great disquiet, suddenly dawning on the horizon of European culture at the end of the Middle Ages"; in his interpretation, the lively mélange of folly and recklessness that suffuse both the painting and the poem is driven by the "ambiguity" of madness: "menace and mockery, the dizzying unreason of the world, and the feeble ridicule of men."[6] Effectually, the ship of fools turns into a much larger metaphor – no longer just a city-state, it encompasses all of humanity and, by extension, the entire world, as

4 Badiou, *Plato's Republic*, 185 (484B-502C).
5 Badiou, *Plato's Republic*, 185 (484B-502C).
6 Michel Foucault, "Stultifera Navis," in *Madness and Civilization. A History of Insanity in the Age of Reason*, trans. Richard Howard (London: Routledge, 2005), 11.

is confirmed by Bosch's pioneering ideas of the global, evidenced for example by *The Garden of Earthly Delights* in closed state (1490–1510), where the outer panels present a spherical world in the midst of creation.[7] Floating through vivid dreams reminiscent of the "amazing Floridas" in Rimbaud's *Drunken Boat*, not polluted by oil spillage yet in 1871, the world is heading towards catastrophe in a stupor, or "delirium […] fiercer than alcohol."[8] Rimbaud's vessel is particularly afflicted by disorientation as it is "tangled in the hair of bights, / Hurled high by hurricanes through birdless space, […] half-drowned, half-crazed."[9] This state seems to have particularly affected navigational skills: not only the technically understood nautical competence but also the philosophical vision of possible sustainable courses and the discursive tools to communicate them in relatable terms. It is as if a thick fog descended on Buckminster Fuller's "fantastically real" Spaceship Earth[10]; however, radars are showing no apparent danger despite dire warnings issued by the likes of Socrates.

In its many incarnations, the ship of fools theme reveals the importance of broader nautical imagination, which is premised on map-making and map-reading as well as prudent navigation and precognition. A boat, Foucault notes, is "a place without a place […] given over to the infinity of the sea"; during its voyages, "it goes as far as the colonies in search of the most precious treasures they conceal in their gardens."[11] The logic of conquest and exploitation appears to be encapsulated in the figure of the ship, which was in fact a laboratory for technology, a vehicle of financial growth, and a symbolic reservoir of beliefs about progress, famously expressed by Tennyson in the 1833 dramatic monologue *Ulysses* as the "spirit yearning in desire / To follow knowledge like a sinking star, / Beyond the utmost bound of human thought."[12] Such ideas of going beyond oneself and never stopping fueled the imperial ambitions of the British Empire, which was able to impose global naval domination in the nineteenth century. This model continues to shape the political imagination, even if mostly on the unconscious level, despite the fact that already towards the end of the nineteenth century cautions were made regarding this by Henry George and Walt

7 Simon Ferdinand, "Being in the Globe: Hieronymus Bosch's *The Garden of Earthly Delights* at the Fringes of Modern Globalism," in *Other Globes. Past and Peripheral Imaginations of Globalization*, eds. Simon Ferdinand, Irene Villaescusa-Illán, and Esther Peeren (Cham: Palgrave Macmillan), 63.

8 Arthur Rimbaud, "The Drunken Boat," in *Collected Poems*, trans. Martin Sorrell (Oxford: Oxford University Press, 2001), 127.

9 Rimbaud, "The Drunken Boat," 129.

10 Richard Buckminster Fuller, *Operating Manual for Spaceship Earth* (Zürich: Lars Müller, 2008), 14.

11 Michel Foucault, "Of Other Spaces," trans. Jay Miskowiec, *Diacritics* 16.1 (1986), 27.

12 Alfred, Lord Tennyson, "Ulysses" (written in 1833, published in 1842), in *An Anthology*, ed. F.L. Lucas (Cambridge: Cambridge University Press, 2014), 87.

Whitman, both of whom underscored the fact that this kind of appropriative mindset, expressed as "This is mine!"[13], runs counter to the fundamentally shared future, since – as one of Whitman's songs articulates it – "All Peoples of the globe together sail, sail the same voyage, / Are bound to the same destination."[14] As George Orwell put it in 1937, elaborating on the concept of a "raft sailing through space," all aboard can be provided for but this ultimately necessitates large-scale cooperation, which "no one could possibly fail to accept […] unless he had some corrupt motive for clinging to the present system."[15] The described clash between imperial expansionism and sustainability-oriented interventions in it makes clear that the questions of material scarcity and imaginative framing are bound up together and have to be jointly examined.

Thus, following in the footsteps of Badiou, it is possible to extend Foucault's contention about the ship as the storehouse of colonial desires, supplementing it with the socio-political ramifications of globalized capitalism and questions of pollution, loss of biodiversity and climate change, as Badiou does in his version of Plato's *Republic*, which traces the problem to the selfishness identified by George. In an exchange with Amantha, who replaces Adeimantus, Socrates bemoans the fact that "[c]apitalism's harnessing of collective energies everywhere encourages selfish impulses and their loathsome sterility."[16] In this light, the oil tanker emerges as the perfect image of the failures of global capitalism, which has proven short-sighted in planetary perspective, exacerbating global inequality and causing runaway climate change. One can only imagine that the revelers from Bosch's painting might become, in Badiou's prism, start-up executives and financiers, or indulgent consumers and heedless gadget-heads – all playing politics in the "constitutional supermarket" where one can vote even whether climate change really exists.[17] In the New Age of Discovery, which began with the digital revolution, we would be collectively as clueless as ever in the face of global challenges. As American writer William Gibson succinctly put it, "there are no maps for these territories,"[18] despite the world map no longer enticing explorers with blank spaces. We have still yet to fathom the implications of the technologies and forms of governance adopted over the last two centuries, albeit considering them at hitherto unthought scales. For this reason, it is paramount to follow

13 Henry George, *Progress and Poverty* (1879), Chapter 26: "The Injustice of Private Property in Land," https://www.henrygeorge.org/pchp26.htm.
14 Walt Whitman, "One Thought Ever at the Fore," in *The Complete Writings of Walt Whitman* (New York: Putnam's Sons, 1902), 32.
15 George Orwell, *The Road to Wigan Pier* (London: Penguin, 2001), eBook, 258–259.
16 Badiou, *Plato's Republic*, 126 (412C-434D).
17 Badiou, *Plato's Republic*, 268 (555B-573B).
18 Phrase from a documentary film devoted to William Gibson, titled *No Maps For These Territories*, directed by Mark Neale (2000).

Gibson and other writers or artists who challenge representations of these developments "[b]y charting their own maps of such moments of change" so as to "draw attention to those moments and passages in which the otherwise extremely durable fabric of new cartographic regimes tatter and fray."[19] Importantly then, today's uncharted lands do not just pertain to physical geography but to climate and life sciences and especially the broader political consequences of humanity's entanglement in the natural and digital environment. This can be elaborated in greater detail by turning to two works that exemplify the twenty-first century resurgence of the ship of fools: the novella *Paradises Lost* by Ursula K. Le Guin (2002), and Allan Sekula's art project *Ship of Fools / The Dockers' Museum* (2010–2013).

An important forerunner of environmental awareness, Le Guin demonstrates in her work that speculative literature has become particularly well-suited for putting our representations of reality under scrutiny in the effort "to broaden the sense of reality, and to free it from the opposition between possible and impossible."[20] Owing to its inherently transgressive character, premised on defamiliarization of what we take for granted, her work does not replicate reality but "traces the limits of its epistemological and ontological frame."[21] Just like Brant and Bosch, Le Guin creates an anamorphic, or transformative account of modernity, challenging its hierarchy of values and rules of visibility, especially with regard to what today's culture makes seen or unseen: which connections are foregrounded and which are rendered invisible.[22] By adopting an alternative perspective, or looking at the world through a distorted lens, science-fiction offers much more than an escapist opportunity to distance oneself from contemporary problems. It opens windows that facilitate greater engagement with reality by bringing out in metaphor that which cannot be expressed from within a certain representational regime. As Rosemary Jackson pointed out, "fantasy's proper function is to transform this world."[23] In this perspective, distortion is a means of going forward, not sideways.

Le Guin takes up this topic in her important early writer's manifesto "From Elfland to Poughkeepsie" (1973), where she juxtaposes Elfland, the fantastic

19 Karin Hoepker, "New Cartographies – New Cartographers?" in *No Maps for These Territories. Cities, Spaces, and Archaeologies of the Future in William Gibson* (Amsterdam: Rodopi, 2011), 15.

20 Isabelle Stengers, "Ursula K. Le Guin, Thinking in SF Mode," in *The Legacies of Ursula K. Le Guin. Science, Fiction, Ethics*, eds. Christopher L. Robinson, Sarah Bouttier, and Pierre-Louis Patoine (Cham: Palgrave MacMillan), 126.

21 Rosemary Jackson, *Fantasy: The Literature of Subversion* (London: Routledge, 2009), 14.

22 On the anamorphic function of science fiction see: Matthew Beaumont, "The Anamorphic Estrangements of Science Fiction," in *Red Planets: Marxism and Science Fiction*, eds. Mark Bould and China Miéville (Middletown, CT: Wesleyan University Press, 2009), 33–34.

23 Jackson, *Fantasy*, 10.

realm of imagination, with the familiar and homely Poughkeepsie. Surely, she argues, many people seek to visit Elfland while retaining the sense of control and ease they enjoy in Poughkeepsie. This would not be much different from modern tourism, where possibly challenging encounters with difference or novelty are frequently tamed by making photographs and reducing otherness to one's own categories, even if they are physically dragged the whole world over. However, Le Guin claims that although Elfland can become like Poughkeepsie, it holds much more in store by being "a game played for very high stakes"; not just a mere daydream, "it is a different approach to reality, an alternative technique for apprehending and coping with existence."[24] In this view, speculative worlds cease to be just playful reconfigurations of the same – they are indeed a real wilderness that poses many dangers yet carries revelatory and revolutionary potential.

Her 2002 short novella *Paradises Lost* can be read along these lines as a work that updates – or hypertranslates – the ship of fools theme, taking it into space, the ultimate vast expanse lying before the multi-generational crew headed for "Hsin Ti Chiu or New Earth."[25] In the novella, with the "Old Earth" ravaged by social and environmental turmoil, resettlement through space exploration remains the only reasonable option left for humanity. Just like in the story retold by Plato and Badiou, rebellion stirs onboard in the form of a spiritual movement headed by "Angels," who believe they can "travel away from the body into the realm of the soul […] free of darkness, of sin, of Earth" because as "the inhabitants of heaven" they have been "chosen for the eternal voyage."[26] In their view, the outside of the ship endangers their mystical "bliss" associated with indefinite continuation of travel through space. However, this radically dualistic, or even gnostic standpoint does not take into account the limited sustainability of such venture; after all, the ship cannot push on indeterminately and must involve the demise of its passengers at some point in the future owing to limited resources, despite technologically advanced ways of recycling matter available onboard. Such willful rejection of the future in the name of perpetuating the reality they have grown accustomed to, or imagined to be final and lacking any alternative, functions in the story as the obverse of the openness to the deep and often scary intimacy with one's own body and environment.

After eighteen-year-old Hsing is promoted by helmsman Luis to second-year navigation course, she is briefed on an important secret: the ship is due to arrive

24 Ursula K. Le Guin, "From Elfland to Poughkeepsie," in *The Language of the Night: Essays on Fantasy and Science Fiction* (New York: HarperCollins, 1992), 79.

25 Ursula K. Le Guin, "Paradises Lost," in *The Birthday of the World and Other Stories* (New York: HarperCollins, 2002), 338.

26 Le Guin, "Paradises Lost," 295.

at its destination earlier than expected[27] but this information could incite the Angels to rebellion. In effect, Hsing becomes entangled in a situation where different viewpoints come clashing and the entire ship must decide whether to continue its journey or embark on the frightening adventure of building a home on New Earth. Since generations have passed on board the vessel, terrestrial life became a mere encyclopedic entry mediated through "simulations" and "bookscreens" that offer clichéd encounters with wild animals or histories of social injustice. Most notable, however, are the remarks made by Hsing's father and his wording of the concept of terrestrial globality: "Sky was another ball that fit around the dirtball, […] but they couldn't show it in the model globe […]. It was transparent, like air. It was air. But blue. A ball of air and it was outside the dirtball."[28] In this account, the ambiguous "dirtball" reveals an uncanny sense of dread behind the grubby globe, where impure life is sustained in part by an invisible atmosphere.

When the ship's crew make their decisions – leaving only a quarter on the planet and the rest headed aboard the ship into blissful nothingness – life proves difficult and full of surprises, especially concerning the fact of sharing home with non-humans: "Creatures. There were creatures everywhere. This world was made of creatures. The only things not alive were the rocks. Everything else was alive with creatures."[29] The new dirtball is habitable yet "dirty," rife with life that continues on its own, unruly and irreducible to what seems familiar and homely. "Continuity here," Hsing observes, "did not depend on human beings."[30] And yet the prospect of making a long-term home amid these non-humans brings a certain satisfaction with it, as Luis and Hsing discover in one conversation after another day filled with toil in the dirt. "When I smashed my knee, and had to lie around," Luis says, "I decided there was no use living without delight"; Hsing is naturally suspicious that he implies a form of angelic bliss, but it is not, as Luis explains: "Bliss is a form of VU [Virtual Unreality]. No, I mean *delight*. I never knew it on the ship. Only here. Now and then. Moments of unconditional existence. Delight."[31] As the dualism of bliss is replaced with the delight of entanglement, the scene concludes with an appreciation of the brutal yet enchanting world around the pair of protagonists who chose the harder yet progressive path premised on hard-won terrestrialism: "They sat in silence for some time. The

27 A parallel can be drawn here with climate change. Cf. David I. Armstrong McKay et al., "Exceeding 1.5 °C Global Warming Could Trigger Multiple Climate Tipping Points," *Science* 377 (2022).

28 Le Guin, "Paradises Lost," 249.

29 Le Guin, "Paradises Lost," 354.

30 Le Guin, "Paradises Lost," 355.

31 Le Guin, "Paradises Lost," 361, emphasis preserved.

south wind gusted, ceased, blew softly again. It smelled of wet earth and bean-flowers."[32]

Reading this short novel as a ship-of-fools story that mirrors the folly of our time, it could be argued that the work reflects the difficult truth about our rootedness in gritty matter on a dirty ball revolving around one star in the vast Milky Way. This uncanny relationship with the Old-New Earth comes to the fore in the perspective opened by the interstellar vessel whose passengers are forced to construct their own visions of Earth-as-home and decide whether they wish to take up the challenge of place-making on a reimagined planet or slingshot themselves into the void. Le Guin carefully acknowledges how painful our intimacy with the world can be – after all, we thoroughly depend on the ecosystems we inhabit, as many recent environmental and health crises have brought to attention. At the same time, however, she emphasizes the crucial task of rethinking how we represent Earth and how we develop our relationship with it. Regardless of the difficulty inherent in this endeavor, the recomposition or retranslation of the global remains the key challenge if more sustainable modes of existence are to be developed. To echo Gibson, we need new maps for these suddenly broader territories of existence.

Such cartography, or the painstaking reassembly of relationships and dependencies that envelop Earth on global scale yet cannot be understood without tracing their various localities, also comes to the fore in the art project *Ship of Fools / The Dockers' Museum* by American photographer Allan Sekula.[33] A huge collection of photographs and objects, it premiered in 2010 as a twin exhibition that culminated Sekula's long engagement with the topic of commodity transportation and nautical travel, which goes back to the book *Fish Story* (1995) and is also the subject of films *Lottery of the Sea* (2006) and *The Forgotten Space* (2010). As part of his final project – Sekula died of cancer in 2013 – he assembled a collection of one hundred images and thirty-three photographs (*Ship of Fools*), and prepared a large selection from images, postcards and prints gathered by the artist on the topic of transportation capitalism (*Dockers' Museum*). In the latter, Sekula documents the circumnavigation of the world aboard the ship Global Mariner (1998–2000), where part of the cargo was an exhibition about the conditions endured by shipping crews. Sekula himself called the voyage "Magellan in Reverse" since his point was to demythologize the gesture of circumnavigation and reconnect it with social issues, or "to raise the question of society from the very space that is imagined to be beyond society."[34] The ship of fools theme

32 Le Guin, "Paradises Lost," 361.

33 Allan Sekula, *Ship of Fools / The Dockers' Museum*, ed. Hilde Van Gelder (Leuven: Leuven University Press, 2015).

34 After: https://ensembles.org/items/14292.

undergoes another creative transformation in this art project. As the aptly named Global Mariner traversed the world, it charted a map of global capitalism, revealing the physical connections that cannot be experienced by dealing only with one of its links, i. e. a single product or process. The flow of goods, which is rendered as swift and immaterial in mainstream accounts, can be rendered visible when ruptured, as was the case with broken supply chains during the COVID-19 pandemic and later, or when they are traced around the globe through projects like the one described here. As is the case with earlier examples of ships of fools, this one also subverts ways of representing the global. The documentation includes mostly plain photographs of people, infrastructure, ship details or churn shots, creating an amalgam of images that are not overtly "artistic" in form and can only collectively address the larger reality of transoceanic shipping. As Alberto Toscano concludes in his discussion of Sekula's "mirror of circulation," the smooth flow of goods is premised on operating in the shadows, "their resistance worn away by scientific management and logistical planning"; however, owing to "ever more intense forms of abstract domination, for which image-making stands as a crucial conduit, but also a potential choke-point," the technique adopted by Sekula succeeds in "excavating the archives of exploitation while patiently composing atlases of resistance."[35] According to Sally Stein, the artist's widow, Sekula's archival practice questions institutional forms of knowledge, specifically the colonial form of the atlas; as he explained in his commentary to the work of Susan Meiselas, "the point here is not to take the world upon one's shoulders, but to crouch down to the earth, and dig."[36] By remaining wary of these distinctions, Sekula manages to counteract the naturalization of capital that follows from enshrining it in the form of atlas. Instead, he brings to the fore the capital's skeletal infrastructure – the physical routes and operations that involve human and machine labor, which he documents step by step with his camera, creating a panoramic work of counter-cartography.

With a view to strengthening labor solidarity, Sekula pinpoints the blind spots of the Western view of capitalism. He draws attention to the long supply chains that underpin the circulation of goods, where links cut across binaries such as human and non-human, natural or machine, real and abstract. Usually hidden from view, Sekula refocuses navigational attention, symbolically encompassing the globe and establishing something akin to a capitalist meridian cutting across a sea of noise and information, labor and exploitation. What he achieves by designing a serialized and non-stylized collection of photographs is to build

35 Alberto Toscano, "The Mirror Of Circulation: Allan Sekula And The Logistical Image," *Society and Space*, 31 July 2018, https://www.societyandspace.org/articles/the-mirror-of-circulation-allan-sekula-and-the-logistical-image.

36 Hilde Van Gelder, "Introduction," in Allan Sekula, *Ship of Fools / The Dockers' Museum*, 25.

resistance to photography's claims to universalism. As Toscano shows, universality "requires the separation of workers from their means of subsistence, their means of cognition and their means of representation."[37] By tying together the political, the epistemological and the aesthetic, Sekula reiterates previous gestures from the ship of fools tradition, challenging the representational paradigm from an ethical-social perspective. Echoing the ecosophical concept of three ecologies developed by Félix Guattari, we encounter in Sekula's work a gesture of bringing together the environmental, the social, and the mental – three dimensions of human life that cannot be disentangled.[38] One decade after Sekula's death, climate crisis and pollution, digital revolution and political militancy, as well as the decline of public mental health and the sense of being dispossessed of one's future, all testify to deep-seated problems affecting the three ecologies or spheres of life in the "period of intense techno-scientific transformations" where "executive authorities appear to be totally incapable of understanding the full implications of these issues."[39] And although much transversal research linking these areas has been already done, also implying social and environmental justice, it seems vital to produce more complete maps of how capitalism and technology interact with our mental life in order to probe how the prevailing system, or representational regime, shuts off the possibility of change as well as how the future can be reclaimed and shaped more collectively in sustainable ways.

The potential inherent in works by Sekula is premised on the formal achievement of this mobile museum, which can be seen as "part cognitive engine, part mind-map, part somatic summoning, part dreamwork shuttling us between displacements and condensations."[40] An innovative map of this kind, or post-atlas, does not aim to mimetically reflect reality but instead "seeds new narrative potentials" using a speculative method that Gail Day describes as "creative and critical folly," while Sekula himself called "quixotic" yet "pregnant with the future."[41] His method is not necessarily based on forms of modern cartography but works towards a similar goal, namely to situate subjectivity within the world in relation to its myriad dimensions, and thus to render reality navigable along lines of flight that do not foreclose livable futures.

37 Toscano, "The Mirror Of Circulation."
38 Félix Guattari, *The Three Ecologies*, trans. Ian Pindar and Paul Sutton (London: Athlone Press, 2000), 41.
39 Guattari, *The Three Ecologies*, 27.
40 Gail Day, "Allan Sekula's Transitive Poetics: Metonymy and Metaphor in *Lottery of the Sea*, *Ship of Fools* and *The Dockers' Museum*," in Allan Sekula, *Ship of Fools / The Dockers' Museum*, 69.
41 Gail Day, "Allan Sekula's Transitive Poetics," 69.

The present discussion began with Plato's *Republic*, a seminal text in the Western tradition, which outlines – as Gunnar Olsson claims – a map of reality, or even a "map of maps" as he argues, introducing what he calls the "Divided Line of the Republic": "the scale by which 'the realm of things' and 'the realm of affections in the soul' are mapped onto each other."[42] An "ontological transformation point,"[43] the line acts as the start of a graticule used to capture reality in intelligible forms: an imaginative meridian that inaugurates a certain mode of producing visions of reality. In this sense, Olsson casts *Republic* as a speculative map of the known world, one that brings to the fore a deeper sense of cartography as an existential-epistemological practice. In this light, it could be aligned with the concept of "worlding": "a particular blending of the material and the semiotic that removes the boundaries between subject and environment"[44], or the act of situating oneself within a larger reality in a meaningful way that opens possibilities instead of foreclosing them.

The basic task of traditionally understood cartography has been to aid people in travelling from one point to another in specific physical spaces. However, a closer look at the history of cartography allows to discern that maps not only help one to reach a particular place, but have always had many more functions that are difficult to grasp from today's abstracted perspective on mapping practices.[45] These would include, I argue, the important function of providing a sense of where one is situated materially, ethically and emotionally, how one's place is related to a certain geographical whole, and what meaning this whole has to the particular map user. It is the last issue that seems particularly compelling. The history of cartography demonstrates how volatile yet crucial the category of "the whole" has been. Indeed, maps and atlases perform a vital meaning-making function since they facilitate not only orienting oneself in physical space but also answering the question about the shape of the inhabited world and its various aspects. Thus, cartographies have expressed both existential attitudes and knowledges about the world: not just its purely quantifiable dimensions, but also religious and philosophical ones. In this perspective, maps appear as vehicles of something that philosophers Gilles Deleuze and Félix Guattari have termed "geophilosophy," or a mode of thinking that "takes place in the relationship of

42 Gunnar Olsson, *Abysmal. A Critique of Cartographic Reason* (Chicago: Chicago University Press, 2007), 45.

43 Olsson, *Abysmal*, 51.

44 Helen Palmer and Vicky Hunter, "Worlding," in *New Materialism Almanac 2016–18*, https://newmaterialism.eu/almanac/w/worlding.html.

45 Cf. *The History Of Cartography, Volume One. Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean*, eds. J. B. Harley and David Woodward (Chicago: The University Of Chicago Press, 1987), 61, 63, 288, 318, and 509.

territory and the earth."[46] It can be argued in this context that such terrestrial knowledge constitutes the basis of all human reflection, or a first philosophy, since it expresses self-aware consideration for where we have come to exist and how we may shape that existence by forming notions of the environment as habitat.

Above examples from the long-running ship of fools tradition that spans art, literature and philosophy can be also read as maps that work with Olsson's "Dividing Line," which defines the representational paradigm and thus decides what emerges in the field of view. Le Guin and Sekula problematize our visions of the global by establishing their own lines of thought that encircle Earth in different ways, destabilizing its conventional representations and rendering it operational for different modes of existence and habitation. Further, they call to attention the representational impasse in thinking globally. As Ursula K. Heise notes in her discussion of Le Guin's story "Vaster Than Empires and More Slow" in the context of "a sense of planet," the fantasy writer does not present the development of planetary consciousness as a "reassuring (re)turn to Mother Earth" but as "a difficult and thoroughly mediated step for the human imagination."[47] In the present context, this mediation concerns primarily the kinds of metaphors we use to describe terrestrial living and its many dimensions. Such metaphors imply certain modes of living. Metaphor is thus "ecopoetic" in the sense found in the Greek etymology of the term, where *oikos* means home, while *poiesis* – making.[48] In this light, homemaking on Earth can be regarded as creation of metaphors that refer to certain images of planetary whole. Therefore, in a broader sense, cartography could be viewed as an essentially ecopoetic practice: by constructing a certain metaphorical image of habitable whole, it develops particular lifestyles and subjectivities. This ecological and philosophical understanding of map-making as a mode of orienting oneself and lending meaning to the world through aesthetic intervention is called here "speculative cartography": a practice of experimenting with metaphors and forging new ones, as evidenced by Le Guin's science-fiction novella and Sekula's work in photography. Both reject the naïve belief that the world is exactly as seen on smartphone screens – a perfect instance of immobilizing cartographical means of representing the global, which causes an acute paralysis of imagination, including its ecological and political components. Artistic images like the ones analyzed here were developed precisely in order to fashion better holistic images of the world's complex

46 Gilles Deleuze and Félix Guattari, *What Is Philosophy?*, trans. Hugh Tomlinson and Graham Burchell (New York: Columbia University Press), eBook, 171.

47 Ursula K. Heise, *Sense of Place and Sense of Planet. The Environmental Imagination of the Global* (Oxford: Oxford University Press, 2008), 20.

48 Julia Fiedorczuk and Gerardo Beltrán, *Ekopoetyka / Ecopoética / Ecopoetics* (Warszawa: Muzeum Historii Ruchu Ludowego, 2015/2020), eBook, 279.

interrelations – ones that would facilitate more conscious and responsible formulation of political goals and development of better visions of the future.

Ultimately, therefore, the aim of speculative cartographies would be to help bring forth ethical positions that could better tackle contemporary issues such as income inequality, forced migration, biodiversity loss, and climate change, among others. In order to better understand the world and overcome the crisis of imagination that underlies the ecological crises, according to Lawrence Buell[49], the former needs tools to grasp processes whose scale greatly exceeds the scope assumed by traditional cartographical representations of the larger reality as well as conventional scales at work in humanity's evolution throughout most of its history. It thus becomes necessary to engage in speculation, which could first make place for astonishment at the world as an autonomous entity – as in Le Guin's *Paradises Lost* – and help with tracing its parameters through reflection on capitalist globalism, as Sekula's *Ship of Fools* does. In the end, both exemplify a geo-philosophy that entails thinking about humanity as correlated with Earth, at the same time developing tools that engender recognizing and shaping this relationship in ingenious and assiduous ways.

Heise brings to attention that images of the global tend to become abstracted and disconnected, as evidenced by their proliferation in the post-digital visual culture, while localism is too narrow a framework to hold visions of Earth as whole. For a planetary consciousness to emerge, it becomes necessary to assemble what Gary Snyder termed "a mosaic within larger mosaics."[50] Accordingly, the practice of speculative cartographies involves assembling maps of the global by plotting new representations of human and non-human collectives onto Earth. It entails recomposing the coordinates used to define what it means to live planetarily, or in globalized modernity. This compositional impulse, which comprises the driving force behind speculative cartographies, can be traced back to modernist cornerstones of this form of mosaic-based creativity: Walter Benjamin's *The Arcades Project* and Aby Warburg's *Atlas Mnemosyne*, both of which comprise attempts at an "archaeology of modernity."[51] Such projects assemble elements from across human history to trace larger themes and undercurrents that have shaped Western literary and visual culture. Later iterations of this form include Gerhard Richter's expansive *Atlas*, Christian

49 Lawrence Buell, *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture* (Cambridge, Mass.: Harvard University Press, 1995), 2.

50 After: Heise, *Sense of Place and Sense of Planet*, 38.

51 Christopher D. Johnson, *Memory, Metaphor, and Aby Warburg's Atlas of Images* (Ithaca: Cornell University Press, 2012), x. Walter Benjamin, *The Arcades Project*, trans. Howard Eiland and Kevin McLaughlin (Cambridge, Mass.: The Belknap Press of Harvard University Press, 1999); Aby Warburg, *Bilderatlas Mnemosyne*, Warburg Institute Archive, research lead: Claudia Wedepohl, https://warburg.sas.ac.uk/archive/bilderatlas-mnemosyne.

Boltanski's inventories[52] as well as Sekula's unfinished monumental work on maritime capitalism *The Dockers' Museum*. Despite its colonial shadow, the form of the atlas, Georges Didi-Huberman argues, explores relationships that are glimpsed by imagination, offering "knowledge that cuts across – by its intrinsic potential of montage consisting in discovering – in the very place where it refuses the links created by obviated resemblances, links that direct observation cannot discern."[53] Such knowledge is vital since it determines the "legibility" of the world and the "imminent, phenomenological or historical conditions of the very 'visibility' of things."[54] Tying the world together, Didi-Huberman contends, is a fundamental affair as it necessitates to "link up the things of the world according to their 'intimate and secret relations', their 'correspondences', and their 'analogies'."[55] In this sense, the atlas offers a model of reading the world – one that facilitates tracing connections that could remain indiscernible within the prevailing representational paradigm. Similarly, Le Guin and Sekula present a cartographically destabilized reality, estranged and distorted through the convention of the ship of fools, revealing in the process vital issues that need to be addressed and woven into the image of the global. As Toscano and Kinkle claim, "map will hinder the mapping, as we come to be captivated by fetishes of scale and precision that smooth over the world's contradictions."[56] Indeed, even though we live in times of globalization and environmental catastrophe, banalized images of the world refuse to take stock of deeper tectonic structures such as climate or capitalist logistics as planetary forces that transcend the limits of human spatiotemporal cognition. In order to probe these vast realities and weave them into human thought, it becomes necessary for the above artists to employ defamiliarization, interrupting automated mechanisms of social perception and introducing gaps that guide us toward today's vital matters of concern. The speculative component engages imagination and mobilizes it to envision a "New Earth." As was the case with Le Guin's protagonist Hsing, this involves both bewilderment and discovery. "After all," Toscano and Kinkle conclude, "among the first products of a genuine striving for orientation is disorientation, as proximal coordinates come to be troubled by wider, and at times overwhelming vistas."[57]

52 Georges Didi-Huberman, *Atlas, or the Anxious Gay Science*, trans. Shane Lillis (Chicago: The University of Chicago Press, 2018), 8 and 248.
53 Didi-Huberman, *Atlas*, 5.
54 Didi-Huberman, *Atlas*, 6–7.
55 Didi-Huberman, *Atlas*, 21.
56 Alberto Toscano and Jeff Kinkle, *Cartographies of the Absolute* (Winchester: Zero Books, 2015), eBook, 23.
57 Toscano and Kinkle, *Cartographies of the Absolute*, 56.

To draw on one extreme example, in *Facing Gaia* Bruno Latour offers an original interpretation of Lars von Trier's film *Melancholia* (2011), arguing that the "final apocalyptic clash" may be in fact about "our Globe, the global itself, our ideal notion of the Globe, that has to be destroyed, so that a work of art, an aesthetic, can emerge."[58] What he means by "aesthetic" is precisely the question of visibility and responsiveness – a prerequisite for his concept of "compositionism," which "takes up the task of searching for universality but without believing that this universality is already there."[59] The Common World, as Latour puts it, "has to be slowly composed instead of being taken for granted and imposed on all."[60] Latour's title *Facing Gaia* also dovetails with the idea of "naming Gaia" developed by French philosopher Isabelle Stengers, who holds that the gesture of naming the planet is not necessarily about establishing its "truth" but bringing it into view: giving one the potential to "feel and think in the mode that the name calls for."[61] It does not have to be a gesture of taking into possession – as was typical for colonial name-giving, which amounts to appropriation – but one of posing a question that cannot have a single answer. "Learning to compose," Stengers emphasizes, echoing Latour's compositionism, "will need many names, not a global one, the voices of many peoples, knowledges, and earthly practices."[62] As "multifold creation," naming Gaia is a daunting yet necessary effort to avoid what she calls "barbarism."[63] This shift is also expressed, Latour argues, in Peter Sloterdijk's idea of the passage from monotheism – represented by the perfect *sphaera*, or ideal globe – to "monogeism," a globe not-yet-round, or one that needs to be composed, named, and faced. As Latour describes them, "monogeists are those who have no spare planet, who have only one Earth, but who do not know its form any better than they know the face of their former God."[64] As in *Paradises Lost*, it remains the task of Earthlings to assemble the globe one mosaic piece after another, issue by issue, forming a patchwork "dirtball" crisscrossed in equal measure with supply chains, migration patterns and ocean currents.

In the above series of narratives and quasi-atlases transforming the metaphor of the ship of state, it is possible to discern the failure to cognitively navigate a world that has outpaced conventional efforts to envision a larger reality and

58 Bruno Latour, *Facing Gaia. Eight Lectures on the New Climatic Regime*, trans. Catherine Porter (Cambridge: Polity), eBook, 364.

59 Bruno Latour, "An Attempt at a 'Compositionist Manifesto'," *New Literary History* 41 (2010), 474.

60 Latour, "An Attempt at a 'Compositionist Manifesto'," 488.

61 Isabelle Stengers, *In Catastrophic Times: Resisting the Coming Barbarism*, trans. Andrew Goffey (Open Humanities Press, 2015), 33.

62 Stengers, *In Catastrophic Times*, 50.

63 Stengers, *In Catastrophic Times*, 50.

64 Latour, *Facing Gaia*, 364.

account for dense entanglements between the human and the non-human. Drifting on today's oceans of disinformation and fragmented knowledge, humanity has become a leading factor in changes affecting the biosphere and has since been unable to respond accordingly by adapting itself to these exigencies and reconsidering its place in the web of life. This problem has escalated along with the solidification of capitalist realism as the dominant mode of cognitive mapping in the twenty-first century, stripping people of the imaginative means to produce viable alternatives for the future.[65] This question can be ultimately identified as a cartographical crisis since the practice of mapping has always involved establishing the relationship between humanity and the environment, not only helping to situate oneself in space and time and define the *ecumene*, but also providing representations of complex relations formed within it in the effort to steer these complex and dynamic systems towards the future.

In the effort to stir the cartographical imagination and render the world operational, something like a hypertranslation of the global has been undertaken in philosophy, literature and art. As Susan Spitzer points out in her preface to Badiou's rendering of *Republic*, while regular translation "carries across" – as the etymology of Latin *translatio* suggests – from one language to another, in "hypertranslation" the "hyper," or *hypselos* implies the "sublime" as a "place of new topological proximities, unmappable according to the conventional metrics of history and geography."[66] Just like Badiou reweaves Plato's *Republic* "to defamiliarize it, to bring out its strangeness,"[67] writers like Le Guin and artists like Sekula reveal an uncanny – strange yet familiar – dimension of terrestrialism. As Socrates argues in Book Nine, "in the eyes of the state that we want to radically transform, the point to which the change would apply doesn't exist, as it were."[68] Hence, the work of speculative cartographers begins in places that have been either papered over or smoothed out – the invisible matters of concern swept under the rug of globalized capitalism.

65 Mark Fisher, *Capitalist Realism. Is There No Alternative?* (Winchester: Zero Books, 2009), chapter 1.
66 Kenneth Reinhard, "Introduction," in Badiou, *Plato's Republic*, xi.
67 Reinhard, "Introduction," xii.
68 Badiou, 165 (471C-484B).

Chapter 1: The Speculative Turn

Towards larger realisms

According to French philosopher Catherine Malabou, one of the key challenges for thought today consists in freeing it from the logic of blind and automatic reproduction, which reinstates the same reality in different guises in a never-ending loop. In order to interrupt this mechanism, she argues, it becomes necessary to undertake the task of "clearing a point of void, nothingness, and dispossession."[69] Her elaboration of this position is framed in cartographical terms as she defines "the most urgent ethical and political task" to involve "opening the unassignable place in a global world, where every place is assigned."[70] Mapmaking indeed provides vivid illustration of this problem insofar as Malabou's goal is not to seek a transcendental solution where a structure disengaged from Earth would regulate the life of the planet and its inhabitants. In the cartographical convention, any such gesture would entail closing gaps in order to iron out a smooth image of the world from a divine perspective. What Malabou proposes is different: a cartography that does not fill white spaces using the standard palette of nation states or physical geography, but scrapes all colorings or dispossesses them by relinquishing any symbolic hold over reality. This reverse cartography would have the purpose of reminding that "waves of ownership, appropriation, reproduction are constantly and repeatedly covering up the originary deprivation of ontological wealth."[71] To paraphrase, new possible forms – ways of thinking and lifestyles – are suppressed behind the veil of reality construed as a capitalist spectacle of progress. Malabou calls these forms "open fields" after Louis Althusser, a phrase that agrees with the blank spaces on maps, whose allure is rooted in the possibilities teeming within them – a force that

69 Catherine Malabou, "Whither Materialism? Althusser/Darwin," in *Plastic Materialities. Politics, Legality, and Metamorphosis in the Work of Catherine Malabou*, eds. Brenna Bhandar and Jonathan Goldberg-Hiller (Durham: Duke University Press, 2015), 58.

70 Malabou, "Whither Materialism?," 58.

71 Malabou, "Whither Materialism?," 58–59.

Malabou views as a vital impulse for imagination and thought today. One example that she provides of such direction in thinking is speculative realism, a loose philosophical movement that has concerned itself seriously with the task of thinking reality in ways that would be less anthropocentric, revealing a world irreducible to human categories. Can such a world be really mapped? Certainly not in the traditional sense of establishing a one-to-one reference that would exhaust it and enclose between the covers of an appropriative atlas. However, it can be approached speculatively, from the angle suggested by Malabou and speculative realists.

Indeed, a new kind of realism emerges from speculative cartographies – one premised on finding a language to formulate a "realism of the larger reality" as Ursula Le Guin described it in her memorable speech at the 2014 National Book Awards.[72] Explorations in philosophy, arts and letters discussed in this book strive not to reproduce an established idea of what it means to live globally, but to open different perspectives that are less anthropocentric and more equitable. Such positions attempt to account for a world that is far stranger and more complex than its purported self-image premised on Enlightenment-style rationalism that elevated the active world of humans above passive nature. The speculative component of cartographical imagination emerges in this context as a necessary means of assembling an image of the world that would account for a reality glimpsed through modern science – a much more surreal picture than is typically imagined, especially after the formulation of relativity theory and quantum mechanics. By opening up avenues of enquiry into a world made strange, speculation constitutes an indispensable equipment of the mind because it facilitates reconfigurations of received notions about humanity and nature, specifically planet Earth. This book draws on speculative realism to bring its fundamental findings in ontology and metaphysics to cartography and reveal its imaginative importance for addressing reality philosophically through a range of artistic means that usher in a speculative geo-philosophy aiming to remodel the world and reshape subjectivity along with it. Speculative realism (SR) symbolically kicked off at a 2007 event hosted by Goldsmiths College in London, its participants including Ray Brassier, Iain Hamilton Grant, Graham Harman and Quentin Meillassoux. The following discussion is limited to the last two thinkers and not so much reconstructs or promotes their theories but aims to outline some of the concepts from this area, which underpin speculative cartographies.

72 Ursula K. Le Guin, "Speech in Acceptance of the National Book Foundation Medal for Distinguished Contribution to American Letters," 19 November 2014, https://www.ursulakleguin.com/nbf-medal.

Speculation has acquired largely negative connotations, either because it "hints at starry landscapes haunted by poets and mad scientists"[73] or due to its association with aggressive investment, especially at the turn of the twentieth and twenty-first century when it culminated with the 2009 financial crisis. However, the Latin root *speculat-* in fact means "observed from a vantage point" and is related to the verb *speculari* derived from *specula* ("watchtower") and *specere* ("to look"). This social and linguistic context already informs us about two important factors regarding the nascence of speculative realism, which Louis Morelle identified as "crystallizing a Zeitgeist."[74] The timeliness of this movement appears to concern not only the turn away from navel-gazing post-structuralism, but also the closing of a much bigger conceptual cage that could be called, after Mark Fisher, "capitalist realism": "the widespread sense that not only is capitalism the only viable political and economic system, but also that it is now impossible even to imagine a coherent alternative to it."[75] It appears that SR has indeed broken a window in the high-rise mirror tower of capitalism by turning to the non-human. As Morelle points out, speculative realism "vociferously announces the end of correlationism and anthropocentrism […] seeking to emphasize themes that have become relatively marginal in continental philosophy such as metaphysical speculation, the inorganic, or the absolute."[76] In this sense, SR challenges established "vantage points" in philosophy and, more generally, in representational regimes that purport to explain reality in anthropocentric or capitalocentric terms. The explosion of SR, or the "SR event" could not congeal as any formal or semi-formal school or alliance. Instead, its revolutionary potential materialized as a range of strikingly original theories. As the editors of the anthology *Speculative Turn* argue, "[t]hough it is too early to know what strange life forms might evolve from this mixture, it seems clear enough that something important is happening."[77] Notably, those "strange life forms" now include works in areas frequently deemed as the ugly ducklings of the humanities, previously often derogatorily deemed too childish for serious critical taste, for example game and horror studies (Ian Bogost, Eugene Thacker), investigations in the agency of matter and panpsychism (Jane Bennett, Steven Shaviro) as well as

73 Graham Harman, "On the Undermining of Objects: Grant, Bruno, and Radical Philosophy," in *The Speculative Turn: Continental Materialism and Realism*, eds. Levi Bryant, Nick Srnicek, and Graham Harman (Melbourne: re.press, 2011), 21.

74 Louis Morelle, "Speculative Realism. After finitude, and beyond? A vade mecum," trans. Leah Orth, *Speculations III* (New York: Punctum Books, 2012), 242.

75 Mark Fisher, *Capitalist Realism. Is There No Alternative?* (Winchester: Zero Books, 2009), 2.

76 Morelle, "Speculative Realism," 241–242.

77 Levi Bryant, Nick Srnicek and Graham Harman, "Towards a Speculative Philosophy," in *The Speculative Turn*, 1.

ground-breaking pursuits in radical ecology and geophilosophy (Timothy Morton, Ben Woodard).

What unites these avenues of enquiry is the above-mentioned criticism of "correlationism," which Graham Harman considers to be Quentin Meillassoux's lasting contribution to philosophy.[78] This concept describes the situation in which we only ever come into contact with reality when it aligns with our subjectivity: "we only ever have access to the correlation between thinking and being, and never to either term considered apart from the other."[79] This leads to the paradoxical situation where we may extend our attention to the pre-given world outside of our subjective watchtower but all we find there is a correlate of ourselves, a human-shaped mirror. An illustration of this is provided in the artwork by New Zealand artist Ruth Watson, titled *A map of the world that does not contain Utopia is not worth even glancing at…* (2004)[80]: a mirrored-glass smooth globe that only has the eponymous line from Oscar Wilde sandblasted on it in place of the equator. The Greek *ou-topos* can be interpreted here as a pun on the fact that the reflective planet does not allow any viewer to find a place on the globe that would not be a reflection of the onlooker or a camera, as shown on the photograph from the artist's website. Although this work is typically read in the context of Wilde's words from *The Soul of Man Under Socialism* (1891), where he expounds a hopeful, socialist belief in progress[81], in the present context it can be also seen as aptly capturing the concept of correlationism and the difficulty of opening a fracture, or non-place in the current epistemological regime, as Malabou suggested. According to Meillassoux, although correlationism admits that subjectivity and language are somehow hooked up with "radical exteriority" (in the present example, the very sculpture of the globe), it nevertheless occludes the sense of being enclosed within their boundaries, or "imprisoned within this outside proper to language and consciousness given that we are *always-already* in it […] and given that we have no access to any vantage point from whence we could observe these 'object-worlds', which are the unsurpassable providers of all exteriority."[82] The sense of being incarcerated, which Meillassoux elaborates, stems from the fact that our vantage point – or the watchtower from which we look at the world, or our window onto the world – limits our perspective, effectively narrowing down the real to a mere correlate of our own existence. Meil-

78 Graham Harman, *Quentin Meillassoux. Philosophy in the Making* (Edinburgh: Edinburgh University Press, 2011), 7.

79 Quentin Meillassoux, *After Finitude. An Essay on the Necessity of Contingency*, trans. Ray Brassier (London: Continuum, 2009), 5.

80 https://www.ruthwatson.net/a-map-of-the-world-that-does-not-contain-utopia.

81 Cf. Katherine Harmon, *The Map as Art. Contemporary Artists Explore Cartography* (New York: Princeton Architectural Press, 2009), 45.

82 Meillassoux, *After Finitude*, 17, emphasis preserved.

lassoux writes in this context of a "bereavement" that has haunted philosophy since the time it freed itself from dogmatisms capable of imposing one particular vision of the world.

What was lost, the French philosopher argues, is a sense of a larger reality that refuses to be reduced to how it appears before us. According to Meillassoux, "contemporary philosophers have lost the *great outdoors*, the *absolute* outside of pre-critical thinkers," or the concept of a world fully independent of human thought: an "outside which thought could explore with the legitimate feeling of being on foreign territory – of being entirely elsewhere."[83] This account summarizes the important move that Meillassoux makes to think reality in less reductive terms. First, the old philosophical concept of the absolute is restored in order to describe the vast world outside the watchtower of subjectivity and language. Second, this absolute is ascertained to be wholly separable from human thought, remaining indifferent to how it appears to any sentience. Accordingly, it appears to be a truly "foreign territory" that human thought shall invariably find disorienting and strange, "perplexed by the strangeness of the real: a strangeness undetectable by the instruments of common sense."[84] The absolute elsewhere severed from the philosophical tree by Immanuel Kant, who acknowledged things in themselves yet cast them beyond the domain of sensible philosophical enquiry, is resuscitated by Meillassoux, albeit not as a gesture of returning to pre-critical philosophy but as a means of thinking it through and drawing conclusions based on science.

One specific example that Meillassoux utilizes at the outset of *After Finitude* is that of an arche-fossil, or "ancestrality": material evidence formed before the emergence of terrestrial life as we know it today. This not only testifies to science's ability to identify an ancestral reality without humans, but poses the crucial question regarding the existence of meaning before it could be made into meaning-for-us. Harman succinctly reconstructs the French philosopher's position as follows: "being is not co-extensive with its appearance to us; what exists is temporally prior to its appearance to us; human sentience and cognition arose at a certain point in the history of the universe that might even be accurately dated."[85] These claims carry profound implications. First, human sentience does not have privileged access to reality; second, human life is embedded in a larger framework that was not predesigned either for people as a species or for their cognitive capabilities. Such decentering of humanity has the paradoxical character of both exposing the limitations of correlationism and gesturing towards

83 Meillassoux, *After Finitude*, 17, emphasis preserved.
84 Harman, *Quentin Meillassoux*, vii–viii.
85 Harman, *Quentin Meillassoux*, 12.

realms that transcend the human finitude of knowledge and death by suggesting a continuity of more-than-human life before and after *homo sapiens*.

The crossing of finitude is a topic that has captured the imagination of artists and writers who plunge themselves into the cosmic vastness in order to speculatively regard humanity from space. This theme is exemplarily elaborated by American poet Tracy K. Smith in the 2011 poetry collection *Life on Mars*, which is streaked – according to Paulina Ambroży – with "conceptualizations of the cosmic sublime alongside their technological and pop cultural representations."[86] In this sense, Smith can be argued to gauge the distance between the radical outside and its shifting glimpses in human registers, thus charting a map that dislocates its readers and confronts them with their limitations rather than confirms and reasserts reality as a comfortable, prefabricated home. Playfully aligning Stanley Kubrick's idea of going on a "space odyssey" with the Hubble Space Telescope's cosmic vistas of "never-ending / Night of space" and David Bowie's growing distance between Ground Control and Major Tom, Smith is invested in building distance and opening gaps. By taking this road, she is dismantling the kind of uniform, correlationist cosmography which absolutizes the human perspective and professes itself to be a fit-for-all, quasi-divine point of view that renders others unnecessary. As Ambroży emphasizes, the point here is to reveal the "darkness," which can be read both as human blindness and the cosmic darkness that embodies the uncanny fantasy of "void-cum-plenum": some other place teeming with unknown possibilities.[87] Smith captures this in the poem "It & Co.," where she meaningfully deploys the capitalized word "It" instead of other words that carry too much domestication, such as "world," "cosmos" or "universe"; in this, she makes room for thinking about "It" in terms of a strangeness that folds back upon humanity, reminding us that "We are part of It. Not guests."[88] The paradox lies in the fact that "It" is both ourselves and something that contains us; and yet, it "avoids the blunt ends // Of our fingers as we point."[89] Although humanity has gone to great lengths "looking for It everywhere […] It resists the matter of false vs. real. // Unconvinced by our zeal, It is un- // Appeasable."[90] Meaningfulness evaporates as "It" slips from grasp, which is reinforced in this piece by the light in between the lines: a light turned darkness when every run-on-line feels like a fall from the precipice, especially in the last split between "un-" and "Appeasable." The sublime washes back on the shores of human knowledge, but is registered only through gaps and slippages. The same

86 Paulina Ambroży, "'Our Eyes Adjust to the Dark': The Cosmic Sublime in Tracy K. Smith's *Life on Mars*," *Text Matters* 10 (2020), 375.
87 Ambroży, "'Our Eyes Adjust to the Dark'," 388
88 Tracy K. Smith, *Life on Mars* (Minneapolis: Graywolf Press, 2011), 17.
89 Smith, *Life on Mars*, 17.
90 Smith, *Life on Mars*, 17.

applies to the title, where "Co." can be interpreted either as the darkness proliferating beyond human finitude or a human addendum to a much vaster and irreducible reality.

Smith's staging of the unsettling failure to pin down one's coordinates brings to the foreground the breakdown of how reality can be read. In the final lines, Smith echoes Edgar Allan Poe's phrase *er lasst sich nicht lesen* ("it does not permit itself to be read") from the short story "The Man of the Crowd" (1840). Poe's remark concerns the mysterious eponymous figure who embodies the spirit of urban life, recording an important shift in how identity and humanity have been reformed and redefined by urbanization and the expansion of the Industrial Revolution. There is indeed something profoundly menacing about the frantic *flâneur* followed by the protagonist of Poe's story. The uncanny association with "deep crime" described by the narrator is connected with "mysteries" that "will not suffer themselves to be revealed."[91] The actual horror expressed in this work is tied to the discovery of a world greatly exceeding the ability to hold it in thought and bring fully from darkness to light. Accordingly, Smith concludes: "It is like some novels: // vast and unreadable."[92] In this sense, Poe's London and Smith's Mars – the anamorphic, cosmic point of reference assumed in the collection – can be seen as two ends of the same process that has produced what is called modernity, revealing a much larger reality, or a "largeness we can't see" as another poem by Smith announces in the title: a reality that may not be accessed directly but has to be sensed through its perilous or transformative effects. Ambroży concludes that the "darkness will not be illuminated; rather our eyes will have to adjust to it."[93] Indeed, it is perhaps poetry's prerogative to expand ways of listening to the hum of reality insofar as "all we live blind to // Leans its deathless heft to our ears / and sings."[94]

Further, in the longer poem "Life on Mars," Smith poses the fundamentally speculative question: "What lives beside us passing for air?" The notion of air is fascinatingly ambiguous in this context because air is something that humans cannot live without yet remains largely imperceptible, something no one usually thinks of unless pollution distorts it. Following up on this idea of permeable yet strange ground for life, Smith takes to dark matter as her example, pondering on the spaces in-between: ones we do not see or even wish to actively un-see in the process of sifting through today's heavy information overload. In the sixth part, the poet ironically imagines a Paradise-like pair who "make it [the world] make sense" as they are "[w]atching the cream disperse into their coffee // Like the

91 Edgar Allan Poe, "The Man of the Crowd," in *Collected Tales, Poems, and Other Writings*, ed. Carl Ostrowski (London: Bloomsbury, 2021), 106.
92 Smith, *Life on Mars*, 17.
93 Ambroży, "'Our Eyes Adjust to the Dark'," 388.
94 Smith, *Life on Mars*, 18.

A-bomb."[95] The two are cast in the roles of Cartesian-style cartographers, comfortably positioned outside and delineating "a swarm of coordinates // On a giant grid." The idyllic, or even Edenic picture is immediately subverted in the seventh part, which is built around the ill-treatment of prisoners in the Abu Ghraib prison by US military operatives. This painful reminder pulls the poem back to earth with all the dirt and pain this entails. It then changes pace as part eight embarks on a litany of umbilical cords that tie us to a planet that is both "beneath us" as well as "[a]round and above," ever-present and permeating our lives despite the work done by humans to "nick and slice" it "into territory."[96] In a particularly succinct pair of lines – once again separated by extra light in order for the darkness the shine forth – Smith summarizes the reductionist attitude to Earth, demonstrating what great lengths one can go to in order to cut reality into palpable pieces: "The earth we ride in disbelief. // The earth we plunder like thieves."[97] The two thoughts may be in fact more interconnected than they would initially appear. After all, it takes a lot of repression, or what Bruno Latour called the work of "purification"[98], or separating reality into passive nature and active culture, to create the false assumption that the planet's resources are limitless and can be exploited *ad infinitum*. The bon mot from part nine – the notion that "we do it to one another, every day, / Knowing and not knowing"[99] – brings back Smith's overarching theme: that of an uncanny feeling of being exposed to a world suddenly made strange and of sensing that one is not just in this world but of it in the largest sense possible – its product and not its master.

Finally, as the collection's last poem "Us & Co." argues, the defamiliarizing, Martian perspective helps the poem achieve a subtle transformation of subjectivity, which involves coming to acknowledge the uncanny sense of belonging to a reality that has never been designed to unfold itself fully before the human mind. As vastly non-human scales are revealed, it becomes apparent, Smith notes, that human life is just "a few hours, // a day at most" and that this time is spent in a world where we stumble half-blind, "making sense of the terrain" and "[b]umping up against a herd of bodies // until one becomes home."[100] Importantly, the cartographical aspect is framed here as a sense-making activity, one that is not exhaustive but concerns primarily assembling a habitat for life, bringing together map-making and home-making, thus shifting the former's priorities from appropriating the world to composing it. The kind of home that

95 Smith, *Life on Mars*, 39.
96 Smith, *Life on Mars*, 40–41.
97 Smith, *Life on Mars*, 41.
98 Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, Mass.: Harvard University Press, 1993), 10–11.
99 Smith, *Life on Mars*, 41.
100 Smith, *Life on Mars*, 70.

we can envision, however, is premised on the distance we acknowledge to exist between human-scale categories and those pertaining to the darkness beyond and inside.

Probing human finitude has been necessary and progressive, Meillassoux concurs, but critical philosophy has moved too far in shutting off the Great Outdoors, leaving itself in the position where it can only discuss the human-world correlation and not the world itself, however strange and complicated it may be. In effect, human thought can only ever encounter itself, comfortably snuggling down in a new dogmatism that precludes asking about universal truths. As a position that we can have access merely to correlation and not the world itself, correlationism disempowers philosophy since the truth remains equally inaccessible to all, thus granting everyone the same kind of access to sources of legitimization. This is indeed a problem that has arisen in the superficially democratic world of modern media, where all sides have their say, resulting in situations where the findings of climate scientists, for example, are pitched against doubts of all kinds that are supposedly capable of undermining basic facts established through geo-sciences on a verified, experimental basis as in fact not occurring "for us." Correlationism, Harman concludes, can follow science but never really takes its discoveries at face value, or asks about their deeper conclusions, especially philosophical ones related to how we conceive of the world and our place in it.

In this way, Meillassoux reinstates a sense of ground beneath our feet, albeit one that neither yields itself to human modes of meaning-making, nor allows to think the foundations of terrestrial life in purely human terms. Meillassoux argues that it is mathematics which facilitates probing the dangerous territory of life-without-humans or human-compatible forms of givenness. He asks about the possible ways of "how can a being manifest being's anteriority to manifestation," arguing it to be the fundamental question that challenges the cage in which modern philosophy would enclose humanity.[101] One possible way is indicated by the "arche-fossil," which revealed a secret path, or "hidden passage" that can reopen questions foreclosed for around two hundred years in philosophy and invite us "*to get out of ourselves*, to grasp the in-itself, to know what is whether we are or not."[102] For Meillassoux, the only mode in which we can pierce the cocoon of correlationism is mathematics. By reintroducing another kind of discourse that seems to have lay dormant for a long while now – that of primary and secondary qualities – he argues that primary qualities are mathematizable, whereas secondary ones can only be an accumulation of appearances specific to a given entity. Relying solely on the latter kind of qualities would lead to a version

101 Meillassoux, *After Finitude*, 48.
102 Meillassoux, *After Finitude*, 48, emphasis preserved.

of correlationism that takes the world to be revolving around the thinking subject, and not the other way round, as the example of ancestrality teaches us. It is in this sense that Meillassoux argues that Kant's alleged "Copernican Revolution" in fact led to a "Ptolemaic counter-revolution in philosophy" because it managed to place human subjectivity at the heart of meaning-making in the universe. The French philosopher's correction would be to embrace the implications of findings by Galileo and Copernicus and note that it is not only a question that involves "decentring of the terrestrial observer within the solar system, but rather the much more fundamental decentring […] *the decentring of thought relative to the world within the process of knowledge.*"[103] Ultimately, completing the Copernican Revolution would mean to acknowledge that the human vantage point is necessarily anthropocentric yet leave the possibility of breaking a small window onto the world out of the lonely watchtower of humanocentric concerns. And although this aperture may be mathematical, this certainly does not mean that the elaboration of scientific findings can do without philosophical and artistic reflection, which emerges as necessary to communicate vital issues such as climate change and make sense of them by, at least partly, "getting out of ourselves." In fact, as Tracy Smith demonstrates in her poems, this trajectory can be pursued in literature, thus repositioning – if only briefly – the subjective position in relation to the vaster outside of reality by destabilizing subjectivity and using metaphor as a vehicle for movement beyond finitude and the neo-Ptolemaic world.

One act of a poetry-driven Copernican Revolution has been staged in Polish poetry by Miron Białoszewski in his 1956 debut volume *Obroty rzeczy* (*Of the Revolution of Things*). Its title obviously alludes to Copernicus's 1543 breakthrough work *On the Revolutions of the Heavenly Spheres* yet demonstrates its implications in speculative-realist mode by shifting accent from the subject to revolving objects freed from the chains of reductionism: "A one krążą // I krążą. // Przebijają nas mgławicami" [And they revolve / And revolve. // Piercing us with nebulae].[104] As celestial and earthly bodies revolve on their trajectories, galaxies of objects extend from everyday life to the Milky Way, making human horizons appear too narrow for an inexhaustible world. Characteristically for this poet, even the most common objects suddenly acquire cosmic dimensions, for example a sieve-spoon: "Jakżeś nieprzecedzona w bogactwie, / łyżko durszlakowa!" [How inconsievably rich you are, / sieve-spoon!][105] or a wardrobe: "opero w trzech drzwiach!" [Opera in three doors!]; "Kto zna jej moc?" [Who knows its

103 Meillassoux, *After Finitude*, 186, emphasis preserved.
104 Miron Białoszewski, *Sprawdzone sobą. Wiersze wybrane* (Warszawa: Państwowy Instytut Wydawniczy, 2008), 52.
105 Miron Białoszewski, *Sprawdzone sobą*, 50.

power?].[106] The perspective taken by Białoszewski is an exercise in "unhabituation" as he puts it in the poem "School of Unhabituation" where automatization of perception is opposed to the incessant speculative work of probing reality's depths.[107] Seeking help from Ananke to "send me whatever just not / things trapped in habituation," Białoszewski makes all objects in the room sing together a special "scale":

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Reality is made of hypotheses, Białoszewski says, and – as the poem's cartographical spacing shows – new contours of the world can be charted by expanding the resolution of mental mappings. Poetry is a special kind of language that launches hypotheses, tests the boundaries of meaning by working with cognition and expression, as well as engages in speculative play to combat habituation and its reductionist thrust. As Białoszewski explains in another poem, "Dziwię się / i dziwię siebie, / i komentuję wciąż żywoty otoczenia" ["I wonder / and wonder myself, / still commenting on the lives around me"]. Out of this commentary arises an ontology that is less anthropocentric and engages reality in refreshing manner by plotting trajectories of human life on the same plane as myriad other existences, without imposing any preformed hierarchies.

106 Miron Białoszewski, *Sprawdzone sobą*, 54.

107 Miron Białoszewski, "School of Unhabituation," trans. Clare Cavanagh and Michał Rusinek, *Poetry Foundation*, 2024, https://www.poetryfoundation.org/poetrymagazine/poems/160853/school-of-unhabituation.

Objects and ontographies

Graham Harman, who champions object-oriented-ontology (OOO), argues strongly against correlationism, or – as he defines it – "the idea that philosophy cannot speak of humans or world in isolation, but only of a primal correlation or rapport between the two."[108] To redress this reductionist perspective, he makes an original gesture that consist in a turn to Aristotle, refocusing philosophy on objects. The American thinker noted that philosophy often either reduces objects to a more fundamental reality such as atoms or disregards them as "too shallow to be the truth" – a mere "arbitrary bundling of immediately perceived qualities."[109] Harman agues instead that reality is made of "middle-range" objects which: (i) can be either small or large but indiscriminately enjoy equal ontological status since everything exists equally in a flat ontology; (ii) can be destroyed because none have infinitely lasting essences; (iii) can be human or inhuman, without elevating any over the other, with no object serving as the ground for all others, which means there is no single container for other objects, although they do form aggregates and alliances; (iv) have distinct real qualities that make them different and autonomous from others; (v) are not exhausted by their relationships with any other objects, including but not limited to interactions with humans since relationships between humans and objects are just one of many; and hence, (vi) objects withdraw into their subterranean existence, to which we have no access and can only refer to it by alluding and guessing. Taking cue from Bruno Latour's concept of irreductionism, Harman holds that nothing can be reduced to anything else. In this context, Ian Bogost vividly postulates a "black hole-like density of being," claiming that an "ontological equivalent of Big Bang rests within every object."[110] Once again, a degree of potentiality unrestricted by human use or intention is admitted to underpin the world, restoring an ontological richness and making room for the as yet unforeseen.

Harman's OOO model is fully presented in the book *The Quadruple Object*, which outlines a fourfold model of objects, distinguishing sensual objects, sensual qualities, real objects and real qualities: "a powerful map of the cosmos."[111] This fourfold grid works as an ontological foundation, or a basic map of object-being, where Harman plots four basic tensions existing between the four elements, identifying these relationships with time, space, eidos, and essence. A unique wind-rose for navigating ontology, this model elegantly explains the existence of time and space by adopting a speculative and metaphysical approach

108 Graham Harman, "The Road to Objects," *continent.* 3.1 (2011), 171.
109 Harman, "The Road to Objects," 172.
110 Ian Bogost, *Alien Phenomenology, or What It's Like to Be a Thing* (Minneapolis: University of Minnesota Press, 2012), 26.
111 Graham Harman, *The Quadruple Object* (Winchester: Zero Books, 2011), eBook, 299.

that decenters humanity and relocates it within a larger reality filled with objects of many sizes, which enter into myriad relationships that create the universe.

In this sense, the world of objects acquires gravity and independence, dethroning humanity as the ultimate source of all meaning and inaugurating a variant of post-humanism that would be nonetheless deprived of the dreary mantra recounting the death of the subject. What would be rather at stake here is the expansion of the non-human universe, also within subjectivity itself. As Mark Fisher remarked, object-oriented philosophy invites us to "consider object itself, alluring in its partial opacity," which led him to conclude that such philosophy can "attune us to the strangeness of objects once they are liberated from common-sense's somnambulant gaze."[112] Furthermore, the idea that objects and essences are not eternal provides a welcome safeguard against imagining and ascribing permanent essences to things, which also has political consequences. In one interview, Harman considers for example the dangers of such notions as "Arab mind" or "feminine taste," calling them "epistemological essentialism" and diagnosing as dangerous generalizations.[113] This carries an ethical dimension revealed in Harman's observation that his ontological position entails a healthy dose of humility, emphasizing – as he often does – that philosophy is not about possessing truth but pursuing it, while the depth of non-human objects can be only tentatively fathomed and certainly does not yield to human gaze. Significantly, this also constitutes a way of alleviating the trench wars waged between the humanities and natural sciences. In object-oriented philosophy, neither qualitative nor quantitative research is allowed to reign supreme. In short, Harman claims that the humanities also deal with things that are real and cannot be accused of manufacturing lies, or simply writing footnotes to physics.

From the perspective of everyday life, Harman does not obliterate depth in objects. On the contrary, he greatly emphasizes their inexhaustible nature, namely that objects cannot be reduced to their relations or appearances, which echoes Białoszewski. For example, the laptop that I use to write these words cannot be reduced to my interaction with it, even though habit and routine appear to have given me a sense of owning this device, also in the ontological sense. What Harman questions is the possibility of direct access to the "whatness" of the "real object" hiding behind the sensual one that we experience. We can never claim to fully understand something – just as fire, which burns cotton, does not exhaust or explain it, but simply enters a relationship with this material's flammability, an example often invoked by Harman. This is also the crux of

112 Mark Fisher, "Clearing the Air," *Frieze*, 20 February 2008, https://www.frieze.com/article/clearing-air.

113 Skepoet2, "Marginalia on Radical Thinking: An Interview with Graham Harman," *Symptomatic Commentary*, 22 September 2014, https://symptomaticcommentary.wordpress.com/2014/09/22/marginalia-on-radical-thinking-an-interview-with-graham-harman/.

his take on correlationism: he does not wish to sabotage its operation by thinking the hyper-chaos of absolute contingency, as Meillassoux does, but spreads it evenly, attributing a dose of correlationism to all objects, which all equally "mistranslate" reality and other objects in their own unique ways. The infamous gap between subject and object is thus pluralized and found in all relationships and interactions in the animate and inanimate realm, without any hierarchical distinction whatsoever. As Levi Bryant puts it in his elaboration of OOO, "[w]hile it is true […] that all objects translate one another, the objects that are translated are irreducible to their translations."[114] Correlationism is tamed in Harman's account insofar as it becomes distributed equally across the ontological spectrum, with no object capable of capturing the other in a conclusive way.

Given the above, OOO facilitates a reconsideration of realism and representation, broadening the horizons of the humanities so as to include within their scope the vast inanimate world, or Meillassoux's "Great Outdoors" without risking reductionism. In this sense, OOO tackles the question of post-humanism by celebrating an opening onto broader reality, all the while acknowledging its more-than-human immensity and inexhaustibility. In political and philosophical terms, this kind of realism contrasts with the capitalist realism of foreclosed alterity and becomes truly speculative by opening the possibility of another future as well as a different story about humanity and its place on Earth. It is related to the effort needed to at least try to recognize the alien, weird and non-human nature of large portions of reality around us. "As philosophers," writes Bogost, "our job is to amplify the black noise of objects to make the resonant frequencies of the stuffs inside them hum in credibly satisfying way."[115] As the world becomes estranged, humanities do become more fictional and poetic, although this entails neither losing track of up-to-date science, nor resorting to individual opinion as the ultimate ground. What is fleshed out in this can be described in terms of attention and othering. "Our job," Bogost concludes, "is to go where *everyone* has gone before, but where few have bothered to linger."[116] It emerges more clearly in this light what the speculative shift of vantage point encapsulated by the etymology of *speculare* might mean: it entails recognizing human cognitive limitations against a broader backdrop of object-relations, and seeking imaginative, indirect means of access to a reality seen as if for the first time, in a spirit of wonder and curiosity.

The above considerations can be supplemented with a powerful poetic exemplification in the form of Inger Christensen's 1981 long poem *Alphabet*,

114 Levi R. Bryant, *The Democracy of Objects* (Ann Arbor: University of Michigan's Open Humanities Press, 2011), 18.
115 Bogost, *Alien Phenomenology*, 34.
116 Bogost, *Alien Phenomenology*, 34, emphasis preserved.

translated from Danish by Susanna Neid. This work is both a statement of ontological, "irreductionist" amazement and a literary cartography that places the reading subject in a non-privileged place within a world filled with objects. Based on the Fibonacci series in terms of form, the long poem begins with the single-line page "apricots trees exist, apricot trees exist"[117]; then, each section's number of lines follows the subsequent numbers in the mathematical series, where each element is the sum of the previous two. Stopping with the letter "n" in another gesture towards infinity, the poem breaks the series, as if acknowledging the limit imposed by the weight of its own words and the boundaries of understanding. The sheer material richness of the book is astonishing as the meditation progresses in ever-longer strides. The alphabetic litany of bracken, blackberries, bromine as well as cicadas, chicory, chromium, citrus trees; cedars, cypresses, and cerebellum in sections two and three unfolds like arms of vast galaxies, cutting ever larger circular arcs of the golden spiral. Although its themes circulate around nuclear and ecological crises, the poem also functions as a meditation on the diversity and object-depth of reality, where all kinds of things exist, creating a truly gravitational force under which the mind bends and dwarfs. And even though "atom bombs exist," as noted in part ten, future and love also exist, along with alphabets: "the rain of alphabets / incessant rain"; the lyrical subject immerses themselves in the world – "nest-building" or finding its place – and admits that through this unique formula it becomes possible to write along with the world, not beside it, or above it: "I write like wind / that writes in water / with stylised monotony / or roll with the heavy / alphabet of waves."[118] In the final poem, an ambiguous, half-ominous image of an exploding planet announces a shift of sensibility with particular force. When "the earth's surface cracks like / peeling canvas; the stuff / of dreams and everything else a human / being was made of flutters / in the air"[119], we are reminded that in the age of nuclear conflicts and environmental catastrophe the earth and the human are no longer what they were and new frameworks for thinking the two together become necessary.

The framework outlined in OOO partly liberates philosophy from anthropocentrism and allows things to interact freely with one another just as humans interact with other objects and among themselves. This kind of a flat ontology has been significantly hailed as "democratic" by Levi Bryant because it accounts for scale but does not impose hierarchies. Without assuming that the human being is the ground for all meaning, we can still elaborate on the possible relationships

117 Inger Christensen, *Alphabet*, trans. Susanna Nied (New York: New Directions, 2001), eBook, 8.
118 Christensen, *Alphabet*, 63–64.
119 Christensen, *Alphabet*, 81.

between galaxies of objects that differ vastly in scale and accessibility. Crucially, the world image emerging from this kind of philosophy is neither narcissistically humanocentric nor mechanistic in a reductive sense. Escaping those two extremes has vitally contributed to the renewal of realism. Finally, OOO offers a broader perspective that does not take away from sciences but grants them their own specificity and pathways to truth. Since object-oriented philosophy postulates that no individual human paradigm can exhaust the essence of a single entity, the painful rivalry between the humanities and natural sciences regarding access to reality can finally be ended, facilitating new possibilities of interaction between these fields, as showcased by Inger Christensen.

Exemplarily, as Bryant argues, cultural studies suffer from a "sharp divide between those forms of inquiry that focus on signification and those forms of inquiry that focus on the material in the form of technologies, media, and material conditions. […] I have sought an ontological framework capable of integrating these diverse tendencies."[120] In this important theoretical move, OOO not only offers an invitation to follow things themselves rather than reduce them to our own interactions, but also conflates – in Bryant's approach – matter and meaning. Accordingly, object-oriented philosophy provides an intellectual framework for considering things themselves in all their richness, without reducing them to correlates of language, society and other codes of culture, instead revealing the intense material mediation that catalyzes and facilitates meaning-making. Naturally, this does not mean that human agency is completely annulled but it is simply put into a necessary perspective. In a sense, setting the world free from the mighty grasp of Kantian seclusion has unleashed a busy world of objects such as commodities, rocks, geysers, sputniks, cartoon characters, power plants, asteroids, or even hyperobjects like global warming, whole ecosystems and virtual universes, all holding the potential to establish their own relations as well as translate and mistranslate each other.

Moreover, the de-anthropocentric tendency of OOO reveals one important defense mechanism protecting the absolute cognitive monarchy of humankind. Uncovering this anxiety is simultaneously a rediscovery of humanity in its often repressed fragility. Timothy Morton even goes on to say that this anxiety revolves around a "human-flavoured way of experiencing what it's like to be a thing"; in this sense, "[p]recisely because I'm paranoid that I might not be a person," he argues, "I am a person."[121] What OOO invites us to do is to see life beyond all flavors of vitalism and mechanism, and to realize that forms of existence are not necessarily reducible to human categories. "Encounters with nonhuman beings

120 Bryant, *The Democracy of Objects*, 32.

121 Greg Lindquist, "In Conversation with Timothy Morton," *Brooklyn Rail*, November 2011, https://brooklynrail.org/2013/11/art_books/timothy-morton-with-greg-lindquist.

are saturated with anxiety because I can't check in advance who these guys are," Morton writes, concluding that "I just have to allow them to exist, which means that in the end, one of the people that I have to allow to exist is me, funnily enough, because I'm also one of these nonhumans."[122] Thus, a subjectless world in which humans are just objects equally existing among a myriad of other things may not be that scary after all. However, it is definitely a "weird" one in both senses of the word: the old one connected with personal destiny and thus subjectivity, and in the later one linked with the quality of being unearthly, or subverting an established sense of the world.

Graham Harman's concept of "weird realism" is crucial for this study because, first, it comprises a particularly compelling flavor of a speculative realism of a larger reality, and second, it entails a new approach to mapping. In *The Quadruple Object*, Harman develops the concept of "ontography," which is far broader than traditional cartography. "Rather than a geography dealing with stock natural characters such as forests and lakes," Harman explains, "ontography maps the basic landmarks and fault lines in the universe of objects."[123] In this sense, his mapping is not representational but concerns the framework of visibility, much like Olsson's "Dividing Line" discussed in the Introduction. Ontography does not attempt to establish any actual semblance between map and territory. It is rather speculative, or metaphorical. Maps of this kind shed all pretense to close the aforementioned gap. Instead, they productively extend that gap in order to paint a bigger picture, one that would acknowledge the independence and agency of the above-mentioned universe of objects. Ontography operates democratically and concerns itself solely with objects, which come in all sizes: quarks, rubber balls, cathedral domes, birches, canyons, federal agencies, ostriches, double stars and books of poetry. Finally, ontography does not reduce objects to anything that would be allegedly more fundamental, like atoms, embracing the principles of irreductionism, inexhaustibility and imminent partial withdrawal from contact.

Traditionally, philosophy would start from the human being, conflating two important questions: how we learn about the world and what the world is like. Speculative realism opposes that tendency, inviting one to try to adopt a nonhuman perspective, at least provisionally, even though we are certainly bound by anthropocentric limitations, or the specific human-world correlationism rooted in our biological makeup. Importantly, however, it seeks ways of talking about what exists without falling into the correlationist illusion of mastery, where every object can be subjugated by the sentient subject, physically or conceptually. This, however, is a challenge for thinking, as Meillassoux demonstrates on the example

122 Lindquist, "In Conversation with Timothy Morton."
123 Harman, *The Quadruple Object*, 227.

of the "arche-fossil" that predates terrestrial life, because it runs counter to common sense and received notions of reality. As Szymon Wróbel puts it, slightly softening the stronger claims by Meillassoux and Harman, the ambition of speculative realism is to put thinking on the course of "expression […] that does not hesitate to come into conflict with the common sense of everyday experience (hence: speculation), but which escapes thought."[124] On the one hand, this involves rejecting the naïve realism of what appears directly before the eyes, while on the other it concerns seeking to cut the Gordian knot of correlationism, which has effectively trapped philosophy in a cage of its own making. Certainly, this philosophical intervention does not annul epistemological problems, but refuses to privilege them. In its elimination of humanity as the central actor in the universe, speculative realism does not reduce humanism to "discursive effects" or "relations of power," although these can be accurate accounts in certain contexts. In fact, as Marcin Rychter holds, it does not celebrate the death of man or the end of philosophy, but assumes an "inaugural gravitas" that looks to the future with the aim of changing the story – a pathos driven not by hubris but by a sense of wonder akin to that inherent in questions posed by pre-Socratic philosophers.[125]

Finally, in object-oriented philosophy Harman rehabilitates metaphor and its role in what he termed "weird realism." Since OOO has revealed the immense rift between objects, including the subjectivity-world divide, differences between objects are only related to scale and not any inherent qualities, which precludes the existence of an overarching object that would exhaustively impose its own meaning on reality. In this light, apart from mathematics, as Meillassoux insists, we only have indirect access to objects, dependent on the labor of translation that can never be faithful yet remains capable of glimpsing objects in their abysmal splendor. Harman draws in this context on Martin Heidegger's analysis of a broken hammer and points out how the "tool-being" of a hammer is disclosed when it ceases to be a ready tool and stands estranged.[126] When no longer seen as an instrument for driving nails, a small window opens onto the hammer's deeper existence and potential, which involves something else than the usual relationship between the tool and its user. This observation, when probed for deeper consequences, inclines to reassess human agency as well as cognitive mechanisms and capabilities. Since objects are inexhaustible and always recede from full access, no single approach can claim to have fully captured a given object.

124 Szymon Wróbel, "Otchłań przedmiotu. O filozofii, która nie jest już strażniczką bytu," in Graham Harman, *Traktat o przedmiotach*, trans. Marcin Rychter (Warszawa: Wydawnictwo Naukowe PWN, 2013), xvii.

125 Marcin Rychter, "Poczwórny Harman," in Harman, *Traktat o przedmiotach*, 217–218.

126 Graham Harman, *Tool Being. Heidegger and the Metaphysics of Objects* (Chicago: Open Court, 2011), 44–45.

Perhaps not even mathematics can fully disclose the possibilities lying dormant within objects. As Harman suggests, there is no royal road to substance. Indeed, the praxis of science can be said to also mobilize a long chain of objects in order to carry out experiments – long strings of mediators who make science possible at all. This is a significant departure from Meillassoux, whose mathematical inquiry seems to hover over and above material scientific labor, as if the vast apparatus of human science were not grounded and earth-bound. In this sense, Harman opens an interesting avenue for other forms of enquiry as autonomous and legitimate ways of probing the world, leading not just through laboratories but also along the lines of poetic description and artistic elaboration. Effectually, speculative realism rehabilitates metaphor as a vehicle of thought on a trajectory beyond one's finitude and toward the great outdoors. By employing imagery that cannot be applied literally, metaphor can have the estranging power which uncovers at least the contours of reality, challenging prevailing regimes of representation and piercing speculative holes in it, or clearing the map by adding empty spaces and estranging the image of the world rather than domesticating it. This reverse cartography would follow the above logic of tool-reversal, and pave the way for a different kind of realism and vision of the world.

Harman developed the concept of weird realism in a book devoted to H.P. Lovecraft, which forms an intriguing parallel to Hölderlin and Mallarmé, who inspired Heidegger and Derrida. In similar fashion, works by the loner from Providence became an important artistic beacon for Harman in his philosophical enquiry.[127] His analysis of Lovecraft's characteristic style shows how the horror writer foregrounds the tension between real, receding objects and the sensual language that tries to contain them, emphasizing the distortion of relations between visible objects and their properties. Lovecraft's writings abound in images of places where "geometry was all wrong," while mysterious objects boast colors describable "only by analogy" and protagonists are forced to make conjectures too wild to be normally articulated.[128] In Harman's account, Lovecraft's prose has two fundamental dimensions: the vertical, which reveals the gaps between objects and their observable properties, and the horizontal, which shows how objects accessible to cognition accumulate layers of accidental encrustations on their surface, forming dazzling swirls of characteristics.

The tectonic shifts in Lovecraft's style perfectly illustrate Harman's model of the quadruple object. To recount, it consists of four parts: the always receding real object; the sensual object accessible to the senses; the changing and volatile sensual qualities on its surface; and finally, the real qualities that make the object

127 Graham Harman, *Weird Realism: Lovecraft and Philosophy* (Winchester: Zero Books, 2012), eBook, 435.

128 Harman, *Weird Realism*, 135, 160.

unique and different from others. In this system of coordinates, a successful metaphor would transport sensual qualities from the sensual object to the real one. By taking an indirect, oblique route towards the real object, it can gesture at some aspect of reality, or contour it, remaining "not unfaithful to the spirit of the thing," as Lovecraft famously put it in a turn of phrase often invoked by Harman.[129] The philosopher identifies a problem with paraphrase, which remains limited by attempts "to give literal form to any statement, artwork, or anything else."[130] Literal content is inherently "stupid," Harman argues, because reality is not commensurate with our necessarily anthropocentric attempts to represent it. Lovecraft was painfully aware of the challenge to traditional humanism this entailed. Harman picks up on this theme by favoring "allusion" over paraphrase because the former is capable of "pointing towards a thing without making it present"; "indirect access," he continues, "is achieved by allowing the hidden object to deform the sensual world, just like the existence of a black hole might be inferred from the swirl of light and gases orbiting its core."[131] In this way, it becomes possible to discuss objects we cannot access directly, for example because they go beyond the limits of sanity, as is often the case with Lovecraft's ill-fated protagonists, or because they can be only gleaned through their local effects since they invariably recede from human eyes, a good example of which is climate change.

Metaphor has the capability to create movement and creatively redistribute object qualities thanks to what Harman calls "fusion" and "fission." Both can be seen as different modes of defamiliarization, or aesthetic interventions that can gesture towards real objects. Fusion occurs when sensual qualities are extracted from their sensual object, becoming the "rheme" of the metaphor, or its determining component, and are transported onto the orbit of the receding real object, the "theme," or the determined component, as if attracted by an "invisible sun."[132] Harman's simple example "man is a wolf" shows that the point is not to say that someone behaves or looks like wolf, but to suggest that the real object-person, whom we never face directly, has certain features that can be said to correspond with wolves, although it is difficult to ascertain what this would precisely indicate. Fusion enables making allusion to the silent object that recedes into the background and whose "allure" resonates with the real object through the metaphorically transported quality. Fission, on the other hand, consists in separating sensual qualities from the sensual object. Harman employs the term "theory" to denote the process of "splitting the usual relation between an

129 Harman, *Weird Realism*, 49–50.
130 Harman, *Weird Realism*, 23.
131 Harman, *Weird Realism*, 440.
132 Harman, *The Quadruple Object*, 194.

accessible sensual thing and its accessible sensual qualities."[133] Much like what happens in Cubist paintings, Harman notes, planes of view are rent apart, revealing which qualities are necessary for the existence of a given object and which are accidental. This ontological nuclear physics becomes a powerful tool of securing insightful cognitive vantage points and juggling between them.

In everyday life, Harman contends, we do not encounter any tremendous "tension between ourselves and our experiences."[134] This can happen only in the event when obvious observations and assessments are torn down, opening gaps that interrupt the "quasi-robotic union with the empty words we utter and the learned habitual gestures that have come to seem like natural extensions of ourselves."[135] It takes tremendous force for something new to cause "breakdowns along the fault-lines of things"[136] so that the results do not submit themselves to any paraphrase. Metaphorical language can cause seismic waves whose reverberations distort the accepted image of reality, revealing it to be fundamentally weird, Harman argues. "Reality itself is weird," he contends, "because reality itself is incommensurable with any attempt to represent or measure it."[137] In this sense, "weirding" becomes a powerful tool of upsetting dominant representations and opening gaps. Harman regards the production and destruction of gaps as the fundamental aspects of philosophy, aligning himself with the former tendency whose representatives he calls "productionists" because they emphasize the revelatory potential in philosophical and artistic efforts to pursue gaps rather than eliminate them, ultimately elevating weird realism over any representational variant.[138]

Opening the cartographical gap

The fundamental gap in cartography is that between map and territory. The rationale behind modern cartographical representations has been to close the gap and provide a sense of control over reality and its fundamental parameters, convincingly laid down on a surface in the form of a geometrical grid. By outlining a measurable world, maps of this kind establish a quasi-divine bird's-eye view of the Earth, enthroning humanity as the prime spectator of the global in the guise of a disengaged godhead. Harman's injunction, on the other hand, is to pursue gaps and even expand them, thus creating sites where different per-

133 Harman, *Weird Realism*, 446.
134 Harman, *Weird Realism*, 479.
135 Harman, *Weird Realism*, 479.
136 Harman, *Weird Realism*, 480.
137 Harman, *Weird Realism*, 100.
138 Harman, *Weird Realism*, 12.

spectives can coexist and be negotiated. These two approaches are vividly portrayed in Kei Miller's 2014 poetry collection *The Cartographer Tries to Find a Way to Zion*, where the Jamaican writer stages a lively dialogue between a Rastaman and a cartographer.[139] Their exchanges comprise the bulk of the volume and run throughout its entire length, with a more closely-packed eight-part section concentrating the argument in a philosophical dialogue.

Miller's book is prefaced by a Rastafari chant: "She hope dem caution worlmap / Fi stop draw Jamaica small / For de lickle speck cyaan show / We independantness at all!"[140] It draws together a number of key cartographical themes: the "worl-map," as the spelling suggests, opens the world-image to perspectives previously excluded from the imperial-colonial model. The question of visibility is also linked to that of sovereignty and control. The way in which Jamaica is positioned in the global imagination plays a significant role because visibility translates into agency and affords representation in systems of knowledge or exchange. Maps are used not only to measure distance but also to rhetorically convey certain visions of reality. Two such concepts of the world come clashing in Miller's dialogue.

The sequence opens with "poem I," "in which the cartographer explains himself."[141] He argues that "my job is not / to lose myself exactly / but to imagine / what loss might feel like." In an intriguing turn of phrase, Miller suggests that the cartographer readily admits the imaginative component in his work. "My job," he continues to explain, "is to imagine the widening / of the unfamiliar and also / the widening ache of it." This dovetails with the speculative inclination to pursue gaps and embrace initial loss of navigational control, making the cartographer painfully aware of his duty "to anticipate the ironic / question: how did we find / ourselves here?" In this context, irony could consist in the fact that "finding oneself" feels more like becoming disoriented. Loss of control or the ability to find the way, however, is not usually associated with maps. To correct the situation, the cartographer quickly points out that his task is "to untangle the tangled, / to unworry the concerned": to soothe the creeping dread that reality is slipping from grasp. This, in turn, is precisely what speculative realism helps to counter by "tangling the untangled," as in the case of subject-object relationships, and "worrying the unconcerned," as in the case of bringing to view objects like climate crisis, for example. The tension between these two tendencies reflects the one outlined by Harman as existing between those who destroy gaps and those who produce them.

139 Kei Miller, *The Cartographer Tries to Map a Way to Zion* (Manchester: Carcanet, 2014).
140 Miller, *The Cartographer…*, 5.
141 Miller, *The Cartographer…*, 16.

The Rastaman naturally disagrees on this point in the next poem, offering "another reasoning" with regard to the task of the cartographer: "that man's job is never straight- / forward or easy."[142] The dialogic dimension is important for the discursive-poetic form of the cycle and is also reflected in the very form of poems that comprise this sequence. The poetic line veers, "tangling the untangled," as is underlined by the use of enjambment, which cuts right through the compound word "straight-forward." The "formal strait" created in this way acts as a passage into the open ocean and back, staging loss and subsequent restitution of situatedness. The final effect of the run-on-line is that the separation of "forward" and its coupling with "easy" brings out an anxious necessity to paradoxically go backwards in order to understand.

Further, the "un-easy" path traced by the Rastaman refuses "to make thin and crushable / all that is big and as real as ourselves […] to make flat / all that is high and rolling […] to make invisible and wutliss / plenty things that poor people cyaa do without." This criticism re-iterates the accusation regarding literal and metaphorical flatness of cartographies that reduce everything to the same, human scale of colonial power. It is especially the adjective "crushable" that carries a strong, haptic tone suggestive of holding Earth like a ball, a subject-object relationship based on violent and reductive conceptual grasp premised on control rather than insight. As in digital image editing, flattening reduces all layers to a single unified plane and eliminates from view the earth's cosmic dimension as well as the circulating masses of air in the atmosphere, both constituting planetary-scale boundary conditions for the emergence of carbon-based life. Finally, it is particularly "crushing" today to see climate change being reduced to an economic factor that enters negotiations as if it were an aggressive player in global financial markets. This underscores the turn made in the third part of Rastaman's criticism, where he shifts to non-standard English to express a vital connection between capital-driven globalization and the price paid for such "progress" by the poorer parts of the world, which are already suffering the most from ongoing climate change and the persistent "invisibility" or worthlessness ("wutliss") in modern representations of the global. This notable wording helps Miller foreground the things that are considered worthless primarily because they are not sufficiently connected to global media and financial streams, underscoring how the richer or more "modernized" conceptualizations of the global readily dismiss entire cultures and ways of life that refuse to be entirely profit-driven. Such crushing conflation of local geographies that are forced into a prefigured notion of Earth as an extractive system is interestingly illustrated by Michael Druks's 1971 photograph titled "Flexible Geography (World)," which "appears at first to be an uninflated beach globe" but in fact is "a

142 Miller, *The Cartographer…*, 17.

ball of crumpled maps."[143] Echoing Harmon's commentary, the artwork could be said to depict a world from which air has been sucked out as all partial, historical and most of all local geographies are crushed so as to produce a ball, or sphere, forming the expected shape of the world. In the end, much like Miller, Druks offers in his piece a bitter commentary on the failed promise of utopian interconnectedness, which has served largely to eliminate difference rather than to honor the local and place it in a meaningful relation to the global.

Nevertheless, the invisible things not found on maps, or crushed in their modern amalgamations, are not an inert and passive backdrop to the single global success story. For example, "the corner shop from which Katie sell / her famous peanut porridge"[144] is no mere dot on a flat representation but an ontological and ethical beacon in communal imagination, a vantage point for orientation and a representation of identity, also in terms of local language. Foregrounding such places also entails another reversal insofar as the "negative" of the global structure emerges into view. As the Rastaman argues in the same part, what also needs to come forth through the map-maker's cartographical imagination is "all them things that shoulda never exist in the first place / like the conquest of pirates, like borders, / like the viral spread of governments." Importantly, this catalogue deploys key associations with maps and mapping: leading to treasure, outlining property and sovereignty, cataloguing state assets, and managing the population. Additionally, one decade later after Miller's book was published, the meaning of "viral" certainly resonates even more than before with web-driven high-velocity circulation of information and unfathomable dangers entailed by the proliferation of big data and disinformation.

Leaving the discussion of digital media for later, let us return to the exchange between the cartographer and the Rastaman. In the third part of the sequence, the former assuredly dismisses the above criticism by saying that all he does is science: "I show / the earth as it is," he argues, "without bias. / I never fall in love."[145] The sleigh-of-hand refusal of desire makes map-making inhuman, elevating the perspective to that of an objective, all-seeing eye of pure cartographical control – the Apollonian Eye, as Denis Cosgrove called it.[146] The detachment afforded by refusing to "get involved / with the muddy affairs of land" creates a divide, or a chasm embodied by Kantian dismissal of objects in themselves as inaccessible and thus impossible to be rationally pursued. The price for the ability "to show the full / of a place in just a glance" is to renounce the material

143 Harmon, *The Map as Art*, 229.
144 Miller, *The Cartographer…*, 17.
145 Miller, *The Cartographer…*, 18.
146 Denis Cosgrove, *Apollo's Eye. A Cartographic Genealogy of the Earth in the Western Imagination* (Baltimore: Johns Hopkins University Press, 2001), x.

roots that tie humanity to the geological and evolutionary deep history along with a thorough biotic and cross-cultural entanglement.

The question of short-sightedness that paradoxically marks the all-seeing eye is the crux of the speculative turn formulated in the sequence's fourth poem. Socratically examining the cartographer's position, the Rastaman asks two fundamental questions: "draw me a map of what you see / then I will draw a map of what you never see / and guess me whose map will be bigger than whose? / Guess me whose map will tell the larger truth?"[147] The former question points out that maps are always made from a specifically material perspective that necessarily cuts through reality using its own lines of cognition in order to carve a life-world from the earthly mass. The ironic tinge of "larger truth" certainly precludes any meaningful claims to "more universal" truths. Truth is made on the foundation of categories that bring visibility to certain groups of objects while remaining oblivious to others, although this does not mean the latter cannot have a profound impact on life. In this sense, truth would be premised on the fundamental coordinates used to bring out an image of the world, or its ontological fishing net, with eyes attuned to certain spatiotemporal scales and not others. In this way, the speculative Rastaman enters into conversation with Kant following a path opened by philosophers like Meillassoux, whose concept of correlationism comes to fore in this context. According to the French thinker, the world of castaway objects fallen from view in the Kantian vision of the world forms the prime example of how human cognitive and intellectual categories carve out a world-for-us from the Great Outdoors. Still, the world-in-itself does shine through ontological gaps on maps when the former are traced and opened. Pursuing them can bring out the negative of an anthropocentrically correlated image of the world, just like the Rastaman does in the dialogue with the cartographer.

The Rastaman continues to speak in the fifth part, extending an invitation to "share with I an unsalted stew / an exalted stew of gungo peas and callaloo."[148] This marks the introduction of an unusual subject: a dislodged or displaced "I" that stands apart from itself, both grammatically and semantically, veering between itself and oneself-as-another. This prefaces the reference to the "I-man" in the role of a different kind of cartographer, one working along lines unmarked in today's visions of globality, specifically "the ways and chains that I-man trod […] down here in Babylon." In Rastafarian Jamaican, "I-man" means "oneself as an individual, emphasizing the unity and divinity within all beings."[149] Read along these lines, the cartographical subjectivity of the "I-man" described in this poem

147 Miller, *The Cartographer…*, 19.
148 Miller, *The Cartographer…*, 20.
149 Jamaican Patwah, sv. "I-man", https://jamaicanpatwah.com/term/i-man/1009.

connotes a different vision of the world, one developed in response to the injustice entailed by extractivist globalization. In this way, the dialogue takes another turn as the lyrical subject ceases to belong to the cartographer or the Rastaman, shifting to a different mode of address.

The sixth part, written "after Kai Krause," draws on the software-engineer's visualization of Africa's size against the world's largest countries, which demonstrates the extent to which Mercator's projection has diminished Africa symbolically by making it smaller. The fallacy of relying on this illusion and embracing it was termed "immapancy" by Krause, as Miller elaborates in the note to this poem. A condition of "insufficient geographic knowledge" and the cartographic sister to "illiteracy"[150], immapancy would testify to a crisis in how we decide to envision a larger world ravaged by global conditions such as climate change or biodiversity loss – crises that necessitate ushering in a different vision of the world than the one afforded by banal, reductive globalization. The work of map-making, Miller suggests, necessitates taking up the challenge of developing a "cartographical view" while acknowledging the ambiguous impact of "maps which throughout time have gripped like girdles."[151] What emerges in this context is that the cartographical imagination we use to develop notions of the global needs liberation through poetic training and innovation, freeing it from the shackles of imperialist agenda and refocusing on two vital dimensions: in the past, the traumatic history, and in the future, communal response to the challenges of immapancy. Examples of the latter can be found in works that foster the cartographical imagination, aiming not only to visibly "represent" but also to speculatively "map" in the sense of revealing traumatic fault lines and providing a sense of uncanny connectivity and entanglement in a more-than-human world.

One good example of redressing the above immapancy through "counter-cartographies" is the work of Kollektiv Orangotango+, as exhibited in the album *This Is Not An Atlas. A Global Collection Of Counter-Cartographies*, which the editors and self-professed activists describe as an anthology of maps created from the bottom up instead of taking a bird-eye view. Shedding any pretense to deliver an "all-encompassing, true-to-scale, and objective view of the world," the critical mappings presented in the volume embrace the political character of cartography and its emancipatory potential.[152] Thematically ranging from the eviction crisis in San Francisco Bay and social risks in the favelas of Rio de Janeiro, to precarious sea passages through European maritime borders and sexual harassment in Egypt, these mapping projects comprise transversal elab-

150 Miller, *The Cartographer…*, 71.
151 Miller, *The Cartographer…*, 21.
152 *This Is Not An Atlas. A Global Collection Of Counter-Cartographies*, ed. Kollektiv Orangotango+ (Bielefeld: transcript Verlag, 2018), 13.

orations of issues often papered over in homogenized discourses of the global, offering "minor knowledge" that "leads to new maps and solidary cooperation" as well as "inspires emerging cartographers and supports grassroot movements struggling for a more free, egalitarian and ecological global society."[153] As a celebration of para-cartographies, or counter-mappings that speak from the margins of empires and imperial discourses, the volume confirms that critical cartographical imagination is today cultivated mostly outside the academia, big business, or national projects. In this sense, Denis Wood is right in arguing that "cartography is dead"[154] although this has also freed it from the restraints of thinking in purely geometric or totalizing ways, enabling cartography to become speculative and embrace its aesthetic and political roots in search for ways of rendering visible what had been suppressed. In an exemplary case titled "Information Overload. From the Map to the Ground, and Back," Elisa T. Bertuzzo and Günter Nest describe a particular project of mapping a self-organized settlement called Karail Basti in Dhaka. As students and researchers studied this area, their work soon became collaborative by engaging the local community to participate and contribute their own stories to the maps' "collective and manual generation," which made the process "function *poietically*, that is, trigger an ideally infinite generation and regeneration of observations according to changing perspectives."[155] In the end, this helped to "turn mapping into (a way of) storytelling," which in turn made it possible to reveal that "the place is already speaking to you with its own voice."[156] In this light, it transpires that cartography starts from listening and embraces narrative as a vehicle for developing a sense of place.

The speculative-realist framework facilitates discerning a wider array of map-making efforts in a world seen from different perspectives, even other-than-human. In the seventh poem in the sequence about the cartographer and the Rastaman, Miller ponders on the proliferation of cartographical lifeworlds that organize the reality of "bees returning to their hives" and "hummingbirds […] that pulse their tiny bodies across / oceans and then back."[157] According to this account, maps are not just mental representations but also physical forces that pave the ways for movement along specific material lines. In the final comparison to newborn turtles, maps literally "break eggs and […] guide them towards ocean instead of land." These kinds of material mappings prove fundamental for survival as they set out basic lines of growth and flight.

153 *This Is Not An Atlas*, 334.
154 After: *This Is Not An Atlas*, 13.
155 *This Is Not An Atlas*, 288, emphasis preserved.
156 *This Is Not An Atlas*, 289.
157 Miller, *The Cartographer…*, 22.

If this is so, humanity also has its own built-in maps. However, the scale of problems it faces today necessitates developing a cartographical imagination capable of connecting larger processes, at the same time looking inward and confronting the deep earthly history that each living being carries within itself. What this entails is the need to make space within one's subjectivity for a larger world that is both radically other yet uncannily found in the midst of all life. This kind of process, initiated by Miller at the level of the sequence's composition and continued with the gradual interlocking of the twin subjects, becomes clear at the onset of the eighth part after the transformation of the lyrical subject into "I&I": "I&I overstand," we read, "for is true that I-man / also looks to maps drawn by Jah's large hands."[158] The declaration delivered in Rastafari patois introduces a subjectivity that provides sufficient room for another "I," where otherness can be made visible and represented. The degree of strangeness invoked thematically in this concluding poem reaches literally cosmic dimensions through "the graph of stars, the cosmic blueprint / of I&I freedom." In Copernican fashion, the astronomical aspect is as an important point of reference not just for situating humanity in space but also for enabling human pursuit of freedom. The latter is importantly rooted in the fact that, in the face of more-than-human forces such as climate change, ensuring long-term freedom requires taking into account how these vast phenomena cut across our received notions of time and space, placing humanity not at the center, but in intermediate space, or between the twin black holes of knowledge as expressed in the image of "Jah who point our eyes / to well-bottom an say *blink and blink until* / *you see again the spread of guiding galaxies.*"[159] On the one hand sits the "well-bottom" of shared geological and evolutionary ancestry, and on the other – the "guiding galaxies" that gesture towards the cosmic formation of Earth as a habitable planet. Suspended between these vast scales, as is necessary to orient oneself in today's world, the subject of the poem is "I&I" – open to alterity yet wary of its inexhaustible, unplumbed depths that must always partly recede from view. As Miller wittily remarks, "stars too / are 'black bodies'," referring both to how black holes absorb light and thus remain unseen to the naked eye yet retain huge gravitational pull, and to the racially marked bodily dimension of this work.

Thus concludes the initial sequence of eight poems, with subsequent ones woven throughout the collection, totaling twenty-seven pieces in which the cartographer travels, seeks directions, and is amazed, while the Rastaman relentlessly continues to address the reductionism entailed by the closing of the gap between map and territory, hoping to "erase a small bit of history's disgrace."[160]

158 Miller, *The Cartographer…*, 23.
159 Miller, *The Cartographer…*, 23, emphasis preserved.
160 Miller, *The Cartographer…*, 29.

The Rastaman boasts about holding a PhD, "from Glasgow / no less"[161], thus revealing himself as none other than Miller and entering the dialogue in person. In contrast with the cartographer's progress, the poet gradually emphasizes the trajectory of movement from trauma, as illustrated in poems from the early part of the sequence, towards utopia, or Zion, pointing to potentially ethical, or even messianic horizon of cartography which weaves together "songs" that "spring from this strange land."[162] For that purpose, the rhythm of the cartographer's exploration of the island is contrasted with "nyabinghi beat" and "heartbeat riddim," or the "outlawed measure […] of cutlass and cane […] the terrible metre of hurricanes."[163] The two modes of mapping are premised on different measures, as Miller recalls in the ironic poem "Establishing the Metre" from the beginning of the collection, which describes the cartographical search for the perfect geometrical measure of distance. This allegedly detached pursuit is nevertheless revealed as the flip-side of colonial oppression, with cartography being called, in poem no. xix, "Babylon's most vampiric / orthography."[164] The cartographer's response to this is particularly interesting since it reflects the earlier consideration of mapping as inherent to all life – a cognitive equipment that transforms reality into a habitable world. Indeed, as the cartographer notes, despite cartography's blunders and limitations, "[w]e speak to navigate ourselves / away from dark corners and we become, / each one of us, cartographers."[165] Following this criticism, with no idiom more than a "partial map," cartography may lose some of its universality yet emerges as crucial for any effort to make reality meaningful and navigable. For the map-maker, this double bind "has wedged itself between his learning / and awakening" in the form of the question "How does one draw / towards the heart?" At this juncture between science and the humanities is the political-ethical project of Zion, an utopian vision of the future as something that needs to be owned and taken responsibility for. As a "reckoning day"[166], Zion concerns both the immediate ethical consequences of present actions ("just an arm's length away"[167]) and the broader communal horizon of the future, with its sustainability at stake. Rastaman's teachings about Zion in poem no. xxv emphasize the idea that the road to Zion is not open to "plotting" but begins with "Turbulation."[168] In other words, loss of direction is necessary for a different future to emerge as a political and theo-

161 Miller, *The Cartographer…*, 34.
162 Miller, *The Cartographer…*, 39.
163 Miller, *The Cartographer…*, 40.
164 Miller, *The Cartographer…*, 44.
165 Miller, *The Cartographer…*, 45.
166 Miller, *The Cartographer…*, 55.
167 Miller, *The Cartographer…*, 58, emphasis removed.
168 Miller, *The Cartographer…*, 62.

logical horizon of justice and prosperity, which cannot emerge through images produced by way of allegedly transparent geometrical representation.

In the penultimate poem of both the sequence and the collection, no. xxvi, the Rastaman delivers a sermon that concludes with the image of "a place / as cannot be held on maps or charts, a place that does not / keep still at the end of paths."[169] This echoes Malabou's argumentation discussed at the beginning of the chapter, which emphasizes how the work of speculation shows the prevailing discursive and material system of Earth's representation to be susceptible to modification through the kind of map-making that pursues places outside its scope. Turning towards places unmarked on maps is premised on pursuing gaps and sites made invisible or inherently too complex to appear on the grid of finance and individualism afforded by modern capitalism, which has produced lines and measures that not just reveal the world selectively but also obfuscate other conceptualizations. In the fast-consumerist culture of the global North, the real qualities of earth-as-an-object remain perpetually obscured by a parade of sensual qualities that cloud the real ones. The real planetary object remains unaddressed and invisible, appearing only through second-hand effects recognized in human spatiotemporal experience. When applied to envisionings of global planetarity, geological or social, it remains difficult to tie together empirical data, combining them into a sensual object that could reveal – on the expressive path of "Eidos" from Harman's ontographical map – some of the Earth's real qualities.

Just like in the case of deep tectonics that surface as volcanic eruptions or continental drift, real qualities can stand behind many of the sensual qualities recorded by humans. In this model, one of earth's real qualities is its core – something that no surface creatures can access directly. And yet, it is the core's ability to produce magnetism that forms the shield protecting biotic life against deadly radiation from space. Carbon-based life carries, in this way, its long genealogy at a deeper level by proliferating in all possible forms afforded by given planetary boundary conditions developed at earlier stages of terrestrial genesis. At another scale, some of the larger real objects include global capitalism and climate change. As these two collide, sending ontological shockwaves that affect societies and environments across the globe, humanity is placed not just in the position of an observer or admirer, but becomes itself an object in a dangerous game that plays out beyond clouds, at scales unfathomable in representational terms. In a twisted way, we have found ourselves back in Plato's cave by unleashing objects that diminish the centrality of humanity and its perspective. These Cthulhu-like hyperobjects, as Timothy Morton called them[170], are entities

169 Miller, *The Cartographer…*, 69.

170 Timothy Morton, *Hyperobjects. Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013), 1–2.

that wreak havoc without necessarily expressing open hostility. Their mere presence is transformative, confronting people with dimensions of existence that transcend human categories and limits of sanity. In a weird-realist perspective, these monsters are acknowledged to exist despite their elusive and trans-corporeal, or trans-objectal character.

In this perspective, the key part in the Rastaman's reflection was to confront history as monstrous and actually in no need of "untangling" or "unworrying." Importantly, the future is at stake here, underlining the heft of forward-thinking navigation. Rastaman's map to Zion is laid out according to different coordinates than ones employed in mainstream depictions of Jamaica. The cover of the book perfectly depicts how a history of "immapancy" has actually occluded the larger picture rather than made it clear. Designed by James Christopher Hill, it presents a palimpsestic amalgamation of wind-roses, geometrical and circular sketches, and an official form, thus making visible something we rarely see: the historico-material accumulation of navigational regimes that no longer facilitates orientation but in fact disorients and stifles. As the Rastaman clearly communicates, piercing through layers of misrepresentation is a straining effort as it necessitates finding oneself tied to a long network of objects on planet Earth. In his effort, however, he is aided by the measure or rhythm of his own, a groove that he can use to trace other earths than those captured in the colonial-capitalist imaginarium.

This topic is specifically addressed in Sylvia Wynter's essay referenced by Miller in the sequence's fourteenth poem. As Wynter argues, negative perception of the black population is "a function of the de-valorization of the human."[171] In her account, the results notably include "self-alienation" and "institutionalized powerlessness" – predicaments that indeed mar the situation of systemically oppressed communities, particularly ones identified by ethnic and income criteria. In notable words, Wynter speaks of such political coordinates as "specific maps to a single territory" that "institute" what she calls "our present biocentric descriptive statement of the human on the model of a natural organism."[172] What becomes apparent is that maps have tremendous power as models outlining certain ways of living, or what Wynter calls "our genres or kinds of being human." Drawing directly on Frantz Fanon, Wynter concludes that a framework of humanity premised on eugenicist ideas has to yield before "unremitting" pursuit of an "ever new understanding of man […] and that he must put an end to the narcissism on which he relies in order to imagine that he is different from the

171 Sylvia Wynter, "On How We Mistook the Map for the Territory," in *Not Only The Master's Tools. African-American Studies in Theory And Practice*, eds. Lewis R. Gordon and Jane Anna Gordon (London: Routledge, 2006), 119.

172 Wynter, "On How We Mistook…," 117.

other 'animals'."[173] After all, mapping, or cartographical imagination is a field where we negotiate future-oriented paths along which the human animal can unfold, change and thrive alongside other beings.

These coordinates are necessarily transnational owing to the fact that today's reach of trade and communication is global. At the same time, human subjectivity becomes globalized by the sheer fact of its volume and mobility as well as owing to the condition of being tied to others around the globe through a myriad of socio-economic links which have uprooted traditional prioritization of locality as regards identity-formation. This is experienced and recorded by the Rastaman, who describes forms of mapping that could locate Jamaica in non-extractive terms. The figure of the island is important in the collection because Miller strongly pushes for ways of rendering it "unsettled" in a poem that imagines it filled with a dense tangle of flora and fauna, as well as history and affect. These dimensions are mixed and hybridized rather than separated into the domains of nature and culture. Nevertheless, it remains "untamed": "unsanitized, unstructured […] unmannered, unmeasured [unwritten, unsettled, unmapped]."[174] Several things happen here: despite being surveyed in multiple nature-cultural dimensions, Jamaica cannot be exhausted and invariably recedes from the hungry map-maker's eyes, in this sense remaining perpetually unmapped and unmappable. This liberation comes at a cost since lack of a privileged overseeing eye dislodges any sense of stability and mastery, entailing a degree of confusion and disorientation. However, it also raises the challenge to take up this effort without trying to achieve the cartographical ideal of perfect visibility, instead venturing to produce one's own maps and work with one's navigational skills. In this sense, Miller's collection proposes to engage in the kind of map-making that would facilitate developing an identity premised on overcoming two important binary oppositions: nature-culture and local-global. As for the first, Miller is preoccupied with how ways of living comprise an embodied map-making that remains materially situated rather than disengaged or detached. In the case of the second, Jamaica's history resists being seen as an isolated narrative; indeed, its entanglement in colonial oppression has forcibly included it in global-scale flows of products and capital. At the same time, as confirmed by Miller's self-proclaimed migrant identity and the subject of poems from his collection, it is movement and dislocation that propel formation of the self: historically for Jamaica, but today also for all global denizens. Finally, the insistence on the transitive, relational identity on Miller's part echoes Achille Mbembe's "ethics of the passerby," who remains open to "elsewheres" and thus leaves within his own subjectivity a place for discovery and spontaneous en-

173 After: Wynter, "On How We Mistook…," 120.
174 Miller, *The Cartographer…*, 18.

gagement in building a community over and above oppressive demarcations of political and military boundaries and zones.[175] Acknowledgement of this has certainly been a necessary step in postcolonial theory and decolonization, as is also testified by reflection on decolonial cartography, which bases on counter-mapping for "creating new geo-bodies" and reforging identities along non-imperial lines.[176]

The collection itself can be read as a decolonial atlas, or a map to the kind of reading that is active, engaged and imaginative. This may in fact constitute the greatest asset of the book in literary terms. Its subjective insight into Jamaica's language, topography, biotic life and history works as an atlas that unfolds in accordance to its own rhythm, a measure taken with emotion and poetic earth-writing rather than a possessiveness that harnesses disembodied geometrical forms to own lands at a glance. As Michael Rose-Steel noted, the productiveness of this approach is premised not on "monosemic systematization" but on the creation of gaps, which occurs whenever subjective expression proliferates; ultimately, gaps "become much more than a surface of a map; they respond to a different key."[177] In other words, gaps are not empty spaces that annul semantic efforts but are rather like the void-cum-plenum discussed earlier in the context of Tracy Smith. Gaps are therefore productive and mobilize ways of reading that enable to "militate against simple classifications and reductionist thinking."[178] In this context, Rose-Steele draws on Viktor Shklovsky's notion of defamiliarization to underline the importance of "'disorientation' as a desired outcome of writing."[179] As Shklovsky emphasized, to make something unfamiliar requires shifting perspective – something that literature can do well – in order to obtain different details, to see something anew by slowing down perception and de-automatizing it.[180] In this sense, Shklovsky's technique is premised on short-circuiting those mechanisms of association and identification which create stereotypical and simplifying views in the name of cognitive efficiency. According to Eric Bulson, who is referenced by Rose-Steel in the conclusion, cartographical de-automatization is a way to "resist prescribed ways of imagining the world" and to "counteract capitalist abstraction and the forgetfulness of

175 Achille Mbembe, *Necropolitics*, trans. Steven Corcoran (Durham: Duke University Press, 2019), 186.

176 James R. Akerman, "Introduction," in *Decolonizing the Map*, ed. James R. Akerman (Chicago: University of Chicago Press, 2017), 8.

177 Michael Rose-Steel, "Of Metaphors and Maps: Cartographic Thinking and the Poetry of Kei Miller," *Politics of Place: Green Connections* 3 (2015), 52.

178 Rose-Steel, "Of Metaphors and Maps," 53.

179 Rose-Steel, "Of Metaphors and Maps," 53.

180 Viktor Shklovsky, "Art as Device," in *Viktor Shklovsky. A Reader*, trans. and ed. Alexandra Berlina (New York: Bloomsbury, 2017), 79.

history."[181] This knot of geographical and material expropriation is undercut by Miller with a plethora of images and voices, which suggest that "we orient ourselves by them, but cannot chart a straight course."[182] This poses a problem to unilateral geometrical cartography: the work of estrangement opens up other possible coordinates for charting the unknown island of Jamaica by seeing it through gaps in Western representations: colonial, enslaving and extractivist. What they obfuscate is a much more complex assemblage of natural and human history as a more-than-human force that has shaped, often traumatically, the history of an island which essentially refuses to be seen at a glance. As Jamaica is now facing an even greater threat in the form of climate change – expecting heatwaves, droughts, floods and rise of sea levels – it continues to be implicated in global processes and more than ever calls for mapping out these implications and developing an awareness that could prove conducive to change.

To conclude, in the face of climate change and other hyperobjects stretched in time and space beyond human intuitive grasp yet confirmed by scientific research, we experience the interruption of Earth, or the "intrusion of Gaia" as Stengers called it. By amassing data from a variety of locales, a distinctly new sense of a greater whole emerges – a vision that would be less myopic in terms of anthropocentrism and cognizant of the relational tangle that binds humanity to its habitat. This, however, triggers a crisis of representation, leading to questions regarding the possibility to capture the thrust of changes that engulf the human and non-human world. Lack of navigational tools for traversing the human-altered landscape of the twenty-first century calls for mapping practices that would transcend traditional cartography in a move similar to that made by speculative realists, counter-cartographers, poets, and artists. The conventional opposition of map and territory – as well as that of subject and object – would be transformed by shifting focus towards the dense mesh of relations that populate gaps. As Kei Miller vividly demonstrates, by tracing the fault lines of today's ecological and social crises it becomes possible to glimpse in these interruptions a larger reality and use these findings as coordinates for navigating the ethical and political turmoil of the twenty-first century. Speculative realism has proven especially invigorating in this respect, opening a fresh chapter in ontology by enabling to rework the concept of cartography and envision different images of globality – ones that challenge accepted notions of realism and humanity's place on Earth.

181 After: Rose-Steel, "Of Metaphors and Maps," 53.
182 Rose-Steel, "Of Metaphors and Maps," 53.

"There are only worlds"

In the area of speculative realism, the work of American philosopher Levi Bryant combines a democratically conceived ontology with reflection on globality, notably framing the discussion using a broadened concept of cartography. Akin to Graham Harman, who originated object-oriented "ontography," Levi Bryant developed the concept of "onto-cartography" in the study *Onto-Cartography. An Ontology of Machines and Media*, where he extends the notion of cartography beyond geography to encompass all sorts of mappings, ultimately developing the notion of the world's composition in the broadest sense.[183] He reworks object-oriented ontology into an "ontology of machines and media," underscoring the dense web of interrelations in the universe of objects and thus facilitating an account of "post-human media ecology."[184] Bryant's notion of machines follows from Harmanian objects, but he shifts focus from the discussion of objects as autonomous beings, outlined in *The Democracy of Objects*, to "structural couplings between machines that modify the becoming, movement, activity, or sensing of other machines," or more simply: media.[185] He understands them, however, not from the perspective of anthropocentric cultural studies but a post-human theory which "presents an ecological vision of relations between machines that elides any fundamental distinction between the kingdom of the human and the kingdom of the non-human."[186] As Bryant holds, an account of these relations can only take the form of an onto-cartography that maps these relations and the lines along which they are formed. This allows Bryant to think ecologically, i. e. in terms of how humanity is part of life on the planet and how the planet constitutes a more-than-human ground that has its own agency and cannot be reduced to human terms.

Although Harman's object-oriented ontology opened a refreshing perspective on autonomous reality, or a "Great Outdoors" formed by galaxies of objects, Bryant's perspective crucially introduces, through onto-cartography, the idea that by pursuing the coupling and un-coupling of machines we may glimpse the very structure or "ecologies" of worlds.[187] This highlights one of the original functions of cartography, namely to establish fundamental coordinates by providing a sense of an overarching, irreducible whole and allowing one to position themselves within it. As Bryant points out, although cartography is mainly associated with geography, there is a whole range of mapping practices whose

183 Levi R. Bryant, *Onto-Cartography. An Ontology of Machines and Media* (Edinburgh: Edinburgh University Press, 2014), 111.
184 Levi R. Bryant, *Onto-Cartography*, 30.
185 Levi R. Bryant, *Onto-Cartography*, 35.
186 Levi R. Bryant, *Onto-Cartography*, 35.
187 Levi R. Bryant, *Onto-Cartography*, 111.

products may not necessarily resemble geographical maps that trace strictly physical features and spatial relations. Onto-cartography, in particular, does not pertain to the lay of the land itself but rather to networks formed by machines that flesh out the world. Importantly, however, the world invoked by Bryant is not made in human image but comprises the "ungrounded ground of all systems of meanings [which] beings such as ourselves and dolphins might throw over it."[188] Fathoming something so vast is impossible, of course, as such objects are in his view "non-subjectivizable," just like the Lovecraftian deities invoked earlier, which transcend human cognitive capabilities. The only way to trace their outlines, while remaining "not unfaithful to the spirit of the thing," is to pay attention to the ways in which the world breaks down, or rather "*intrudes* on the networks of meaning we throw over it."[189] This can be illustrated with the way geology works. Since we do not have direct access to inner Earth, tectonic shifts, earthquakes and volcanic eruptions have been the conduit for surface-dwellers to listen to the rumblings of the planet deep below, and to hypothesize about its structure. Bryant likens this to how Lacanian psychoanalysis describes the emergence of the Real: as a traumatic intervention that pierces through the imaginary and symbolic orders used to wrap reality in layers of meaning. Importantly, the psychoanalytic theory of trauma was redefined in planetary perspective by Iranian philosopher Reza Negarestani, also associated with speculative realism, whose work is discussed further.

In this context, however, it is worthwhile to align Bryant's planetary theory with Harman's elaboration of tool-being. Just like in the case of the hammer that remains unnoticeable when sitting snug in hand and suddenly comes into awareness when broken, unveiling its deeper existence, it is possible to argue that climate change and other ecological catastrophes have recently "broken down" planetary systems as we know them, revealing the hidden powers of the world and its sheer depth, or gravitational pull, which effectually precludes any sense of mastery. "To be in a world," Bryant concludes, "is to be decentralized, to lack all mastery, and to be a participant in an assemblage, network, or composition that exceeds society, culture, and oneself."[190] Accordingly, Bryant contrasts the correlationist closing of the gap between map and territory – a centralizing and imperial gesture – with onto-cartography, which "seeks to map the gravitational relations between machines arising from the manner in which they mediate one another so as to determine why assemblages take on the patterned organization they possess."[191] Focusing on "gravitational relations" rather than ordinary

188 Levi R. Bryant, *Onto-Cartography*, 112.
189 Levi R. Bryant, *Onto-Cartography*, 112, emphasis preserved.
190 Levi R. Bryant, *Onto-Cartography*, 114.
191 Levi R. Bryant, *Onto-Cartography*, 197.

distance, Bryant understands maps in non-representational terms, expanding cartography to include not only topographical maps, but also genetic maps explaining historical becomings and vector maps that "chart the trajectories along which worlds are unfolding."[192] Maps like these help to understand the dynamics of examined worlds without resorting to generalization. Instead, they enquire about composition, at the same time indicating possible points for intervention. Importantly, as Bryant observes, maps have two important features that need to be taken into account. The first is that maps are always selective and thus prone to obscuring certain aspects in the picture in favor of others. The second is that maps, as machines, are also invested with agency and power, which specifically consist in their ability to shape the image of the world as well as act upon it.[193] Although when applied to modern cartography they become two powerful positions for criticizing Western cartographical reason as a colonial and extractivist apparatus, in the larger context of speculative cartographies they become liberating principles that, first, acknowledge that the world is non-totalizable, and second, bestow on maps the potential to change the world through active, transformative mediation.

This paves the way for a new kind of geopolitics, or "politics of the earth"[194] that would take into account both humans and non-humans in order to imagine more sustainable worlds and boost the ability to bring about change.[195] The speculative turn thus appears capable of reinvigorating cartography by revealing, as Esther Scholtes points out, that "the gap between 'map' and 'mapped world' is not a vacuum, but rather is a complex ensemble of relationships that are constantly regenerated"; accordingly, she argues, in order to "imbue the cartographic metaphor with new vigour, we need to activate this gap."[196] As she concludes in her discussion of artistic uses of cartography in film and photography, maps are insightful precisely insofar as they operate in the "twilight zone between reality and its description"[197], revealing previously unfathomed connections and dependencies. Such shift of perspective not only reveals networks of machines that mediate flows within ecologies, but also embraces map-making primarily as facilitating production of "gravitational transformations"[198] – ones that take into account the situated and embedded character of material meaning-making on Earth. Finally, the above analytical component is only one part of Bryant's

192 Levi R. Bryant, *Onto-Cartography*, 265.
193 Levi R. Bryant, *Onto-Cartography*, 124.
194 Levi R. Bryant, *Onto-Cartography*, 206.
195 Levi R. Bryant, *Onto-Cartography*, 211.
196 Esther Scholtes, "Terra Nullius. Cartographic Metaphors In-Between World and Representation," *kunstlicht* 41.2–3 (2020), 18.
197 Esther Scholtes, "Terra Nullius," 18.
198 Levi R. Bryant, *Onto-Cartography*, 211.

"geophilosophy," or "terraism"[199] as he provisionally called it on his blog, which also includes deconstruction and terraformation, all three interrelated and depending on each other.[200]

The last two processes make use of speculative, or ontological maps in order to "intervene in worlds so as to produce better ecologies or assemblages"[201] by making connections or severing them. Since Bryant's flavor of geophilosophy is markedly non-dualistic, he does not wish to wrench cultural processes from natural ones but emphasizes that his view of mapping acknowledges the complexity of interrelations between the human and the non-human. Thus, his theory embraces entire ecologies seen from a less anthropocentric perspective, with humanity no longer residing in the privileged position. In this sense, his onto-cartography is pluralistic and ontologically democratic, at the same time allowing for weirder yet indispensable accounts of how worlds work. At the same time, Bryant contends, since not everything is connected to everything else, it is impossible to speak of cartography in the singular. There are always already cartographies in the plural, and Bryant does not hesitate to call them "the First Philosophy of political practice": "[w]ithout cartography," he claims, "nothing is possible."[202] By taking the world for granted and obvious, or reducing it to abstract notions, we would face the elimination of "wonder and perplexity" that are intimately connected with cartographical practice as well as predetermine the openness to build more-than-human collectives and to "become-other in working with others."[203]

Since assemblages cut across the human-nature divide, pursuing their operations requires dismantling binarism and rethinking the concept of nature. In this, Bryant aligns himself with Timothy Morton in claiming that nature cannot be considered as existing outside the doors of civilization but permeates what we call culture, making the two indistinguishable. As Bryant concurs, "geophilosophy proposes that there is only nature, that culture itself is a formation of nature, and that there are no transcendent or vertical terms outside of nature."[204] In this way, an ecological reconsideration of society entails thinking about it as continuous with nature. The implications of this are quite profound, as Bryant shows, arguing that nature must be viewed as historical and creative as well as contingent and not determined by any single arch-principle.

199 Levi R. Bryant, "Terraism," *Larval Subjects*, 4 October 2011, https://larvalsubjects.wordpress.com/2011/10/04/terraism/.
200 Levi R. Bryant, *Onto-Cartography*, 279.
201 Levi R. Bryant, *Onto-Cartography*, 257.
202 Levi R. Bryant, "Terraism."
203 Levi R. Bryant, "Terraism."
204 Levi R. Bryant, *Onto-Cartography*, 256.

Bryant's concept of mediating machines aligns with the practice of mapping as the condition of sense-making: not just as active reading but also as a way of living and negotiating the relationship between oneself and the larger environment – a practice of putting the world together. In his characterization of mapping practices Bryant discusses four types of maps: topographical, genetic, vector, and modal maps, all of them revealing concerns that are crucial for geophilosophy.[205] First, topographical maps demonstrate the material conditions for various becomings of assemblages by foregrounding geological and geographical factors as well as networks of technologies that underpin global circulation of information. In this, they can shed more light on how non-human agency is involved in structuring the ecologies we inhabit. "Understanding these flows," Bryant notes, "is crucial to understanding the gravitational structure of assemblages."[206] Among these flows a crucial role is played by sources of energy and material outputs, or waste. Second, genetic maps "chart the *genesis* or history of how particular worlds came to be."[207] Bryant names Marx, Freud and Darwin as exemplary genetic cartographers, and regards their achievement to consist mainly in denaturalizing sociopolitical praxis, or putting it in perspective by revealing its contingency and indicating that alternatives are possible, i. e. that no given social order or vision of the world is somehow more natural since they are historical and susceptible to plastic formation. The idea that things could have been otherwise helps to conceive of a different world that may be more equitable. The concept of the future is actually the subject of the two last types of maps: vector and modal ones. The third type, or vector maps chart possible futures on the basis of trends observable in the present. Climate science works in this way as it predicts how raising global temperatures by 1.5 degrees Celsius can set in motion processes that will affect life on Earth in a longer perspective for all biotic life. Such maps are crucial because they point out key matters of concern that need to be urgently addressed. Finally, the fourth type, or modal maps chart possible futures and consider what would have to change in the existing assemblage so that it could "produce" a desired world.[208] These interventions can consist either in severing existing connections and creating "lines of flight" (the practice of deconstruction), or by "forging new relations" and "building new ecologies" (the practice of terraformation).[209] These practices add up, Bryant concludes, to a cartographical politics that differs from one based on quasi-natural norms and standards. Mapping "how gravity is structured"[210] does not

205 Levi R. Bryant, *Onto-Cartography*, 259.
206 Levi R. Bryant, *Onto-Cartography*, 261.
207 Levi R. Bryant, *Onto-Cartography*, 263, emphasis preserved.
208 Levi R. Bryant, *Onto-Cartography*, 266.
209 Levi R. Bryant, *Onto-Cartography*, 279.
210 Levi R. Bryant, *Onto-Cartography*, 283.

imply a normative system of values but shows "how power or gravity functions in particular social assemblages or worlds"[211] without introducing humanocentric or ethnocentric bias. Overall, Bryant's onto-cartography offers a post-humanist framework for considering how vast networks of different machines mediate one another and structure the ecologies humanity is a part of. It is only in such perspective, he argues, that we can "develop maps adequate to the political demands that face us today"[212], notably climate change and ecological crises as well as inequality and migration.

Bryant's theory takes cue from the geophilosophy formulated by Gilles Deleuze and Félix Guattari in *What is Philosophy?* where they argue that thinking itself emerges from the relationship between earth and territory – between the "plane of immanence" on the one hand, and our mapping of it on the other, or "existential territorialization" as they call it.[213] These two poles are useful insofar as they replace the notions of subject and object. The Copernican Revolution, Deleuze and Guattari argue, "puts thought into a direct relationship with earth"; however, the earth, much like in speculative realism, "goes beyond any territory" and cannot be ever fully conceptualized.[214] In geophilosophy, territory and earth comprise "two components with two zones of indiscernibility – deterritorialization (from territory to the earth) and reterritorialization (from earth to territory)."[215] We inhabit this twilight region where thought emerges out of the tension between the earth as the ground of existence and the mappings that help to situate oneself in reality and navigate it. In a vivid metaphor, the authors describe thinking as consisting in "stretching out a plane of immanence that absorbs the earth (or rather, 'adsorbs' it)."[216] In effect, the earth shapes us into what we are but we in turn reshape ourselves by producing territories for thought and action. Therefore, as Bruno Bosteels remarks, forging new "cartographies of the unconscious should develop new modes of producing subjectivity […] at the unstable middle ground between territory and the earth."[217] Further, Bosteels regards "cartographic legends and interpretants," or the "cartographic grammatology" (after John Pickles), to be the key mechanism that transforms Earth

211 Levi R. Bryant, *Onto-Cartography*, 284.
212 Levi R. Bryant, *Onto-Cartography*, 286.
213 Gilles Deleuze and Félix Guattari, *What Is Philosophy?*, trans. Hugh Tomlinson and Graham Burchell (New York: Columbia University Press), eBook, 171.
214 Gilles Deleuze and Félix Guattari, *What Is Philosophy?*, 171.
215 Gilles Deleuze and Félix Guattari, *What Is Philosophy?*, 172.
216 Gilles Deleuze and Félix Guattari, *What Is Philosophy?*, 177.
217 Bruno Bosteels, "From Text to Territory. Félix Guattari's Cartographies of the Unconscious," in *Deleuze & Guattari: New Mappings in Politics, Philosophy, and Culture*, eds. Eleanor Kaufman and Kevin Jon Heller (Minneapolis: University of Minnesota Press, 1998), 168.

into an existential territory.[218] The unconscious mentioned by Bosteels would include, especially in light of Bryant's onto-cartography, not just personal history but also the vast ground of life, its human and non-human conditions of possibility.

This stance was also differently expressed by Gilles Deleuze in a television interview with Claire Parnet titled *L'Abécédaire de Gilles Deleuze*. In the part "D for Désir," he voices the conviction that "literature is not someone's little private affair" but rather a means of "hallucinating" (*délire*) the entire world: "history, geography, tribes, deserts, people, races, climates etc."[219] Deleuze uses this argument to summarize his criticism of psychoanalysis. He observes that its greatest fallacy is to reduce all problems to a family tragedy, a childhood affair that is later repeatedly staged in the psychic theatre, effectively anchoring one's significance in patricide fantasies, or anxieties about the symbolic phallus. This is most clearly visible, according to Deleuze, in psychoanalytical misunderstanding of delirium. "One *délires* the world," he claims, "and not one's little family."[220] This would amount to saying that fictional flights of imagination or wandering metaphors are not reducible to particular nodes in one's private history, but point outward in a hallucinatory attempt to asymptotically come to terms with the world. For Deleuze, this also implies that the fundamental cognitive dimension, one that we obviously share with animals, consists in a specifically understood twofold mapping: territorialisation, which involves locating oneself within a given environment, and deterritorialisation, or establishing lines of flight, escape routes, and ways out that tap into the realm of possibility. Delirium, he emphasizes, is always a "world delirium," a cosmic one, and not a "family delirium."[221] The unconscious then would be much more than a social affair since in this light it reaches back to the ground of all life and thought on planetary scale.

Confronting the chaos, or delirious fantasies "crossing the universe in an instant"[222], and bringing intelligible orders requires that we "cast planes over the chaos"[223] using art, science and philosophy in order to "cut through the chaos in different ways."[224] The brain, Deleuze and Guattari argue, sits at the junction of the three planes, which act as "rafts on which the brain plunges into and confronts chaos," and through their interaction becomes subject, or "thought-

218 Bruno Bosteels, "From Text to Territory," 168.
219 Gilles Deleuze, "D for Désir," in *L'Abécédaire de Gilles Deleuze*, produced by Pierre-André Boutang, interviews by Claire Parnet, *Arte*, France 1995.
220 Gilles Deleuze, "D for Désir."
221 Gilles Deleuze, "D for Désir."
222 Gilles Deleuze and Félix Guattari, *What Is Philosophy?*, 389.
223 Gilles Deleuze and Félix Guattari, *What Is Philosophy?*, 390.
224 Gilles Deleuze and Félix Guattari, *What Is Philosophy?*, 402.

brain."[225] In an interesting turn of phrase, brain is said to be a "state of survey without distance, at ground level"; through such cerebral cartography, it "sets up the plane of immanence on which concepts are placed, move, change order and relations, are renewed, and never cease being created."[226] Already at this stage it is possible to hypothesize about an extended notion of a more-than-human brain whose primary operation is mapping chaos. Although this theme is only signaled here, it was developed by Catherine Malabou, whose work is discussed further. The key tension at work here would be the one between brain and subjectivity. Deleuze and Guattari echo Arthur Rimbaud's claim that "I is another" and build on the cartographical gap existing between subjectivity and earth – a gap filled by the brain, a busy mapmaker who belongs fully in nature and creates a fictional "I" by situating itself in the environment. In the end, this contributes to a broadened understanding of cartography. Conceived as a map-making that combines geography, writing, aesthetics and technology, speculative cartographies chart maps of an uncanny world that bred us yet escapes our surveying power. Their mode of operation is fiction because it concerns hallucinating the world rather than firmly taking it into possession. Such cartographies, I argue, have recently emerged not just in critical works but also in a variety of arts, embracing weird realism and offering elaborations of a defamiliarized world that we thought we knew so well but which falls through gaps pierced by global-scale events described by natural sciences and sensed in both art and planetary computation. Further, the socially produced parameters of reality are unable to shoulder the non-intuitive picture that emerges from modern research in physics and mathematics, thus becoming in need of updating. Ultimately, what becomes necessary is to draw on the power of imagination to create new visions of reality that reveal a thoroughly surreal and counterintuitive concept of nature.

Surreal nature

This issue is addressed by Marek Woszczek in his study of the weirdness of world-as-nature, titled *Potentiality, Physics, and the Discovery of Surreality of Nature.*[227] Combining insights from physics and mathematics, he develops a philosophical analysis of the metaphysics of nature from Bruno and Descartes to Locke, Leibniz, Newton and Hobbes, tracing the development of a stable and passive view of nature. The cage of metaphysics formed at this philosophical

225 Gilles Deleuze and Félix Guattari, *What Is Philosophy?*, 406.
226 Gilles Deleuze and Félix Guattari, *What Is Philosophy?*, 407.
227 Marek Woszczek, *Potencjalność, fizyka i odkrycie surrealności natury* (Warszawa: Wydawnictwo Naukowe PWN, 2021).

juncture continues to bind humanity to a vision of reality formed around false metaphors as Woszczek straightforwardly calls such world-images. Remaking them requires a "deep inversion of metaphysics in recognition of the fact that Nature is fundamentally surreal."[228] What Woszczek demonstrates in his work is the upturning of the "ascetic" vision of nature as largely inert, un-generative, and patiently obeying the laws of physics, specifically human-made instruments and technologies. His thesis is that nature is in fact a dimension of potentiality that can only be regarded as surreal, or etymologically speaking, "beyond" (sur-) what is conventionally regarded to be "real," insofar as it is disobedient, excessive and even "anarchic." This perspective, he argues, better captures the implications gleaned from the latest findings in experimental and theoretical physics.

Woszczek argues that quantum paradoxes show the fallacy of the metaphysical imagination shaped by predominant ideas suggesting how nature functions.[229] The two metaphors he analyses can be seen as cartographies of reality that fray despite their claims to authority and attempts to stabilize nature as operating in predictable ways. The first such mapping originates in David Hume and "develops a vision of nature as a plane of individual, independent properties or events"; like pixels in an atomistic "mosaic" they flash up contingently yet all their current global states are available to the "Absolute Eye."[230] The second configuration, or geometrization of nature concerns setting it in the role of a "model student": a "disciplined ascete" or "perfect queen."[231] The heavily gendered formula clearly makes nature expected to passively subject to the male Apollonian gaze placed at an abstracted, removed position of the all-seeing eye, in this case by following expected principles of conduct measurable by instruments. This image is that of ideal reason looking down upon its loyal and obedient subject, casting nature in the role of a handsome yet passive bride wooed by firm Science as opposed to lower-case and plural sciences which do not claim to form a bigger picture. Woszczek also references an image from Deleuze: that of a teacher who assigns a task to the student; its completion is then assessed in terms of what is true and what is false in the eye of a "serious authority."[232] The Polish philosopher points out that this corresponds to the Leibnizian teleological ideal of "maximum determinability as perfection," which Deleuze mocks in his discussion of his example as an infantile superstition, or a fantasy of mastery. Woszczek himself, in turn, argues that "we live in a quantum Universe which only sometimes appears to follow classical mechanics that facilitate modelling it to a

228 Marek Woszczek, *Potencjalność, fizyka…*, back cover.
229 Marek Woszczek, *Potencjalność, fizyka…*, 160.
230 Marek Woszczek, *Potencjalność, fizyka…*, 160.
231 Marek Woszczek, *Potencjalność, fizyka…*, 161.
232 Marek Woszczek, *Potencjalność, fizyka…*, 161.

certain degree."[233] What this shows is that the universe is not mappable in the conventional sense of geometrical and teleological authority, posing a challenge to expand the metaphysical imagination with a view to embrace another vision of reality.

According to Woszczek, there is in fact no rational authority that oversees the diligent student. At the ontological level revealed by quantum theory, nature is the complete opposite. Echoing the gendered metaphor, Woszczek regards nature not as an obedient girl but as the many-breasted goddess Diana who represents the abundance and excess of the surreal sub-world of potentiality where indeterminacy reigns supreme. He lifts this image from Giordano Bruno in order to metaphorically capture the excessive character of quantum entanglement, which organizes quantum fields of possibility, "Nature," Woszczek argues, proceeds by "effectively trying out all possible scenarios at the same time, as is demonstrated by global superpositions of field states regardless of spacetime."[234] What happens is that in any given situation nature simulates every possible trajectory, laying out a field of potentiality that is already entangled in quantum terms and thus does not constitute a set of logical variants, instead "entering physical interaction, becoming entangled […] even if no events bring them together."[235] In this sense, Woszczek concludes, what we usually consider to be observable nature is merely a blip on the ocean of surreal potentiality that is always active and does not require any stimuli to be generative. Once again, however, it is not mappable and cannot be catalogued or browsed as if we were zapping through channels in multiverse television.[236] The key takeaway from this in the present context is not just that nature cannot be rendered fully visible but that we have been mostly looking in the wrong direction. Woszczek holds that we are today challenged to accept that the surreal dimension of potentiality is actually the reality, constituting a shifting ontological ground. This image also echoes Guattari's concept of "chaosmosis" which has no "pre-established schemas." The French philosopher expounds his concept in terms of mapping, concluding that a "cartographic representation" of chaosmosis would concern "existential production involving territorialised components of finitude […] and the engendering of Universes of virtuality which are not directly locatable within extrinsic discursive coordinates."[237] Finally, Woszczek's approach resonates with

233 Marek Woszczek, *Potencjalność, fizyka…*, 161.
234 Marek Woszczek, *Potencjalność, fizyka…*, 163.
235 Marek Woszczek, *Potencjalność, fizyka…*, 163.
236 Marek Woszczek, *Potencjalność, fizyka…*, 169.
237 Félix Guattari, *Chaosmosis: an ethico-aesthetic paradigm*, trans. Paul Bains and Julian Pefanis (Bloomington: Indiana University Press, 1995), 125.

Meillassoux's concept of "hyper-chaos," which is neither full chaos nor static order: it is unlimited and unrestrained.[238]

Woszczek's inversion of metaphysics suggests a different mapping of reality, one that crucially takes stock of potentiality, or virtuality. He contrasts the ascetic metaphor of restraint with the radically excessive overabundance in the realm of potentiality, which is ontologically prior and constitutes "the necessary condition for any physical manifestation."[239] This reversal frees nature from being conditioned and accessible to an absolute eye that rationally selects what can actualize and what remains dormant: potentiality is no shadow of reality, itself being active, generative and indeterminate as well as not following the limitations of possibility conceived by humanity.[240] Quantum paradoxes show that determination-based assumptions in physics produce results that can only be seen as paradoxes.[241] None of the metaphysical systems discussed by Woszczek could embrace the indeterminate entanglements that produce reality in active fashion, and that comprise "a single physical plenum."[242] Indeed, if we are looking for coordinates of reality, "probabilistic quantum spaces" may be contingent but can act as "forms of stability, or parameters of the Universe," unlike categories of Newtonian physics or Cartesian spatial relations.[243] Woszczek's line of thought sheds light on mapping practices because in this light they become not just geometrical measurements but a means of probing what is possible. An inversion of cartography following his ideas would focus less on representing what is available to the human or quasi-divine Apollonian eye in a way that presumes mastery and control, and more on speculating about possibility and the parameters in which change can occur. And although the power of potentiality and its actual effects are not separate, imaginative change of proportion between the two is a speculative step that de-anthropomorphizes the world and offers a glimpse of nature as something entirely unlike any prevailing representations. In this, a gesture is made towards speculative cartographies that do not have strictly representational goals but aim to reveal the conditions for the emergence of certain phenomena as well as chart paths towards a future that can become subject to change by developing a radically different vision of reality.

Woszczek underlines the fact that specific images of nature underpin not only metaphysics but also physics, the latter also often embracing absolute frames of

238 "Speculative Solution: Quentin Meillassoux and Florian Hecker Talk Hyperchaos," in *Urbanomic Document*, UFD001, 5, https://www.urbanomic.com/document/speculative-solution-meillassoux-hecker/.
239 Marek Woszczek, *Potencjalność, fizyka…*, 179.
240 Marek Woszczek, *Potencjalność, fizyka…*, 180.
241 Marek Woszczek, *Potencjalność, fizyka…*, 185.
242 Marek Woszczek, *Potencjalność, fizyka…*, 189.
243 Marek Woszczek, *Potencjalność, fizyka…*, 190.

reference.[244] In contrast, however, he posits a vision of nature that is opaque and does not yield before the all-seeing eye, remaining an "open secret," as Goethe put it, or something "infinitely surreal" according to Woszczek's central thesis.[245] Echoing Meillassoux, Woszczek argues that literally everything is within the power of nature and no universe of possibility is "naturally" outlined before humanity. Reminiscently of speculative realists, he shows vital consequences of this position for the way human history and future are written, which also carries ethical and political importance. The decentering of humanity and instrumental reason, which are no longer seen as the only active and creative actors, makes room for the kind of nature that is self-generative, or its "own sole legislator."[246] Putting things in such perspective facilitates a reassessment of human and more-than-human agency. The discovery of quantum entanglement has revealed scales inaccessible to humans otherwise than through the medium of modern scientific apparatus. Apparently, it takes particle physics to finally think through human subjectivity and its place in the world, once again confirming that humanity is fundamentally entangled in its environment, inseparable from it and unable to lift itself above it in order to gain a view from afar. As Woszczek concludes, mythologized ideas of self-sufficiency and self-mastery are premised on an infantile and "play-safe" intellectual operation that involved "de-activation of nature," leading to proliferation of dualisms and "rigid political maps of what is in fact possible."[247] The inversion of cartography as metaphysics can at least partly reveal the necessity to imagine other maps to the future if we are to rise up to the challenges of an intensely and bizarrely changing world. In other words, the surreal dimension of nature can act as a beacon for navigating the dangerous shores of modernity, which Woszczek likens to walking on a tightrope. Nature's activity is not something that can be holistically gleaned, aestheticized, catalogued and befriended, as emphasized by Humbolt, "a great cartographer of nature" as Woszczek calls him due to the fact that the German thinker would never claim to be able to "fully embrace the entire spectrum of its [nature's] possibilities."[248] In this sense, it is possible to argue that nature is reclaimed and reinstated as a productive more-than-human force that we know yet do not know. Simultaneously, such reversal requires to rethink notions of reality, realism as well as representational conventions that purport to deliver reliable conceptualizations of the Earth. In light of Woszczek's discussion, both the image of the world and the concept of human subjectivity become a challenge not only for science but also for aesthetics and politics.

244 Marek Woszczek, *Potencjalność, fizyka…*, 194–195.
245 Marek Woszczek, *Potencjalność, fizyka…*, 195.
246 Marek Woszczek, *Potencjalność, fizyka…*, 197.
247 Marek Woszczek, *Potencjalność, fizyka…*, 198.
248 Marek Woszczek, *Potencjalność, fizyka…*, 197.

As Rosi Braidotti argues in *The Posthuman*, this is not merely a challenge for human self-reflection, but involves developing new metaphorical lines of flight characterized by sufficient escape velocity to veer from older metaphysics in the effort to probe a reality seen less anthropocentrically, acknowledging its inherent weirdness and "entangled agency" as Karen Barad put it in her elaboration of "intra-action."[249] Rendering the world visible along different coordinates, or mapping the global as a single geological force, has now become a "responsibility on our species" owing to the fact that "technologically mediated power acquired by *Anthropos*" carries "lethal consequences" for planetary life.[250] Still, it remains a Sisyphean effort to envision Earth as a complex biotic system where only intra-action is possible due to the entanglement at environmental level. This is because the metaphorical language necessary to usher in a different vision of reality requires the painstaking undoing of old metaphors and creating new maps to reality – maps we are still missing despite the globe being thoroughly surveyed. Quantum entanglement, Woszczek claims, provides a tentative model of thinking about what it means to live not as isolated individuals but as embodied minds bound up not just with the immediate ecosystem but also with the parameters of millennia-old co-evolution and geological formation. And just like modern physics opens the vista of a reality built primarily around potentiality, ecology and earth sciences show human embeddedness and thus call for imaginative formulations more adequate to the emerging concepts of subjectivity and nature. Braidotti uses the term "geo-morphism" to describe this process, emphasizing that its negative associations – especially the idea of a solely technological solution to climate crisis achieved through terraformation notwithstanding the consequences – need not obscure the imaginative and metaphorical dimension.[251] She wishes to explore its productive potential insofar as it facilitates "reconfiguring the relationship to our complex habitat, which we used to call 'nature'."[252] At the same time, she is indicating that visions of globality are subject to change and can be transformed, revealing planetary plasticity, which is discussed further.

The farewell to older concepts of passive, obedient and controllable nature is something that Timothy Morton also underlined in the title of his study *Ecology Without Nature*. Still, as Woszczek emphasizes, the term itself is not as important as the intuitive pre-judgements that place a metaphorical grid over Earth. Further, as McKenzie Wark remarked, the very concept of "logos" in the word "ecology" is static and premised on the kind of knowledge that is aggregative and

249 Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013), 158.
250 Rosi Braidotti, *The Posthuman*, 66.
251 Rosi Braidotti, *The Posthuman*, 81.
252 Rosi Braidotti, *The Posthuman*, 81.

immobilizing.[253] As Wark shows, perhaps we should think "nature without ecology" if we wish to emphasize the vastness and inscrutability of a reality woven in ways that are essentially inaccessible to human cognition, referencing a nature that is deeper than the human eye can reach, always receding from view. Her reformulation is also a powerful argument in favor of embracing the concept of ecopoetics, which underlines the dynamic component of *poiesis* as a making that – by way of its material embeddedness – must always be simultaneously a certain way of being as well as a mediated and material process. Ecopoetics can be thus seen less as a mode of amassing knowledge through discursive conceptualization and more as a way of approaching texts and other media with the aim of releasing their cartographical potential for positioning the self and navigating reality. This involves mapping as a form of ontological localization that produces a sense of tentative situatedness in the vast and strange world.

The idea of a world simultaneously familiar and strange is explored further by Morton in *Dark Ecology. For a Logic of Future Coexistence.* Along the lines of Harmanian "weirding" explored above, he emphasizes that ecology is both "dark-uncanny" and "dark-sweet" because our embeddedness in nature may be both blissful and terrifying.[254] And yet there is no way to exit nature no matter what elaborate philosophical scaffoldings we set up in order to elevate ourselves above planetary life. In the sense of its uncanniness, nature is thus something essentially strange yet intimate. It is strange for we have only limited access to the totality of processes that make ecosystems work, our scales of perception merely zooming in on the world to carve it into intelligible chunks. The sum of all dependencies and relations that facilitate growth and evolution of semiosis in the wider sense can be only glimpsed indirectly, through the use of metaphors that never exhaust the deep mesh of reliance. Thus, in order to partake of the abovementioned ambiguous joy, humans may engage in processes of translation that do not reduce nature to what can be immediately mobilized for utilitarian purposes, but promote becoming accustomed to the strangeness of coexistence. Morton calls it "weirding" and employs the image of a loop to argue that ecological knowledge is a "knowing that knows itself," or one that acknowledges its grounding in earth systems.[255] In this way, weirding conceived as a circular motion – much like the drawing of meridians – can account for weird feedback loops in global-circular causality. Climate change serves as a good example here, because it marks the "encroachment of hyperobjects" into our lives.[256] Hyperobjects can be known only through local effects because their operation exceeds

253 McKenzie Wark, *General Intellects* (London: Verso, 2017), eBook, 558.
254 Morton, *Dark Ecology. For a Logic of Future Coexistence* (New York: Columbia, 2016), eBook, 25.
255 Morton, *Dark Ecology*, 25.
256 Timothy Morton, *Hyperobjects*, 7.

human capacity for understanding complexity owing to their immense distribution in time and space. "The Anthropocene," or the time when humanity has become itself a terrestrial, geomorphological force, Morton argues, "binds together human history and geological time in a strange loop, weirdly weird."[257] In this loop, we are both dependent on the continuity of the biosphere we inhabit, and bear responsibility for the ways we co-create it. The goal of ecological thought, according to Morton, is thus to paradoxically "unground the human by forcing it back onto the ground, which is to say, standing on a gigantic object called *Earth* inside a gigantic entity called *biosphere*."[258] In this "time of hyperobjects," we are experiencing "traumatic loss of coordinates, 'the end of the world'," which is rooted in the fact that there is tremendous asymmetry "between the infinite powers of cognition and the infinite being of things."[259] What happened, according to the philosopher, is that the intrusion of Gaia, or earth's violent reterritorialization, has revealed processes of proportions that dwarf human scales of agency and complexity. This dazzling interruption is not unlike a huge volcanic explosion that reminds us of geological life proceeding at a pace entirely impossible to align with our perception, deep in the bowels of the Earth. What this importantly entails is a crisis of representation, especially in terms of conveying massively distributed hyperobjects such as climate change, which cannot be effectively pinned to any representable form and resist any mimetic modes of cognitive or artistic elaboration. Ultimately then, Morton seems to be right when he considers the key question to revolve around the kind of aesthetic experience that would be capable of at least gesturing towards hyperobjects and earthly life *tout court*.[260] The category of speculative cartographies means to account for such aesthetic experiences and reconfigurations.

The political dimension of this newly formed awareness entails resisting all forms of reductionism that ossify or simplify our relationship with nature. Such resistance would consist in Morton's weirding or – to borrow from Friedrich Schleiermacher's translation theory – foreignization of nature in the process of translating it into human terms and recognizing its uncanny character.[261] Translation is a particularly useful and resonant category in this respect. Harman employs it as a technical term in object-oriented ontology, to which Morton also subscribes with just a number of caveats. As stated before, objects can only partly enter into contact, translating each other but always in their own specific, incomplete way. Causation, which Harman locates in the aesthetic dimension, relies on the metaphorical movement of one quality into the orbit of another

257 Morton, *Dark Ecology*, 31.
258 Timothy Morton, *Hyperobjects*, 18, emphasis preserved.
259 Timothy Morton, *Hyperobjects*, 22.
260 Timothy Morton, *Hyperobjects*, 24.
261 See: Jeremy Munday, *Introducing Translation Studies* (London: Routledge, 2001), 27.

object, bringing about change. In this sense, translation bridges objects and allows things to happen. Accordingly, successful communication of the far-reaching implications of climate change or humanitarian emergencies entails developing new metaphors that could help us re-imagine our relationship with nature. In this sense, translation could be seen as a mode of envisioning a weirder outside, and resisting anthropocentric simplification just like it puts up resistance to mental monocultures, or monoglottization in the ecology of languages. Thus, ecology could be seen both as a form of translation and political activism, bringing together ontological imagination, aesthetic efficacy and rhetorical praxis.

In this light, cartography acquires an expanded meaning: by making speculative-driven metaphors we become better equipped – as Elizabeth Grosz puts it – to "produce intensities and sensations that in themselves summon up a new kind of life," which she sees as the primary task of all art.[262] Paradoxically, it would be the fictitious, or metaphorical dimension of cartography that allows it to be successful in charting a "new Earth" that we can no longer claim to be "naturally given to us," and in practicing "more-than-human geographies," which Sarah Whitmore sees as the major task in the Anthropocene.[263] To acknowledge the world as a complex assemblage, it becomes necessary to engage in studies that reinvigorate what she calls worldliness. Acknowledging the "Great Outdoors" and reappraising our mapping skills become essential steps to exchange the anthropocentric perspective for an ecocentric one. We can neither render the world fully present for us nor master it by surveying its extent and gauging its depths due to the non-local character of hyperobjects. What we can do, however, is to strive "[t]owards a finer earth-living" – as Kenneth White phrased it – by fashioning for ourselves an aesthetics that could redresses the imbalance between the human and the non-human.[264] Ultimately then, creative map-making becomes concurrent with world-building, or home-making, in literal and metaphorical sense. As Deleuze and Guattari claim in *A Thousand Plateaus*, territories are indeed works of art that creatively chart hitherto unthinkable multiplicities, thus becoming refuges for imagination.[265]

In the landmark essay *Three Ecologies*, Félix Guattari recognizes the urgent need to alter the scientistic paradigm (not to be confused with the scientific method or actual sciences) and navigate it toward a model based rather on

262 Elizabeth Grosz, *Chaos, Territory, Art: Deleuze and the Framing of the Earth* (New York: Columbia University Press, 2008), 78.

263 Sarah Whitmore, "Materialist Returns: Practising Cultural Geography in and for a More-than-human World," *Cultural Geographies* 13.4 (2006), 601–602.

264 Kenneth White, "Elements of Geopoetics," *Edinburgh Review* 88 (1992), 167.

265 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*, trans. Brian Massumi (Minneapolis: University of Minessota Press, 2008), eBook, 1000.

aesthetic and ethical concerns. Still, the meaning of this needs to be expounded.[266] Neither dimension revolves in his account around preset notions of the beautiful and the good. Instead, Guattari embraces a constructionist approach oriented towards the future. He argues that the aforementioned misalignment between human and non-human spatiotemporal scales will inevitably require "existential reorientation."[267] Squaring up to this challenge requires "analytical cartographies" that "reach beyond the existential territories to which they are assigned"; "cartographers of subjectivity" are therefore invited to experiment and open new possibilities.[268] According to Guattari, in rapidly changing times, the expression of subjectivity is put under tremendous pressure but can be imagined using the lens of three interlocked kinds of ecologies: social, mental, and environmental.

For Guattari, these areas cannot be separated because partitioning reality into isolated strata or flows, as evidenced by scientific specialization, has had the effect of occluding the bigger picture, where it is discernible how climate change can be, for example, bound up with the dissolution of social bonds and the deepening of anxiety concerning the future. Just like in the conclusion to *What is Philosophy?*, we encounter here the figure of three dimensions whose junction is the brain. It is at this node that we can work by intersecting the three planes through cartographies that reveal the entanglement of psychic life and social activity with the biosphere and the lithosphere. Investigation of this kind speaks to the urgent need for new value systems that could shift the operations of desire away from extractivism and profitability. Guattari sees the task of cartography to consist today mainly in trying to "bring into being worlds other than those of pure abstract information […] to face up to a dizzying confrontation with the cosmos in order to make it in some way livable."[269] As such, cartography is visionary or even hallucinatory in the sense given to the term by Deleuze.

Taking cue from this form of geophilosophy, Bruno Bosteels emphasizes that the colossal rift which emerged between "the expanses of the earth and the territorial universes of existence" has shaken the relationship between earth and territory.[270] Accordingly, representational maps have lost power as mirrors of stable world. On this account, maps ought to be instead "judged like works of art for their ontological and pragmatic efficacy in bringing forth and unmaking the environment, setting up existential territories, or bringing forth entire worlds

266 Félix Guattari, *The Three Ecologies*, trans. Ian Pindar and Paul Sutton (London: Athlone Press, 2000), 12.
267 Félix Guattari, *The Three Ecologies*, 133.
268 Félix Guattari, *The Three Ecologies*, 44.
269 Félix Guattari, *The Three Ecologies*, 147.
270 Bruno Bosteels, "From Text to Territory," 145.

from the uneven surface of the earth."[271] Following Lukács, Bosteels argues that aesthetics is crucial insofar as it concerns the visibility of certain issues or agents as well as their expression and political representation. Once again, it emerges as a kind of first philosophy insofar as it can help to "account for the multifarious articulations of the social and the subjective, the material and the semiotic, between map and territory."[272] In this sense, mapping moves from articulation in terms of a conventional, horizontal-vertical graticule toward transversal and mobile lines that cut across dimensions and strata to enable articulation. Such cartography of the unconscious is indispensable for the present age, Guattari argues, because it ignores former divisions of nature-culture and inside-outside, liberating itself from representational "tracing" in favor of a performative mapping that "sets in motion a regime that is both autopoietic and rhizomatic."[273] This reflects an important shift in the understanding of the unconscious, which ceases to be an archival inventory of people and objects, instead emerging as the unconscious of "mobilization": "an unconscious whose objects take flight rather than remaining buried in the ground."[274] As Bosteels concurs, Guattari's primary goal is to locate sites of intervention that could contribute to the production of "new subjective cartographies."[275] Exchanging mimesis for creative symbio-poiesis, this mode of mapping does not aim to produce semblances of an immobilized world but articulates the fact of "journeying" as it "merges with its object, when the object itself is movement."[276] For this reason, Guattari's schizoanalytic cartographies are "existential" rather than "representational," and consequently expressive of ongoing "cartographic subjectivation."[277] Maps, in this sense, do not necessarily have to resemble the territory but are rather about finding ways of making it habitable through modes of living that take into account and heed the three interrelated ecologies: the mental, the social, and the environmental, each one interlocked with another, forming a New Earth.

271 Bruno Bosteels, "From Text to Territory," 147.
272 Bruno Bosteels, "From Text to Territory," 152.
273 Bruno Bosteels, "From Text to Territory," 159.
274 Bruno Bosteels, "From Text to Territory," 159.
275 Bruno Bosteels, "From Text to Territory," 165.
276 Bruno Bosteels, "From Text to Territory," 167.
277 Bruno Bosteels, "From Text to Territory," 167.

Chapter 2: Geo-trauma

Speculative cartographies attempt to bring together science, politics and aesthetics to pursue a geophilosophy of the earth, "to actually *think* the earth and to *map* its ethical, social and political involvements," as Rick Dolphijn put it.[278] Such cartographical efforts would usher in an updated vision of the global, or a "new Earth" – something that Deleuze and Guattari emphasize in their later works. In order to achieve this, however, as Bryant and Morton stress, nature needs to be recast as the uncanny ground of life and thought. What emerges through such revaluation is an "ungrooved"[279] earth – one freed from the shackles of human-based or transcendental representational graticules used to map it in the past. In result, the anthropocentric ground is snatched from under human feet, revealing planetary ancestrality that resists anthropocentric reductionism. Dolphijn underscores the importance of such estrangement of the Earth as "foreign territory" in the effort to "free thinking *through* the earth"[280] by confronting the "enigma of openness."[281] What Deleuze and Guattari called a perpetual revolution would be realized by completing the Copernican turn, as suggested by Meillassoux, Harman and notably the Iranian philosopher Reza Negarestani. For him, a real revolution leading towards more-than-human "polytics" – the plural spelling meant to foreground its many-sidedness – is premised on a radical reformulation of otherness as "anotherness" by shifting from "being open (to)" to "being opened (by)."[282] Through Cartesianism *a rebours*, mastery of the cognizant mind is exchanged for a radical immersion in planetary life, quite like in Morton's "dark-sweet" ecology of entanglement. Being "opened up by" is indeed uncanny

278 Rick Dolphijn, "Undercurrents and the Desert(ed): Negarestani, Tournier and Deleuze Map the Polytics of a 'New Earth'," in *Postcolonial Literatures and Deleuze. Colonial Pasts, Differential Futures*, eds. Lorna Burns and Birgit M. Kaiser (London: Palgrave Macmillan, 2012), 200, emphasis preserved.
279 Rick Dolphijn, "Undercurrents and the Desert(ed)," 201.
280 Rick Dolphijn, "Undercurrents and the Desert(ed)," 201.
281 Rick Dolphijn, "Undercurrents and the Desert(ed)," 211.
282 Rick Dolphijn, "Undercurrents and the Desert(ed)," 211.

yet also brings the possibility of change and creativity, or even a "whole new life."[283] It is a revolution that has engulfed minds, societies and the planet itself as humanity became a leading factor in shaping the Earth's surface in the Anthropocene. Still, inasmuch as we could attribute this revolution to change of consciousness, it is far more than that since we have made ourselves the target of hyperobjects that forcibly open up humanity to earth's geo-cosmic origins. Discerning the abysmal depths surrounding humanity, Negarestani expands the politics based on otherness to a "polytics" that "*is* the radical outside."[284] In this far-reaching gesture of decentering humanism, New Earth also becomes an "unground" that is in no sense open to humanity but rather to "its undercurrents, as they secretly flow in all directions, creating transversals *ad infinitum*."[285] In another inversion, as Robin Mackay argues, the "geotrauma" of discovering the unstable ground beneath our feet concerns the "inhabiting of the organic by the inorganic."[286] As Aiden Tynan concurs, this is a necessary step "to give the psychoanalytic concept of the unconscious its full materialist extension."[287] Geotrauma, he continues, is like a cosmic event that reconfigures the unconscious to make it encompass not just the psyche and social life but also its organic and inorganic ground. In our time, climate change provides a flash of revelation that sheds light on the traumatic force that extends far below and above human scalar terms. This interruption of Gaia, which permeates minds, bodies, bacteria and rocks, opens humanity to the cosmic dimensions of its very conditions of possibility. It reveals the uncanny connection between the traumatic events from earth's history and the icebergs melting due to global warming. Speculative cartographies explore this connection, tracing the fault lines of geotraumatic catastrophes that have shaped the Earth's evolution.

In Nick Land's *Fanged Noumena*, the fictional researcher Professor Barker offers a concise introduction to the theory of geotraumatics, discussing the pivotal position of the brain, which is traumatized by being made open to cosmic dimensions. Barker begins by noting that Freud's *Beyond the Pleasure Principle* contains seeds of a cartography that would chart the "Geocosmic Unconscious as a traumatic megasystem" basing on the notion of life being tightly strung be-

283 Rick Dolphijn, "Undercurrents and the Desert(ed)," 212.
284 Rick Dolphijn, "Undercurrents and the Desert(ed)," 213, emphasis preserved.
285 Rick Dolphijn, "Undercurrents and the Desert(ed)," 213.
286 Robin Mackay, "A Brief History Of Geotrauma," in *Leper Creativity. Cyclonopedia Symposium*, eds. Ed Keller, Nicola Masciandaro, and Eugene Thacker (New York: Punctum Books, 2012), 33.
287 Aidan Tynan, "Geotrauma, Towards a Concise Definition," *Violent Signs*, 30 March 2012. After: Emily Apter, "Planetary Dysphoria," *Third Text* 27:1 (2013), 136.

tween the organic and anorganic.[288] The latter pole is embodied by the earth's core, which was formed in the cataclysmic bombardment out of which planets formed in the early days of the solar system, 4.6 billion years ago. Life would not emerge for around another billion years. The Hadean and the Archean are the epochs when earth's traumatic core was formed and buried beneath the solidifying crust. This marked the onset of the "anorganic memory" that comprises an "impersonal trauma as drive-mechanism."[289] Geology indeed confirms that, as we venture inside the earth by mapping its interior, we simultaneously "regress through geocosmic time."[290] In this account, the Ur-trauma, or "Cthell" is the earth's core formed by iron and nickel under extreme pressure and temperature: "the anorganic metal-body trauma-howl of the earth."[291] All life on the planet is a continuous expression of this original geotrauma, which intimately binds humanity to earth's deep past; as MacKay argues, ultimately "the time of the earth is recorded, accreted, knotted up inside us."[292] We carry it not only in the atoms that make up our bodies but also in the biological form developed in the course of evolution and shaped by the ecosystems we have inhabited. In this perspective, human life is not uniquely articulate in and out of itself but instead functions as a conduit for the expression of geotrauma, or interpretations of the "encrypted message from Cthell to cosmos."[293] "Geotraumatic cryptography," MacKay explains, "must proceed as ultra-genealogy, assessing these memories deep-frozen and imprinted in the body and determining the planetary events which they index."[294] The material unconscious of deep time is mapped in geotraumatic theory by life on Earth, even when it is as short as that of humans, for "each one of us is as old as the entire biological kingdom, and our bloodstreams are tributaries of the great sea of its total memory."[295] In such light, every living organism is a map to the cosmic genesis of the planet if the right cryptographic key is applied.

As MacKay notes, this trauma could be extended even further, breaking what Negarestani called the "monogamous" relationship between the sun and the earth. What Negarestani demands is a radical ecology that departs not only from anthropocentrism but also from solar-centrism. This agrees with the notion of "root" (*radix*) in the word "radical" – certainly, Earth's pre-history began beyond what we know today as the solar system. The Iranian philosopher goes as far as to

288 Nick Land, "Barker Speaks. The CCRU Interview with Professor D.C. Barker," in *Fanged Noumena. Collected Writings 1987–2007*, eds. Maya Kronic and Ray Brassier (New York: Sequence Press / Urbanomic, 2011), 497.
289 Nick Land, "Barker Speaks," 498.
290 Nick Land, "Barker Speaks," 498.
291 Nick Land, "Barker Speaks," 498.
292 Robin Mackay, "A Brief History Of Geotrauma," 20.
293 Robin Mackay, "A Brief History Of Geotrauma," 20–21.
294 Robin Mackay, "A Brief History Of Geotrauma," 21.
295 Robin Mackay, "A Brief History Of Geotrauma," 24.

say that a true "revolutionary" – one understood both in political and Copernican senses – situates Earth not in terms of its local relationships with Sun or Moon, but in the "relation of multiplicity between the planetary body and the cosmic contingencies which led to its formation."[296] This is necessary because it is only on this vaster background that the geotrauma of Earth can be revealed or "unearthed," while the subject – revolutionized in accordance to an unbounded exterior. As MacKay concludes, this occurs through regression: a geological journey back to the Earth's beginning, and beyond. "Unpick the individual, travel down her spine, into the rocks, through the iron core," he describes this trajectory, "attaining a burning immanence with the sun, and exiting towards the unknown."[297] Regardless of how far it is actually possible to proceed in this venture, it is a powerful reminder that mapping the unconscious, when conceived as the continuity between personal and deep history, repositions humanity in relation to its traditional coordinates, or even the solar system, ascertaining that life on Earth cannot be rationally thought outside of forces that can be neither properly identified nor tamed. Finally, geotraumatics introduces the possibility to reconsider the relationship between the human and the non-human in terms of violence that belongs to neither one nor the other.[298] This is because traumas are nested in one another in a long chain extending from the Earth's formation to the present day. Ultimately then, suffering is also decentered and ceases to be a psychological problem, turning into "a *geological* one, a concern of the earth."[299] Importantly, non-psychic suffering cannot be fully incorporated as an object of consciousness. Impossible to interiorize, it remains an unassimilable element that "opens up" its target from outside and creates stratifications, "systems of interiority" that shape the unconscious.[300] This reinterpretation of the psychoanalytic theory of trauma constitutes the basis of Negarestani's realist geophilosophy.

The Anthropocene, or Stenger's "intrusion of Gaia" is an ethical turning point that marks the moment when a new synthesis of the globe becomes necessary in order to move from capitalist globalization to a realist account of Earth positioned in relation to the universe, and not just to humanity. To achieve this goal, new maps are necessary, ones capable of unlocking the unstable ground by following geotraumatic transversal fault lines that connect the inside with the outside, deep time with human history. In this, Negarestani updates the idea of geophilosophy elaborated by Deleuze and Guattari, who in turn followed Niet-

296 Robin Mackay, "A Brief History Of Geotrauma," 31.
297 Robin Mackay, "A Brief History Of Geotrauma," 32.
298 Tim Matts and Aidan Tynan, "Geotrauma and the Eco-clinic: Nature, Violence, and Ideology," *symploke* 20.1–2 (2012), 157.
299 Tim Matts and Aidan Tynan, "Geotrauma and the Eco-clinic," 160, emphasis preserved.
300 Tim Matts and Aidan Tynan, "Geotrauma and the Eco-clinic," 158.

zsche in postulating an intellectual position of "being true to the Earth" and thinking a "new Earth" that could potentially free us from the shackles of abusive forms of territorialization. As Jan Jagodzinski notes, Negarestani's "recognition of the tellurian dynamism of the Earth requires an embracement of inhuman technologies and techniques, a 'dark imaginary' that drags the Anthropocene into the depths of the Earth, and no longer on its surface."[301] Such philosophical descent demonstrates the more-than-human character of the planet as well as the fact that it cannot be thought without properly acknowledging the cosmic forces that have shaped it. To recall: the Earth's core is the planet's innermost iron heart and simultaneously a record of its violent, traumatic past encased in eons-old geological strata. Notably, the philosophical trajectory of Negarestani is informed by notions of trauma or woundedness, as is also the case with Catherine Malabou, which is discussed further.

Negarestani's model of geophilosophical realism, formulated in the 2011 essay "Globe of Revolution," is founded on the following idea: "The synthesis between the cerebral, the socio-cultural, the political, the territorial, the historic, the economic and the geological is determined and driven not by a self-centred or axiomatically veritable earth or horizon of interiority but by an open universal continuum."[302] This means that Earth is not really thinkable from the perspective of life on its surface. Negerestani emphasizes that philosophy needs to embrace the farthest consequences of the Copernican revolution. A "realist true-to-the-universe earth" must be regarded not as a self-contained and self-sufficient entity. An "open conception of globality," he writes, "cannot be exhausted by the body of the earth or any collection of multitudes therein."[303] At the level of subjectivity, Negarestani argues, "the individuum […] is precisely the continuum of […] the brain, the streets, the earth, and the cosmos; it is a focalized gradient from the universal continuum."[304] It would mean that the individual is never self-constituted but rather brought to life by being opened up from the vantage of radical exteriority that performs a traumatic incision on the body of Earth, cutting through its surface into the core, and even beyond it. The notion of the open, universal continuum is indispensable for this argument insofar as it constitutes the fabric from which Earth is cut and formed as a series of nested traumas. This completely reverses the mode of thinking based on solipsism-leaning individualism because Negarestani begins with the larger background

301 jan jagodzinski, "Introduction," in *Interrogating the Anthropocene. Ecology, Aesthetics, Pedagogy, and the Future in Question*, ed. jan jagodzinski (Cham: Palgrave Macmillan, 2018), 52.

302 Reza Negarestani, "Globe of Revolution. An Afterthought on Geophilosophical Realism," *Identities* 8.2 (2011), 25.

303 Reza Negarestani, "Globe of Revolution," 25.

304 Reza Negarestani, "Globe of Revolution," 43.

and only later allows a separate cognitive subject to emerge, and even then not as a fully distinct entity but rather as a traumatic cut made from the local center of gravity to the discrete brain. There is in fact no isolation here because the cut invariably links the thinking brain to its local condition of possibility – in the discussed model, the Earth's traumatic core, Cthell.

"Trauma," Negarestani claims, "is not a rupture marking the centrality or discreetness of the regional subject with regard to its outside, but a regionalizing cut made by a higher universal order in its own continuous field."[305] Taking cue from theories of trauma developed within psychoanalysis – specifically by Freud, Ferenczi, Rank, Spielrein, and Reich – he pushes the notion of trauma beyond the organic domain to include events such as the material accretion of Earth during its violent birth and the formation of its iron core. However, no trauma is final or original, Negarestani emphasizes, because there is always another one that extends deeper into an infinite series of interconnected traumas that go back as far as the Big Bang. In this sense, he argues, they are "nested" and perform an important mediating function by "transplanting" the universal exteriority ever closer to individual brains. However, the geophilosophical synthesis of the relationship between thought and Earth cannot submit to a "terrestrial myopia" of "binding the universal absolute in *one* way and one way *only*."[306] For example, in the case of today's capitalism, this kind of binding would revolve around the financialization of the habitat. What capitalism attempts is the "calculative isolation and regulation of traumas so as to forestall the deepening of the geophilosophical synthesis along alternative modes of binding."[307] We can easily observe this in how a number of problems – global inequality, air pollution, plastic waste, etc. – are parceled or isolated, and rarely considered as interrelated and nested. A truly revolutionary subject – in both political and cosmological sense – would thus be one who reconnects their regional field with the larger cosmos by using the mediating function of traumas to "turn the earth of capitalism into a multiverse of traumatic vertigos."[308] This is one of the meanings of "polytics" as it involves the pluralization of nested traumatic frames of reference, which is necessary to recognize the interconnection between such issues as loss of biodiversity, monetization of environment, extractivist politics, mental health crisis, and so on.

These dizzying vistas are part and parcel of sending thought on an asymptotic track along the open continuum of the universe. By following this line, Negarestani unmakes the globe's sphericity, demonstrating that the earth was ac-

305 Reza Negarestani, "Globe of Revolution," 26.
306 Reza Negarestani, "Globe of Revolution," 35, emphasis preserved.
307 Reza Negarestani, "Globe of Revolution," 48.
308 Reza Negarestani, "Globe of Revolution," 49.

tually founded by being shot through with a cosmic dimension that intersects all of its aspects and dimensions. In this light, Earth emerges not as a self-enclosed, self-sufficient sphere, but rather as a traumatic incision in the larger fabric of the universe. For this reason, it is impossible to synthesize it locally and a larger perspective of universal synthesis is required to think it in a way that is true-to-the-universe. In this account, Earth becomes a regional cut in the universal open. These new cartographical coordinates unground thought from a veritable, mimetic earth, relocating it within a nested model of a regional planet embedded in the open field and shaped by cosmic "traumata" that "twist the shape of the regional along their contingently erupting points of intrusion and zones of transplantation."[309] The concept of the "globe of revolution" undermines any forms of universalization that take the earthly horizon as a boundary of thought, condemning them as instances of "terrestrial myopia" that fail to acknowledge that no locality can be synthesized without accounting for its relations with the open field of the universal. Likewise, "[t]he universal absolute cannot be thought except as an exorbitant index of exteriority."[310] Negarestani's account constitutes an attempt to broach the global by showing how a revolutionary synthesis could "unbind alternative modes of traumatic inflection upon the absolute," facilitating an asymptotical approach to the universal by way of "transplanting exteriority within interiority."[311] This implies that in order to facilitate real political change we need to revolutionize Earth by remodeling it in relation to larger, nonhuman forces in the universe. This would help us to see Earth not as a perfect globe but rather as a traumatic and "exorbitant" cut-out from a larger reality. Although we are not capable of fully grasping the universal dimension, we may attempt to approach it in a speculative manner, or asymptotically by engaging with Earth's traumatic inflections, which offer windows onto the universal, acting as nested mediators and performing a "universalizing function between regional horizons."[312]

In effect, Negarestani's theory calls for the defamiliarization and weirding of Earth in an effort to acknowledge its porous and open nature. He "un-globes" Earth and positions it within a non-anthropocentric ontology. At the same time, he acknowledges the limits of anthropocentrism, emphasizing that the universal cannot be approached otherwise than by engaging with regional effects of traumatic gravity. Echoing Morton's "weird loops," Negarestani considers the "twists" that put the local in the perspective of the global: "[b]y undertaking modally unbound traumatic syntheses toward the universal absolute, the modern

309 Reza Negarestani, "Globe of Revolution," 30.
310 Reza Negarestani, "Globe of Revolution," 33.
311 Reza Negarestani, "Globe of Revolution," 35.
312 Reza Negarestani, "Globe of Revolution," 35.

man comes into a *twisted* immanence with the abyssal open."[313] Twisted immanence is like a vertiginous encounter with the great outdoors, involving "relocation" from a "totalized and discrete earth to a new alien field of gravity where the subject is reconstituted outside of its own center once and for all."[314] This would be the full meaning of the Copernican Revolution in geophilosophy, which reorients the fundamental parameters of subjectivity and its situatedness in the world, entailing a vital cartographical challenge.

Unsurprisingly then, to approach the task of regional synthesis, Negarestani argues, "we have to make a new navigational map."[315] It certainly is not representational for it cannot base on "mimetic," specific points in space, but must trace "obscure and fuzzy regional gradients, contingently distributed tectonic subduction zones for the focalization (rather than emergence) of the trans-and-absolutely-modernist thought."[316] Similarly to Deleuze, Guattari and Bryant, Negarestani is interested in vectors of becoming rather than static lines. Instead of rigid differentiation, such thought invests in gradients of intensities, finding its course along trajectories that follow the fault lines of geo-traumata. These are Negarestani's fundamental coordinates for speculative cartographies: not any local axes that would define center and periphery but cuts through nested layers of deep spacetime. Negarestani even goes on to say that the closer thought approaches any "supposed centres of the world, the weaker synthetic tensions become and the more difficult it is for the revolutionary subject to emerge and come into focus."[317] Instead, the revolutionary subject needs radical decentering in order to achieve their goal. "Revolution," Negarestani argues, "was never meant to be strictly terrestrial" but requires the kind of thinking that "plunges into the ever deepening and widening universal constellations of traumata" as well as "deepens and widens the geophilosophical synthesis of its horizon into and across the geocosmic continuum."[318]

To summarize, thinking the human can only happen through the non-human, and Negarestani goes to great lengths in order to show that a truly Copernican subject does not have any privileged relationship either with themselves or their immediate territory understood as habitat and cognitive world. Moreover, mobilizing political potential – or "polytical" as Negarestani wants, emphasizing the poly-valent character of non-human multitudes – is a cartographic venture insofar as it entails seeing the modern subject not as a free-floating monad but as a

313 Reza Negarestani, "Globe of Revolution," 47, emphasis preserved.
314 Reza Negarestani, "Globe of Revolution," 40.
315 Reza Negarestani, "Globe of Revolution," 41.
316 Reza Negarestani, "Globe of Revolution," 41.
317 Reza Negarestani, "Globe of Revolution," 42.
318 Reza Negarestani, "Globe of Revolution," 44.

situated "vector of synthesis between regional traumas […] and the universe."[319] The task of cartography would be to explore further the gap between map and territory, understood in this interpretation as a series of nested traumata that extend from "a groundless geocosmic continuum" to "the formation of terrestrial field" and finally to "psychic architecture."[320] Mappings driven by this perspective connect and weave all planetary dimensions.

Unlike Meillassoux, who favored mathematical access to the absolute, Negarestani posits that it can be approached "through interconnected webs of traumata" that traverse the mental, the social, and the environmental, much like Guattari's three ecologies.[321] Traumata serve as mediating conduits that connect the regional horizon with the radical outside, and would thus constitute the basic graticule of a "true-to-the-universe" cartography of the Earth. Such mapping would also usher in the "geophilosophical synthesis of citizen" tasked with deepening that synthesis beyond the boundaries of current representational and political paradigms. The "state" or "capitalism" isolate traumas so that no field of traumata can be deepened in order to connect with another layer. Akin to what Deleuze and Guattari argue, capitalism "smooths" the surface of the Earth, policing it so as to prevent the subject of revolution from "breaking and entering into isolated fields of trauma," or "exporting the revolution."[322] In this context, Negarestani follows in the footsteps of Catherine Malabou, warning about the risk of replicating the mode of thinking shaped by capitalist globalization, currently the only type of global thought and one that needs to be overcome for change to become possible. Malabou stresses that identity-formation in this world can be meaningful only if it opposes the capitalist-mimetic "caricature" of the world and refuses to perpetuate it. Negarestani takes cue from her theory of plasticity to describe subjectivation as prone to terrestrial myopia or reductionism yet simultaneously capable of finding lines of flight that could open other possibilities. As he passionately argues, the revolutionary subject is not expected to disavow traumas of capitalism or fundamentalism, but to interconnect them in the regional horizon, "transplanting" one world inside another, "envisioning the world as a unified world where the cerebral, the territorial, the terrestrial and the cosmic are already nested within one continuum."[323] Owing to its neuroplasticity – or the capability to receive form and give form – the brain is postulated as able to "reconnect isolated traumas within its plastic field and

319 Reza Negarestani, "Globe of Revolution," 51.
320 Reza Negarestani, "On the Revolutionary Earth. A Dialectic in Territopic Materialism," presentation at the "Dark Materialism" conference, Kingston University London, 12 January 2011 (available as pdf article), 2.
321 Reza Negarestani, "On the Revolutionary Earth," 9.
322 Reza Negarestani, "On the Revolutionary Earth," 19.
323 Reza Negarestani, "On the Revolutionary Earth," 19.

expand along the mediating functions of trauma."[324] Therefore, the brain emerges as an important junction that has been elucidated by Malabou in her theory of brain plasticity.

Plasticity

According to Jarosław Lubiak, in order to address the Anthropocene it has become paramount to move away from "globalization" towards "planetarism," uncovering a deeper, metamorphic Earth that can be grasped through Catherine Malabou's concept of plasticity.[325] She developed it in relation to the brain's neuroplasticity and the concept's history in metaphysics, notably in Hegel and Heidegger. Working at the intersection between philosophy and neuroscience, she argues that plasticity captures how the brain is capable of both giving and receiving form, as evidenced by its destructive potential, for example in patients with brain damage. The concept of plastic planetarism, which draws on plasticity to think terrestrialism, can help to take into account how Earth itself is both giving humanity its biological form and receiving form through terraformation and anthropogenic climate change.

Lubiak curated the exhibition *Human-Free Earth*, realized as part of a larger project *Plasticity of the Planet* (2019–2020) at the Ujazdowski Castle Centre for Contemporary Art in Warsaw. Among the many insightful artworks displayed was the 2016 video installation by the Luxembourg art duo Gast Bouschet and Nadine Hilbert, titled *Metamorphic Earth.* It includes seven large-scale projections and an intense drone-based soundtrack by Stephen O'Malley, creating an immersive yet disorienting experience. The poetic montage of images weaves together vastly different scales: broad vistas, architectural details, and close-ups shot in the wilderness, showing specs of dusts or material particles. The announcement of the show noted that "perceptions are blended and reference points continually shift: the infinitely large mixes with the infinitely small; the stable with the unstable; the natural with the cultural."[326] The artists referred to such shifting of scales as a kind of "sorcery" they harnessed to foster "identification with universal flows and energies, accommodating the incessant meta-

324 Reza Negarestani, "On the Revolutionary Earth," 19.

325 Jarosław Lubiak, "Plastic Planetarism: The Art of Staying with The Trouble," in *Plasticity of the Planet. On Environmental Challenge for Art and Its Institutions*, ed. Magdalena Ziółkowska (Milan: Mousse Publishing, 2019), 123.

326 Gast Bouschet and Nadine Hilbert, "Metamorphic Earth," *e-flux*, 9 December 2016, https://www.e-flux.com/announcements/77936/gast-bouschet-nadine-hilbertmetamorphic-earth/.

morphoses of the planet and renouncing its capitalist exploitation."[327] As Lubiak argues in his curatorial essay on "Plastic Planetarism," the plot-less film brings forth the "intertwining and mutual penetration that defines how the Earth and its human inhabitants coexist."[328] Taking cue from Donna Haraway, he interprets this artwork as a demonstration of *sympoiesis*, marking deep entanglement of the human, the biological, and the cosmic. This installation would argue that humanity is enmeshed in different temporal and ontological scales, which are irreducible to what we call globalization in the sense of the circulation of capital, goods, and people. However, in order to address the Anthropocene, Lubiak argues, it becomes necessary to embrace planetarism as based on the metamorphic character of the Earth – on its instability and embeddedness in the larger universe. Akin to Negaresatani's inhuman reformulation of geophilosophy, *Metamorphic Earth* pierces the crust of globalist imaginary and descends towards a weirder account of earthly entanglement. As Peter Grey notes, Bouschet and Hilbert "follow a path of *katabasis*; shadow, silt, and specks of light descending into the underworld […] where the bright simulacra of consumer goods have no visible cost […] their palette is patiently ground from a mineral subterranean strata."[329] The work ultimately suggests that the sorcery of art can stimulate the development of an imagination necessary to consider these geotraumatic fault lines and discern the profound entanglement of strata and temporalities that cut through our brains and bodies. Only by acknowledging these meshes can we develop resistance to neoliberal capitalism, which isolates traumas and leaves people in a state of disconnected and disinterested apathy, thwarting engaged response to the challenges of the Anthropocene.

In the book *The New Wounded*, Malabou introduces the eponymous term to speak not only about people with brain lesions but also others who have been touched by what she calls "destructive plasticity."[330] These people are in an irreversible state of shock, changed, disaffected, or otherwise transformed, often beyond recognition as in the case of patients suffering from dementia or Alzheimer's disease. In a broader perspective, Malabou argues that the "post-traumatic condition reigns everywhere today and demands to be thought."[331] She genuinely marvels at the fact that this important aspect of human experience has never been considered in a way that would combine welcome and unwelcome

327 Art Museum of the Hainaut Province, "Bps22 Musée D'art Dossier Pédagogique Les Expositions *Metamorphic Earth*," 22, https://v3.bps22.be/volumes/files/DOSSIER-PEDA-PANO-META-UBD.pdf.

328 Jarosław Lubiak, "Plastic Planetarism," 128.

329 Peter Gray, "Cocytus Defrosted," https://www.bouschet-hilbert.org/now/cocytus-defrosted/.

330 Catherine Malabou, *The New Wounded. From Neurosis to Brain Damage*, trans. Steven Miller (New York: Fordham University Press, 2012), 17.

331 Catherine Malabou, *The New Wounded*, 17.

aspects of change, seeing change as primarily transformative and environmental. This is all the more important since we are witnessing today a "global phenomenon of psychic violence" that can be explained, she argues, only materially, in neuropsychological terms by accounting for the way in which the brain is physically shaped by the world.[332] Further, as already suggested by the concept of planetary plasticity, the plasticity of the brain is an idea that can be elevated to the rank of an ontological principle and an epistemological framework, which Malabou calls the "motor scheme," or a "compass" for navigating the present.[333] "Ontologically," Peter Gratton explains, "plasticity is the very stuff of existence; it's a ground that destabilizes any stable meaning or foundation for existence."[334] In a way, this would be epitomized by patients who cannot recognize themselves anymore. Nowadays, however, it is also the Earth that is no longer recognizing itself.

Analyzed from the perspective of geopolitical plasticity, this traumatic condition opens important political and ethical vistas. In the book *What Should We Do With Our Brains?* Malabou answers the question posed in the title in the following manner: "Not to replicate the caricature of the world […]. To refuse to be flexible individuals who combine a permanent control of the self with a capacity to self-modify at the whim of fluxes, transfers, and exchanges, for fear of explosion."[335] In this sense, plasticity affords both dissolution or formatting of identity as well as mobilization of revolutionary potential necessary to counteract the docility and apathy that disengage us from key political issues such as global inequality or climate change. Most notably though, Malabou opposes flexibility as a lifestyle of constant adaptation to the vagaries of the market.

As Malabou became increasingly preoccupied with the question of the Anthropocene, her concept of plasticity has proven useful for this task. In the article titled "The Brain of History, or the Mentality of the Anthropocene," she argues that the brain acts as "an intermediary between the historical, the biological, and the geological."[336] In the course of "the geological becoming of the human," it comes to light that we are in need of a "renewed and reelaborated concept of mentality."[337] A new materialist perspective on mental life that she proposes involves seeing the brain as a part of the environment. Accordingly, the "history

332 Catherine Malabou, *The New Wounded*, 167.
333 Catherine Malabou, *Plasticity at the Dusk of Writing. Dialectic, Destruction, Deconstruction*, trans. Carolyn Shread (New York: Columbia University Press, 2010), 17.
334 Peter Gratton, *Speculative Realism. Problems and Prospects* (London: Bloomsbury, 2014), eBook, 298.
335 Catherine Malabou, *What Should We Do with Our Brain?*, trans. Sebastian Rand (New York: Fordham University Press), 78.
336 Catherine Malabou, "The Brain of History, or, The Mentality of the Anthropocene," *The South Atlantic Quarterly* 116.1 (2017), 45.
337 Catherine Malabou, "The Brain of History," 52.

of mentality also includes […] the materiality of inorganic nature, the soil, the rocks, the mountains, the rivers, the earth."[338] A new synthesis of mentality along these lines helps to overcome the ailment she identifies as a specifically Anthropocenic paralysis: acute disaffection, loss of wonder, indifference, or narcolepsy induced by the addiction to today's individualistic lifestyles.[339] In this sense, the challenge of the Anthropocene consists in rekindling planetary imagination in such a way as to reshape our relationship with Earth by rejecting its flattened, one-dimensional image afforded by capitalist globalization. The traumatic changes to planetary ecologies and human mentality require to embrace planetary plasticity and develop on its basis a new identity – one that would account for the continuity between the Earth's deep time, human life in the present, and planetary futures.

Although Negarestani criticizes Malabou for not being radical enough, their positions do overlap to a degree, especially in light of Malabou's later work. In the end, both fall back on the brain's plastic susceptibility, arguing that it can, as Negarestani put it, "reconnect isolated traumas within its plastic field and expand along the mediating functions of trauma."[340] It is by working through and along traumas that we can reconnect our local horizons with the "freedom of absolute depths" and synthesize a new, "polytical" image of the globe.[341] This relies on a relationship with the radical outside established along the coordinates of contingent traumas which act – just like in Malabou's account – as accidents that open other possibilities, "another way of being."[342] It is in this sense that trauma can be generative: after all, it opens up systems of interiority to the universal continuum.

Akin to Negarestani, who postulated the need for renewed maps that would perform regional syntheses, Malabou also embraces new mappings, or speculative cartographies. At the outset of *What Should We Do with Our Brain?* she specifies that "the plastic art of the brain" involves "establishing of [neural] connections" and "modelling them" in contact with one's environment.[343] She dismisses cybernetic concepts that cast the brain as a central processing unit, instead embracing a networked account of the nervous system's activity, which was specifically likened by Marc Jeannerod to a "multidimensional map."[344] This plastic map is, in her view, "precisely the form of our world," although – for that

338 Catherine Malabou, "The Brain of History," 51.
339 Catherine Malabou, "The Brain of History," 45–47.
340 Reza Negarestani, "Globe of Revolution," 50.
341 Reza Negarestani, "On the Revolutionary Earth," 19.
342 Catherine Malabou, *Ontology of the Accident. An Essay on Destructive Plasticity*, trans. Carolyn Shread (Cambridge: Polity Press, 2012), 87.
343 Catherine Malabou, *What Should We Do with Our Brain?*, 19–20.
344 Catherine Malabou, *What Should We Do with Our Brain?*, 35.

very reason – we fail to notice it and, in consequence, remain oblivious to the power relations inscribed in it, which are thus perpetuated in social life.[345] Turning to films by Alain Resnais and Stanley Kubrick as examples, she further reasserts that in their works "landscapes are mental states" or "cartographies" that bring to our attention "the identity of the brain and the world," or simply the unity of the "brain-world."[346] Thus, the "delocalized" brain is not just a commanding organ but rather an archipelago of "multiple interconnected functional spaces, always in movement and susceptible to self-modification"[347], while its fundamental feature is the "power to configure the world."[348]

Malabou developed a philosophical language that accounts for the brain's artistic work of worlding and opens the possibility of liberation from those world-configurations that stifle its operation. Her search for a discourse in which "the neuronal man" could "know how to speak of himself" has led Malabou to the conclusion that articulation of subjectivity in the Anthropocene is premised on assuming the brain to be an intermediary between history, biology and geology, or consequently – a cartographer. And since its epigenetic becomings are mediated and occur "through the inorganic"[349], subject-object dualism is rendered useless, along with any representation-based notions of interacting with the world. Once again then, the map-territory distinction is subverted. Crucially, the brain is both map and territory because it must adapt to its own modifications too: a living map shaped by cosmic forces yet able to rearrange itself for better and for worse. As Malabou importantly underscores, "it is not a matter of thinking the brain 'in' its environment; it's a matter of seeing the brain *as* an environment, *as* a metabolic place."[350] Only by grasping this does it become possible to complete "the political emancipation of the brain"[351], which is necessary to overcome the political inertia that leads to loss of affect, particularly curiosity and astonishment.[352] Presently, this predicament is paralyzing because it freezes imagination and immobilizes its potential to develop alternative cartographies – ones revealing a different possible world of nature-cultural political relations and configurations.

It is in Catherine Malabou's concept of the self that the cartographic metaphor is reworked in a way that transforms the traditional understanding of map and

345 Catherine Malabou, *What Should We Do with Our Brain?*, 38–39.
346 Catherine Malabou, *What Should We Do with Our Brain?*, 39.
347 Catherine Malabou, *What Should We Do with Our Brain?*, 43.
348 Catherine Malabou, *What Should We Do with Our Brain?*, 39.
349 Catherine Malabou, "The Brain of History," 42, emphasis removed.
350 Catherine Malabou, "The Brain of History," 52, emphasis preserved.
351 Catherine Malabou, *What Should We Do with Our Brain?*, xiii.
352 Adrian Johnston and Catherine Malabou, *Self and Emotional Life: Philosophy, Psychoanalysis, and Neuroscience* (New York: Columbia University Press, 2013), 62.

territory. "The 'self'," she writes, "is a synthesis of all the plastic processes at work in the brain; this permits us to hold together and unify the cartography of networks."[353] The first map produced by the brain is thus one related to the process of the brain representing itself. What crucially emerges in this process of self-mapping is the "blurring of the borders between brain and psyche."[354] As these processes intensify and extend into the non-human realm, further layers are added to these mappings. Interestingly, as Malabou progresses to elucidate this, taking cue from Antonio Damasio, she goes on to argue that these proto-cartographies reveal the operation of "something like a poetic activity."[355] Such cerebral poetry would be responsible for the transition from the neuronal level to the mental, forming a bridge between mental maps and neuronal territories. In a turn of phrase that brings to mind claims made within biosemiotics, Malabou concludes that in the very networked character of interconnected neurons there is already something at work that makes them predisposed to expression of meaning. It is as if a material network could become expressive out of its own complexity when stimulated by contact with the environment.

This, however, would be impossible if it had not been for the brain's plasticity. As Malabou often recalls, "plastic" can also refer to "plastic explosive," which confirms the potentially destructive, change-inducing character of plasticity. In mild doses, these explosive occurrences can act like "creative bursts that progressively transform nature into freedom."[356] Thus, by offering a possibility of introducing discontinuities and gaps in the smoothed-out surface of the brain, neuroplasticity can be seen as an agent of change or reform. This function concerns ways of subverting perceptual habits by introducing obstacles, providing challenges to sense-making mechanisms, and inclining to regard the world differently – just like poetry does. Accordingly, at the heart of the plastic brain we encounter a sense-making mode similar to literary defamiliarization, anamorphic estrangement or weirding addressed previously. Once again, what is crucial for the brain is not to mimetically represent reality "as it is" but to counteract the closure of the gap between world and its description. This echoes Malabou's already mentioned dictum that the one thing we should definitely do with our brains is not to continue copying the caricatural vision of the world, by which she means the current, unsustainable and destructive form of global capitalism.[357] To facilitate this, she concludes, new mental maps are necessary because they can establish novel relationships between ourselves and our brains:

353 Catherine Malabou, *What Should We Do with Our Brain?*, 58.
354 Catherine Malabou, *What Should We Do with Our Brain?*, 60.
355 Catherine Malabou, *What Should We Do with Our Brain?*, 60.
356 Catherine Malabou, *What Should We Do with Our Brain?*, 74.
357 Catherine Malabou, *What Should We Do with Our Brain?*, 78.

ones inviting a world to come rather than perpetuating the self-destructive repetition compulsion.[358]

The "brain-world to come" that Malabou postulates to be ushered in with great responsibility and care is premised on a redefinition of what she calls "the history of mentality": instead of considering it from a purely specieist, egotistic perspective of humanity as the crown of being, she advocates acknowledging that human mentality crucially includes "the materiality of inorganic nature, the soil, the rocks, the mountains, the rivers, the earth."[359] In this, she attempts to embrace the "geological becoming of the human"[360] – a gesture that aligns her with geophilosophy. Despite theoretical differences, these positions share a fundamental, ecological premise, namely that we should not view the brain as existing in the environment but rather as being a continuous part of the environment, or the most immediate habitat. One cannot underestimate the significance of this philosophical gesture: annulling the partitioning of the environment along the dividing lines of nature-culture, human-nonhuman or subject-object involves both radical democratization of ontology, dethroning humanity and acknowledging its rootedness in nature, as well as a far-reaching reconsideration of agency and causality.

Malabou's commitment to the concept of plasticity also involves a rethinking of writing, especially in *Plasticity at the Dusk of Writing*, where she postulates that plasticity – as "continuous implosion of form" – comprises the "motor-scheme" that supersedes the linguistic-graphic one.[361] Malabou traces the transformation of writing through the release of artistic energy that "crumples and creases the text and makes a work from it" – a deconstructive energy facilitated by plasticity, in this account the actual form of writing.[362] This simultaneously calls for a plastic mode of reading, which would consist in "causing the form that comes after presence to arise in works."[363] Plastic reading could be thus understood as revealing a mapping left in the work as an imprint that heralds the difference between the original experience and its record. One caveat she adds, however, is that this imprint is not just graphic but geo-graphic because it involves difference manifested materially in epigenetic mode as "assemblies, forms, or neuronal populations."[364] In the end, "to produce the consciousness of the brain is not to interrupt the identity of brain and world and their mutual

358 Catherine Malabou, *What Should We Do with Our Brain?*, 82.
359 Catherine Malabou, "The Brain of History," 51.
360 Catherine Malabou, "The Brain of History," 52.
361 Catherine Malabou, *Plasticity at the Dusk of Writing*, 57–59.
362 Catherine Malabou, *Plasticity at the Dusk of Writing*, 56.
363 Catherine Malabou, *Plasticity at the Dusk of Writing*, 57.
364 Catherine Malabou, *Plasticity at the Dusk of Writing*, 60.

speculative relation; it is just the opposite, to emphasize them."[365] The reassertion of the brain in the world at the same time involves decentering subjectivity, which can be called other-worlding (altermondialisation) after Hugh J. Silverman. In his account, it concerns "the multiplicity of individual human bodies-brains and its/their ongoing process of self-fashioning as a sort of self-othering, self-re-forming" as a result of which "the myriad of inter-connections ('synapses') within us becomes increasingly indistinguishable from the interconnected world/society/polis/culture outside of us and in which we live."[366] In this light, Malabou argues, fiction is what the brain creates in order to experience itself, because it can have no real access to the neuronal make-up that is of pre-verbal nature.[367] No self-reflection of the brain is possible without invention, or developing what Slavoj Žižek called "a fiction observing its own fiction."[368] Therefore, she posits a "supreme fiction" that brings to our attention the existence of the brain, which is otherwise inaccessible. Indeed, if we follow the argument that the "neural experience develops itself as literature"[369], then fiction acquires a fundamental role in identifying the plastic histories of the brain and in providing it with the experimental field in which mental cartographies can be acknowledged and shaped. At the same time, the capacity for poetic "self-sculpting" also entails restitution of wonder, which Malabou sees as the ground for feeling oneself at all[370] – a means of saving the "affect of the other" from being permanently impaired[371] as well as providing a "foundation for care."[372] Through plasticity, we can think ecology as a materialist practice of meta-modelling mental maps through poetic experimentation, which facilitates an ecocentric view that posits brain cartographies as the basis for fathoming the deep entanglement of humanity in its environment.

As Malabou argues, the Anthropocene is a time of intense and precarious becomings, requiring thought to rise to the ambiguous challenge of plasticity and learn more about how humanity imprints itself on the world as well as how the world in turn shapes human brain. This can be achieved by acknowledging plastic brain cartography that makes us who we are by turning our brains into sites where connections are forged between all manners of things out in the world, assembling mappings that define the limits of our concern and care. At the same

365 Catherine Malabou, *Plasticity at the Dusk of Writing*, 53.
366 Hugh J. Silverman, "Malabou, Plasticity, and the Sculpturing of the Self," *Concentric: Literary and Cultural Studies* 36.2 (2010), 99.
367 Catherine Malabou, "What is Neuro-Literature?," *SubStance* 45.2 (2016), 81.
368 After: Catherine Malabou, "What is Neuro-Literature?," 87.
369 Catherine Malabou, "What is Neuro-Literature?," 81.
370 Catherine Malabou and Adrian Johnston, *Self and Emotional Life*, 9.
371 Catherine Malabou and Adrian Johnston, *Self and Emotional Life*, 10.
372 Catherine Malabou and Adrian Johnston, *Self and Emotional Life*, 51.

time, the fictive character of these maps leaves room for refining and updating them.

In *Plasticity at the Dusk of Writing*, Malabou follows in the footsteps of Jacques Derrida, arguing that writing has not been just a means of recording speech or data, but in fact a logic of tracing, or inscribing difference through spacing. Derridean grammatology is premised, Malabou argues, on the plasticity of writing: "writing would have to be plastic to open onto its 'wider' meaning, to reveal the *other* writing, masked by its 'derived' or 'common' meaning."[373] This "enlarged" kind of writing is a "motor scheme" that defines the scope of knowable meaning.[374] Historically metamorphic, the motor scheme delimits the boundaries of reality and sets the tone for thinking and enquiry. According to Malabou, it is plasticity that emerges out of writing as today's "best-suited and most eloquent" motor scheme that functions as "the energy sensor and rhythmic source of a new era."[375] Were we to interpret this historical junction as the onset of the Anthropocene, it becomes possible to consider Malabou's philosophical argument as an attempt to gesture towards new modes of framing reality, specifically ones fit for navigating the dangerous waters of the twenty-first century. The Anthropocene emerges, in this light, as an instantiation of plasticity, inaugurating what Lubiak called planetary plasticity. Indeed, anthropopressure and anthropogenic climate change have revealed the plasticity of the Earth, which shapes biological life but can be in turn affected by mass-scale changes such as carbon emissions or deforestation. As Malabou demonstrated, plasticity can be both productive and destructive, which clearly dovetails with the example of the Earth insofar as human-made ocean pollution or mass extinction can be both exacerbated or mitigated, depending on the accepted historical image of the planet. It is in this sense that her words about the emergence of plasticity as the inheritor of writing acquire a very special ring: "It is therefore in the capacity of a new *pure historical image* that plasticity, as a still uncertain, tremulous star, begins to appear at the dusk of *written form.*"[376] At the dusk writing, plasticity emerges as the new motor scheme. Writing, however, is not obliterated but returns in new, plastic form, "speculatively promoted"[377] in order to open new possibilities of identity-formation. In the present context, these threads can be woven together, revealing one possible transformation of the historical image premised on map-making: a "mode of tracing" that delineates the world by acknowledging its worldly entanglement and enlarging the capacity to think what has been impossible to encode in former modes of writing. Malabou's mention of

373 Catherine Malabou, *Plasticity at the Dusk of Writing*, 12, emphasis preserved.
374 Catherine Malabou, *Plasticity at the Dusk of Writing*, 14.
375 Catherine Malabou, *Plasticity at the Dusk of Writing*, 15.
376 Catherine Malabou, *Plasticity at the Dusk of Writing*, 15, emphasis preserved.
377 Catherine Malabou, *Plasticity at the Dusk of Writing*, 16.

"tremulous star" is particularly significant for this discussion as it also hints at the cosmic dimension. The planetarism suggested here, however, cannot be a writing that encircles Earth in purely human categories but one that takes into account the web of connections forming planetary life, which cut across the human and the non-human, the biotic and the geological. What the Anthropocene calls for is a new historical image that can only be developed by embracing plasticity as the defining feature of the relationship between the human and the planetary. What plasticity introduces into this dialectic is a "nonsystematic plurilingualism."[378] Irreducible to human categories, this myriad of invisible connections that populate the gap between humanity and Earth contribute to the transformation of both the planet and the life it holds. Remaining perpetually open to its own metamorphosis, plasticity has the capacity to enlarge itself, which led it to become "a travelling concept, a *trace* or *graph of self*" as well as the "metabolism of philosophy."[379] Unmoored from Hegel's thought, plasticity emerges as something more than a ripe philosophical concept – it actually regulates the rise of forms, although it itself remains "neither visible nor invisible" in its metabolic function that accompanies every transformation. Malabou writes about a "plastic system" as a "form capable of welcoming whatever arrives, including, perhaps, the other of history."[380] In this sense, plastic cartographies transform modern practices of map-making by revealing the other of scientific cartography: a powerful dimension of world-making or sense-making premised on elaborating the relationship between the map-user and the larger world as inseparable yet mediated. Such ways of mapping meaning are based on different coordinates than those offered by the graticule that captures the globe in discursive modes typically rooted in colonial, capitalist, or generally extractivist practices. What speculative cartographies reveal is the upside-down of the world enclosed in the bubble of global capitalism: the other of banal globalization. Through gaps between map and territory seeps the polyglot discourse of that which has been repressed in dominant visions of the global but has been always already there: economic inequality, plastic waste, food scarcity, ocean acidification or perilous migration. As Malabou emphasizes, the unsettling strangeness within is disturbing and manifesting through "interruption" or "intrametabolic upheaval"; when form is pushed to its limits, it explodes like plastic.[381] Out of dust, new forms emerge, the place of rupture marking the space "between the emergence of form and its annihilation"[382] at the moment when change enforces

378 Catherine Malabou, *Plasticity at the Dusk of Writing*, 24.
379 Catherine Malabou, *Plasticity at the Dusk of Writing*, 27, emphasis preserved.
380 Catherine Malabou, *Plasticity at the Dusk of Writing*, 34.
381 Catherine Malabou, *Plasticity at the Dusk of Writing*, 43.
382 Catherine Malabou, *Plasticity at the Dusk of Writing*, 43.

"negotiation between form and form, […] a *metamorphic negotiation.*"[383] Climate change can certainly be considered as an instance of "intrametabolic upheaval" that has profoundly disturbed not only humanity but also the nonhuman world, setting in motion processes that greatly exceed human scales of cognition and are increasingly difficult to capture using conventional discursive tools. The intrusion of Gaia, or the materialization of forces that cut through the former human-nature divide, has called attention to the interrelation between life and larger climatic or geological dimensions. This scar reveals both the deeper strata of what is assumed to be intelligent life and the possibility of another image or conceptual graticule that could function as a basis for maps which push the limit of their form towards deforming reality and opening up to other futures.

Through the concept of plastic reading, Malabou facilitates rethinking planetary visions. Deconstruction of global images exposes their malleability, but Malabou goes one step further, focusing on what comes after deconstruction. In other words, she is interested in "how a text lives its deconstruction"[384], arguing that "it is a matter of revealing a form in the text that is both other than the same *and* other than the other, *other than metaphysics*, *other than deconstruction.*"[385] It is a "form that is the fruit of the self-regulation of the relation between tradition and its superceding and which at the same time exceeds the strict binary terms of this relation."[386] In this sense, plastic reading looks both to the past and to the future, drawing on the potentiality of the former to unlock possibilities in the latter. The point is then to think in ways that are neither thoroughly traditional nor purely deconstructive.[387] To continue with the theme of the global, the deconstructed image of the planet not only reveals ineliminable differences at its basis, but also receives – in Derrida's language – a "double mark": one within itself and one "outside the deconstructed system."[388] That other trace is the real Earth, a hyper-object whose form is revealed only with the withdrawal of mimetic presencing. It is only then that something else can be made visible: the contours of a New Earth. This gesture echoes Meillassoux's concept of arche-fossil, which can be seen here as an earthly mark from outside the correlationist circle, which facilitates reinventing it. His imaginative leap of envisioning Earth without humans opens a new planetary vista, one that it is indeed "other than deconstruction": a groundless, metamorphic earth, crisscrossed by cosmic forces and offering no meaning that would be specifically human or human-bound. Mal-

383 Catherine Malabou, *Plasticity at the Dusk of Writing*, 50, emphasis preserved.
384 Catherine Malabou, *Plasticity at the Dusk of Writing*, 52.
385 Catherine Malabou, *Plasticity at the Dusk of Writing*, 52, emphasis preserved.
386 Catherine Malabou, *Plasticity at the Dusk of Writing*, 52.
387 Catherine Malabou, *Plasticity at the Dusk of Writing*, 54.
388 Catherine Malabou, *Plasticity at the Dusk of Writing*, 52.

abou's concept of plasticity reveals not just free play of difference but the "continuous implosion of form, through which it recasts and reforms itself continually."[389] By turning attention to such unceasing metamorphoses, she wishes to reveal, through plastic reading, "a childhood to come" or a "primitive future of texts" that lies "both before and after history."[390] It is a meaning that does not yet exist, a perspective of a different future that is not framed by transcendence, that is beyond metaphysics, or at least human-framed metaphysics. Plasticity is then "the condition of existence of meaning in as much as it confers its *visibility* upon it, without this being confused with its presence."[391] Indeed, the Anthropocene is no divine intervention, but a change that reconfigures the visibility of Earth in terms of a horizon or outline that is not directly present but becomes thinkable through the visibility conferred on it by plasticity. Following Lyotard's definition of visibility as "an exteriority that cannot be interiorized as signification"[392], Malabou underlines the question of form, or rather "deformation" of exteriority, "the form that comes after presence."[393] To think Earth is not to submit it to overarching historical frameworks or overturn them; a New Earth must be acknowledged as plastic: giving form and receiving it. Indeed, in its long history, this planet has undergone tremendous changes carried on the backs of those forms of life that have inhabited it. The same preoccupation drove Negarestani to the center of the Earth to address the question about humanity. In a similar gesture, Malabou posits the brain as the intersection of geological and human forces, at which point its plasticity comes to the fore, simultaneously hinting at possible geographies that would bring forth a new childhood of Earth.

Malabou's considerations in *Plasticity at the Dusk of Writing* conclude with a powerful argument that comes from neuroscience. Drawing on the biologist Jean-Pierre Changeux, she begins by acknowledging that cerebral organization is a subject that merits philosophical attention because it displays what comes after writing: a graph or map that is "geographic" because it traces neuronal populations as assemblies that "determine the appearance of graphs"[394], forming a notion of the environment. The etymological root of geography is *geo-graphein*, or earth-writing. In the Anthropocene, as humanity has become a geological factor in planetary life, it is itself inscribing the planet quite literally, transforming the very foundations of life and discovering in the process its own entanglement with other actors in the ecosystem. This is much closer to ter-

389 Catherine Malabou, *Plasticity at the Dusk of Writing*, 57.
390 Catherine Malabou, *Plasticity at the Dusk of Writing*, 54.
391 Catherine Malabou, *Plasticity at the Dusk of Writing*, 56, emphasis preserved.
392 Catherine Malabou, *Plasticity at the Dusk of Writing*, 56.
393 Catherine Malabou, *Plasticity at the Dusk of Writing*, 57.
394 Catherine Malabou, *Plasticity at the Dusk of Writing*, 60.

raforming than to writing insofar as it does not involve "printing or facilitation" but "re-formation or re-composition."[395] This is postulated by Malabou to be recognizable already at the level of the brain's structure. The way synapses work is that they are not only recipients of form but are able "to modify their effectiveness as a result of experience."[396] This double bind guarantees the possibility of change derived from fundamental openness, or woundedness that makes humans sensitive to changes in the environment and capable of turning to different futures through better understanding of interconnectedness within the webs of biological life, climatic forces and geological processes. Drawing on Negarestani, the cosmic trauma embodied by the Earth's iron core has opened up humanity to planetary-scale vistas, inviting hyperobjects into our homes and revealing the possibility of a different planetary form through plastic geography. Plasticity provides a way to think "alterity without transcendence"[397] and "opens a future in the absence of any openness of the world."[398] These are key notions for speculative cartographies insofar as they embrace terraformation as world-building, home-making, or the shaping of future through imaginative engagement with the more-than-human world. Earth is plastic too, as geoscience has vividly demonstrated. Its long history is one of traumatic transformations. Profound metamorphoses have produced a world we typically take for granted, but whose precarious planetary conditions have to be addressed given the current projections for crossing vital tipping points. The susceptibility to change identified in brain plasticity can be scaled up – following Negarestani – to reveal the woundedness of Earth itself as a cosmic incision in the universal continuum. Only in this larger context is it possible to locate humanity and its place in earthly life as well as establish the basic parameters for a realist geophilosophy in the Anthropocene. In this light, for example, climate change can be regarded as the revelation of Earth and its agency, causing systemic breakdowns along the cracks of nature-cultures. The newly revealed power of Earth is also something that, to some extent, humans wield. Plasticity thus uncovers planetary potential for change through more-than-human alliances that could provide solutions to global crises. Malabou embraces neuronal plasticity as connected with genetic indetermination: "plasticity forms where DNA no longer writes"[399] and posits that it provides a materialist explanation of the self-organization of being and thought.[400] In this sense, it goes far beyond its original locus of meaning – the human brain – and emerges as a philosophical concept that provides a useful lens

395 Catherine Malabou, *Plasticity at the Dusk of Writing*, 60.
396 Catherine Malabou, *Plasticity at the Dusk of Writing*, 60.
397 Catherine Malabou, *Plasticity at the Dusk of Writing*, 66.
398 Catherine Malabou, *Plasticity at the Dusk of Writing*, 78.
399 Catherine Malabou, *Plasticity at the Dusk of Writing*, 60.
400 Catherine Malabou, *Plasticity at the Dusk of Writing*, 61.

for regarding the evolution of Earth images or mappings as ways of organizing knowledge about the world and acting inside it.

Another powerful argument for the cartographical organization of the brain is provided in Rebecca Schwarzlose's account of "brainscapes," or "the warped wondrous maps" formed in human brains.[401] Her thesis is that the human brain is a walking atlas brimming with maps that organize the ways we encounter the world and interact with it. As she notes in the introduction, these maps are vital for orientation in the here and now, but at the same time provide deeper awareness of how the future is shaped through brain formation, or intra-action with the environment, as it could be phrased by drawing on Karen Barad's agential realism. As already acknowledged, the brain is the environment of the self and in turn belongs with all other strata it inhabits, both biotic and mineral. This brings out the meaning of intra-action as "mutual constitution of entangled agencies": the co-becoming of the brain and the self, or territory and map, as both are transformed through encounters facilitated by complex relations and not individual positions.[402] Barad's account is indirectly supported by Schwarzlose, who emphasizes that brain maps are all about coordinates, or graticules, and not representations; more than that, they operate through "gross distortions."[403] One vivid example of this, which she analyses in close detail, is how the image-processing brain area V1 visualizes the world, often compromising on certain aspects of scopic orientation. Schwarzlose's crucial term – "brainscapes" – in fact describes the "distorted version of reality as it is mapped inside our heads."[404] The cartographical processing done by the brain epitomizes the aesthetically processed representation or inherently metaphorical organization of knowledge at the cerebral level. "Just as you can draw a map of the Egyptian pyramids on almost anything," Schwarzlose argues, "you can build maps of distance, time, frequency, temperature, and more, all with the same set of materials – in the case of brain maps, neurons, electricity, and time."[405] What comes to light here is the concept of the brain as an imaginative cartographer who is busy tending to an entire atlas of maps necessary to situate oneself in the world and navigate it. As Harman shows through the concept of tool-being, these maps easily recede into the background while in use, which is typically most of the time. We are only reminded of their existence when they break down, which holds especially true for the history of brain science, enabled in many ways by traumatic events

401 Rebecca Schwarzlose, *Brainscapes. The Warped, Wondrous Maps Written in Your Brain – And How They Guide You* (Boston: Houghton Mifflin Harcourt, 2021).

402 Karen Barad, *Meeting the Universe Half-Way. Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007), 33.

403 Rebecca Schwarzlose, *Brainscapes*, 43.

404 Rebecca Schwarzlose, *Brainscapes*, 52.

405 Rebecca Schwarzlose, *Brainscapes*, 83.

involving damage or destruction. The reason behind receding could be that this wiring is very old in both phylogenetic and ontogenetic terms: "Before you had functioning eyes, your proto-brain already contained the structural scaffold of your visual map […] and many other brain maps," Schwarzlose ascertains.[406] To continue with the metaphor of brain-as-cartographer, the basic speculative tools and techniques are embedded deep in the evolutionary makeup of human biology and activated right from the earliest stages of embryonic formation. These are also examples of vector maps, as Bryant calls them, which guarantee some degree of stability for trajectories of becoming in complex environments. They are nevertheless not a fully determining factor because in early life a fine tuning of brain maps occurs, as is clear in the case of auditory maps developed by rat pups, for example.[407] This testifies not only to the fragility of these maps but also to their "superpower" which gives "each and every creature the chance to uniquely and responsively adapt to its surroundings."[408] A fine example of Malabou's interpretation of epigenetics, this position also echoes Guattari's crisscrossing of mental, social and environmental ecologies. Although no far-reaching changes can be made to adult sensory brain maps, they remain "somewhat malleable" and confirm continued interaction between the brain and environment.[409] Importantly, these fundamental atlases at the back of the human mind are not limited to what is directly the subject of cognition; in fact, they have the power to "transport us beyond the here and now"[410], activating not only visual but also auditory and tactile areas in the brain. At the same time, the ability to bring together various brain maps and the conceptual domains they introduce constitutes a metaphor-driven means of "aligning abstract concepts with physical dimensions and then putting our brain maps to work."[411] This is achieved imaginatively within every culture with regard to certain fundamentals like the understanding of numbers and their connection with the real world.[412] Such brain-level research also confirms some of the fundamental assumptions in cognitive linguistics regarding the embodied character of meaning, as suggested for example by Lakoff and Johnson in *Metaphors We Live By*. In the 2003 afterward to this classic study, they further add that their neural theory of metaphor transforms the concepts of mapping and projection as maps comprise physical neural connections, while projection refers to domains activated in

406 Rebecca Schwarzlose, *Brainscapes*, 132.
407 Rebecca Schwarzlose, *Brainscapes*, 136.
408 Rebecca Schwarzlose, *Brainscapes*, 141.
409 Rebecca Schwarzlose, *Brainscapes*, 142.
410 Rebecca Schwarzlose, *Brainscapes*, 171.
411 Rebecca Schwarzlose, *Brainscapes*, 191.
412 Rebecca Schwarzlose, *Brainscapes*, 193.

different parts of the brain, addressing neural ensembles that complete the metaphor.[413]

Activation of various sensory modalities occurs even if their objects are not the target of attention at a given moment. The operation of the V1 visual area involves processing information in other areas too, using their input regarding what is or should be expected or recognized.[414] "In this way," Schwarzlose colorfully describes, "your brain is like a complex subway system with many routes and transfer points. […] Meaning does not reside in any single map, but many maps can work together to create meaning."[415] This is exactly what brain science teaches us about information, which becomes distributed and map-based, or "contained in the pattern of activity across many neurons rather than in the activity of any single neuron"[416] because "representing any particular meaning entails marshaling many areas of the brain and its maps all at once."[417] This echoes Malabou's point about neuronal assemblies, along with their geographical and political dimension, once again tightening the knot formed by mental, environmental and social ecologies. Importantly, Schwarzlose draws attention to the emergence of this triple ecology during childhood, when heightened sensitivity to stimuli marks the crucial period of brain formation, beginning as early as in prenatal and neonatal stages.[418] The kind of environment where children are brought up lays down the basic configuration of the three ecologies in the young brain. This dovetails with the fundamental tenets of neuroplasticity by highlighting cerebral susceptibility or sculptability that acknowledge deep immersion in the environment while facilitating differentiation and change. At the same time, this perspective recognizes the crucial character of brain maps developed during early development. They act as a foundation for more abstract maps that are necessary to grasp how complex ecologies work. These multifaceted cartographies, which play a crucial role in navigating today's world, are in fact constructed using the more deep-seated ones, "built atop a teetering tower of ladders"[419] – maps nested and mediating one another. This is another important reminder because modern culture often lacks appreciation for how complicated matters are processed using plastic brain maps that enable the elaboration of multi-dimensional objects. At the bottom of the aforementioned ladder we find "basic neuronal foundations for sensation, action, and spatial awareness that

413 George Lakoff and Mark Johnson, "Afterword, 2003," in *Metaphors We Live By* (Chicago: The University of Chicago Press, 2003), 256.
414 Rebecca Schwarzlose, *Brainscapes*, 202.
415 Rebecca Schwarzlose, *Brainscapes*, 202.
416 Rebecca Schwarzlose, *Brainscapes*, 94.
417 Rebecca Schwarzlose, *Brainscapes*, 204.
418 Rebecca Schwarzlose, *Brainscapes*, 246.
419 Rebecca Schwarzlose, *Brainscapes*, 251.

were laid down in childhood"[420]: maps that coordinate perception and activity mostly in the background, usually revealing themselves when they break down. However, this is no longer an individual issue, because if we accept that "brainscapes undergird and fundamentally shape how you think, reason, comprehend, and imagine for a lifetime"[421], it becomes paramount to pursue adequate social and environmental ecologies in order to create a mental ecology that would be oriented toward a sustainable and shared future. For this reason, it is crucial to tend to children's neural foundations, facilitating "ease and versatility for building cognitive ladders throughout life."[422] These cognitive ladders, I would argue, form an atlas of the present, one that serves as a guide to both the past and the future. As Schwarzlose concludes, "brain maps […] lend us a tangible roadmap for understanding how and why we think and feel and act the way we do."[423] Brainscapes, in her view, constitute "the deepest foundation of who and what we are"; for this reason, "how they arise, adapt, and represent are integral to human health and the promise or peril of emerging technologies."[424] To these concerns I would add the task of re-grounding human subjectivity in the vast nature-cultural landscape of the Anthropocene. Indeed, "[b]rainscapes also lay bare the remarkable relationship between our minds and the wider world" because they "embody the world's place within each of us."[425] The choice of verb here offers an important clue as embodiment indicates that brain maps are living, or lived plastic maps, receiving forms and recomposing them through transformative encounters with the world. Once again, as Malabou underscores, the answer to the question of what we should be doing with our brains is to refrain from automatic replication and remain faithful to the task of cartography understood as the negotiation of coordinates for representing complex interrelations in the experienced reality. In this light, speculative cartographies would have deep their roots in brain maps that operate in non-representational terms through metaphor and distortion, activating other maps in the process of constructing meaning through metaphorical connections among different conceptual domains. Malabou's call entails in this light poietic elaboration of brain maps in the effort to negotiate their graticules and reveal vital issues of concern in the Anthropocene.

420 Rebecca Schwarzlose, *Brainscapes*, 251.
421 Rebecca Schwarzlose, *Brainscapes*, 251.
422 Rebecca Schwarzlose, *Brainscapes*, 254.
423 Rebecca Schwarzlose, *Brainscapes*, 254.
424 Rebecca Schwarzlose, *Brainscapes*, 255.
425 Rebecca Schwarzlose, *Brainscapes*, 255.

Speculative fiction

In the short story "The Earth-Brain" by Edmund Hamilton, the narrator relates an account of Clark Landon, who is literally haunted by the Earth, which "follows" him with tremors, tectonic shifts and earthquakes wherever he goes in punishment for his trespassing on the Earth's brain located inside a huge mountain near the North Pole.[426] The story was published in 1932 in the pulp magazine *Weird Tales* and is representative of weird fiction, which proliferated at the time, reaching peak popularity. Hamilton's story captures vital elements of what was termed by H.P. Lovecraft "cosmicism" – a genre of supernatural, cosmic horror that upturned classical modes of Gothic or horror writing, reversing its premise.[427] In typical instances of the latter, as Polish writer Wojciech Gunia aptly put it, a monstrous or supernatural irruption is tamed so as to restore order in the world, but in cosmic horror the breakdown of the onto-epistemological framework actually reveals that reality cannot be ordered because the entities that cut through the human cognitive mesh cannot be assimilated, gesturing towards larger, more-than-human forces at work in an unfathomable universe.[428] As China Miéville underlines in his overview of weird fiction, at its core we find a "numinosity under the everyday," or sublime "awe" that is "undermining the quotidian"[429], which causes – as is the model case in Lovecraft – a "deferral" that renders reality "always-already unrepresentable."[430] According to the British writer and critic, this profound shift is expressive of an "underlying crisis" that has engulfed "capitalist modernity" at the turn of the nineteenth and twentieth century[431], continuing to unfold in the Anthropocene. In this way, entities from deep space, like Lovecraft's Cthulhu, can be considered an adequate literary response to "think and unthink society" through the lens of the fantastic.[432] In the discussed narrative, however, the weirdness of cosmic horror is not brought upon the unsuspecting protagonists by way of an extraterrestrial monstrosity but through the Earth itself, made manifest as its Brain. In this way, another reversal takes places, one that dovetails with environmental humanities: the silent background to life and adventure is rapidly foregrounded and becomes

426 Edmond Hamilton, "The Earth-Brain," in *Acolytes of Cthulhu*, ed. Robert M. Price (London: Titan Books, 2014), eBook.
427 S. T. Joshi, *A Dreamer and a Visionary. H. P. Lovecraft in his Time* (Liverpool: Liverpool University Press, 2001), 182.
428 Wojciech Gunia interviewed in "Weird fiction. Co to za literatura?," *Albo poczytam*, podcast by Anna Karczewska, Radio Kampus, September 2023.
429 China Miéville, "Weird Fiction," in *The Routledge Companion to Science-Fiction*, eds. Mark Bould, Andrew M. Butler, Adam Roberts, and Sherryl Vint (London: Routledge, 2009), 510.
430 China Miéville, "Weird Fiction," 512.
431 China Miéville, "Weird Fiction," 513.
432 China Miéville, "Weird Fiction," 513.

the prime actor in the unfolding drama, the Earth catching up with arrogant humanity.

In Hamilton's story, Landon was part of an expedition to the North Pole, aiming to verify whether reports of a polar mountain are actually true. Led by the scientific impulse to confirm this, which would have far-reaching geological implications, the group finally travel to the said massif despite admonishment from the Inuit, who tried to convince the surveyors that their disturbance of the mountain may have severe consequences. At the mountain, the explorers discover a tunnel that leads them inside, where they confront the Earth-Brain: "a great ovoid of pure light, like a huge egg in shape and a hundred feet high," or an entity "of light or force that towered there at the cone-cavern's centre, emitting the light that illuminated it and also the enigmatic force that had beat upon us and the soft roar of sound we had heard."[433] A rendition of Earth in miniature form, it encapsulates not only vision and sound, but also gives a "sensation as of the impact of a colossal will […] a will so mighty that mere nearness to it makes one feel its power as tangible force."[434] The complex weaving of the planet's forces reveals its "mind," as one of the Inuit calls it: an "alien force" that not only expresses itself through seismic activity but also possesses a brain, albeit one that is shown to be distributed by research in ecosystems and the Earth's history. This is also indicated in the story, as the narrator marvels at the Earth Brain's "light-tentacles [that] ran down like animating sinews through its great earth-body"[435], forming non-human longitudes and latitudes. Synthesized in this way, the Earth suddenly emerges as having agency and metamorphic powers. Weird fiction excels at putting its protagonists in a position of cognitive disturbance, or "discognition" as Steven Shaviro calls the kind of literature "that operates through speculation and extrapolation."[436] When sentience and intelligence are pushed to the limit, human concepts of consciousness are destabilized and traumatically brought into the presence of greater cosmic dimensions, which not only dwarf human thought but also uncannily entwine with *Homo sapiens*. The dismal alien revelation, which fascinated yet deeply troubled the racist Lovecraft, suggests a deeper connection between the seemingly self-contained humanity and its rootedness in earthly life support systems. This uncanny trans-subjectivity experienced by Landon is therefore not mere interaction with the Earth-Brain but an engagement akin to Karen Barad's intra-action: the kind that is invariably embedded in planetary networks of material mediation. In this model, the question of consciousness becomes decentralized as traditional Freudian

433 Edmond Hamilton, "The Earth-Brain," 297–298.
434 Edmond Hamilton, "The Earth-Brain," 279.
435 Edmond Hamilton, "The Earth-Brain," 285.
436 Steven Shaviro, *Discogniton* (London: Repeater Book, 2016), eBook, 7.

unconscious is extended to the material world, with its long, often traumatic history of transformation. This revelation is forced upon Landon: through weird engagement, he is othered, made suddenly different – opened up by the Earth, which holds the characters "in remorseless grip."[437] Landon concludes that "somehow in my mind then I knew without shadow of doubt that the ovoid was contemplating us, was examining and inspecting us."[438] Moreover, the experience entirely reverses the active-passive dichotomy. As the protagonist is paralyzed by the Earth-Brain, his mind is pushed back into the vast, living material background of the planet: "it was not my own mind that leapt thus, but the mere reflection or echo in my mind of the Earth-Brain holding me."[439] Human individuality dissolves in dark-ecological awe, providing a different perspective on consciousness, subjectivity and affect:

> How can I tell what I seemed to feel? It was as though for the time I was part of that great Earth-Brain, was thinking as it thought and seeing things as it saw them. It was as though, like it, my mind was cased not in any tiny body of colloids and bones and blood-compounds, but in a vast body endowed with a totally different sort of life. As though my great body was a planet, its stupendous frame of stone and its circulating life-fluid, the cataracts of flowing fire in its interior! As though all the multitudes of land and water forms of life that swarmed upon my vast body were as unnoticeable and unimportant to me, intent on my own vast affairs, as microbes to the human upon whose body they live.
>
> It seemed that I, the Earth-Brain now and not Clark Landon, sat here in this brain-chamber at the top of my earth-body. Poised here, I was as aware of all my great body as a man is of his arms and legs. For down into my earth-body ran the tentacles of light that extended to the uttermost parts of earth, the muscular system by which I moved my earth-body at will.
>
> I moved one of those mighty muscles of light and the answering movement of my earth-body was a great quake on the other side of earth! Another of my muscles twitched and an avalanche crashed somewhere else on earth! I paid no attention whatever to the verminous tiny things dwelling upon my body, often annihilated in hordes by my earth-body movements.[440]

The Earth's "vast body" becomes embodied knowledge as Landon is opened up to a different identity, his own body becoming a map of the planet, the "earth-body" offering a glimpse of the Earth-Brain's colossal potentiality for myriad becomings. The vistas opened by such rearrangement of the relationship between humanity and the environment conflate the two as a single plane of plasticity that affords actuality and life. What this encounter illustrates is car-

437 Edmond Hamilton, "The Earth-Brain," 300.
438 Edmond Hamilton, "The Earth-Brain," 300.
439 Edmond Hamilton, "The Earth-Brain," 303.
440 Edmond Hamilton, "The Earth-Brain," 304–305.

tographic rupture: an explosion of anthropocentric claims to uniqueness and mastery through mapping. During the described earthquake, the brain opens cracks, or gaps that reveal a vaster intelligence, or planetary "conatus," to invoke Spinoza's term. Through these fissures emerges an "alien intelligence," as Skeel, a member of the expedition, anxiously calls it: an "intelligence operating on planes and for ends entirely alien to us."[441] The real scare in the story, then, consists not just in mortal danger faced by protagonists but in the shattering of former visions of the global. It is highly significant in this context that weird fiction is indeed an aesthetic that tries to communicate a degree of weirdness and lack of mastery over a world made unfamiliar by the theory of relativity, quantum physics and neuroscience. Although derided for its pulpy sensationalism and over-the-top plots, weird fiction was able to capture some of that disorientation and bottle it in the form of monstrosities that can never be overcome yet encroach on human life, taking away sanity by confronting protagonists with cosmic powers, piercing them with cosmic traumata, as Negarestani calls the coordinates that have replaced the Newtonian categories of local physics with the cosmic and subatomic weirdness that transpires from Einstein, Bohr or Heisenberg. These theoretical developments necessitate confronting Earth as alien planet, or reworking the relationship between humanity and space in order to develop a cartographical graticule for a vision of the world that still needs to be formed. What grants Landon's account even more gravity is that the protagonist is ultimately driven to suicide, the Earth-Brain following his every move and catching up with him through massive seismic torsions all over the world. Today, we may identify with Landon as anthropogenic climate change is unleashing all kinds of extreme weather events, heralding unforeseeable chains of disruption set to transform planet Earth. And although Hamilton's story was not written with climate catastrophe in mind, it does offer a vivid model of the trans-subjectivization that humanity is undergoing in its becoming the *anthropos* of the Anthropocene. As Mark Bould argues, taking cue from Fredric Jameson, the unconscious of the text – its silences, contexts and material conditions – can be partly revealed by changing the master code, or the lens through which images and texts are processed.[442] To illustrate this "critical weirding," Bould uses the example of queering cinema, where films are watched without assuming that everyone is heterosexual, and thus making it possible to note the flows of desire between characters. Another angle of this kind is the ecocritical one, which in turn tracks the subtle indications of parameters that shape the relationship between humanity and the environment. What Hamilton's "Earth-Brain" reveals in

441 Edmond Hamilton, "The Earth-Brain," 283.

442 Mark Bould, *The Anthropocene Unconscious. Climate Catastrophe Culture* (London: Verso, 2021), eBook, 37–38.

this view is the deep-seated anxiety about becoming-earth, dissolving into the ecosystem, or being subjugated and transformed by planetary-scale forces.

Another notable example of such radical "traumatic transplantations" is Area X from Jeff Vandermeer's 2014 *Southern Reach* trilogy, a series of novels that have won acclaim for their distinctive blend of New Weird sensibility and ecological concerns. Reworking a colonization scenario where humanity comes into contact with Area X, Vandermeer sets up an uncanny confrontation with transformative forces that "refract," as the 2018 adaptation by Alex Garland emphasizes, or bend reality at multiple scales. Although its appearance is shrouded in mystery since its initial emergence, Area X is shown as slowly expanding and metamorphosing earthly territory under an impenetrable, shimmering bubble. Paradoxically, it leaves in its wake a pristine and flourishing habitat, as if untouched by human hands. The Southern Reach organization that officially oversees this event has already sent eleven expeditions to investigate, with little success and at great human cost. *Annihiliation*, the first novel of the trilogy, follows an all-female expedition comprised of an anthropologist, a biologist, a psychologist, and a surveyor. As they enter through the opalescent barrier known as the "Shimmer," they discover, however, that all the ways of making reality sensible are rendered useless since what they experience eludes their categories of understanding and advanced technology.

The novel's first part, titled "Initiation," opens characteristically with a paradoxical statement: "The tower, which was not supposed to be there, plunges into the earth in a place just before the black pine forest begins to give way to swamp and then the reeds and wind-gnarled trees of the marsh flats."[443] At the very outset, the fundamental coordinates of presence and non-presence are disturbed as cartographical expectations fall short in the face of the uncanny tower. Like members of the expedition, readers are plunged into the story *in medias res*, immediately immersed in a weird setting where basic spatial parameters come undone. This causes profound disorientation, which creates an effect that William J. Hugel called "cartographic destabilization."[444] Area X thwarts any attempts to establish cardinal points, disrupting the operation of locative media, whether cognitive or technological, as emphasized by the fact that all radio or satellite communication is jammed and rendered useless. "The map," the narrator concludes, "had been the first form of misdirection, for what was a map but a way of emphasizing some things and making other things invisible?"[445]

443 Jeff Vandermeer, *Annihilation* (New York: Farrar, Straus and Giroux, 2014), eBook, 6.

444 William J. Hugel, "Developing Weirdness through Cartographic Destabilization in Jeff VanderMeer's *Annihilation*," *Inquiries* 7.5 (2015), http://www.inquiriesjournal.com/articles/1032/developing-weirdness-through-cartographic-destabilization-in-jeff-vandermeers-annihilation.

445 Jeff Vandermeer, *Annihilation*, 107.

According to Hugel, "in the expedition members weirdness has colonized and deformed their sense of place into something uncanny."[446] In a weird turn, uncertainty creeps over the relationship with the environment, which is both thoroughly natural yet also a "camouflage" as the psychologist notes, indicating the presence of a much vaster and unfathomable force transforming the ecosystem, gradually enveloping the expedition, forcing its members to shed vestiges of existing cartographical systems and turn towards other means of mapmaking – ones that would acknowledge precarious embeddedness in a rapidly transforming ecosystem. Importantly, the setting of the trilogy has been acknowledged by the author to have been inspired by Florida's St. Marks National Wildlife Refuge, situated at the Gulf of Mexico, which has been not only the site of severe environmental catastrophe owing to the Deepwater Horizon oil spill, but also the victim of overfishing, destruction of habitats, especially wetland areas, as well as pollution produced by discharge of chemicals and, last but not least, climate change. In a sense, then, Area X constitutes an uncanny return of the repressed as Earth and humans are alike transformed by an event whose ramifications cannot be captured in cognitive mappings afforded by conventional ideas of space and its ecological becomings.

The uncanniness of Area X has been the staple of criticism devoted to the *Southern Reach* trilogy, specifically attracting concepts of traumatic returns and painful resurfacing of weird environmental grounding, as outlined by Timothy Morton and Reza Negarestani. Siobhan Carroll noted that *Annihilation* "provides a useful lens via which to process the return of our repressed awareness of humanity's implication in a natural world."[447] This establishes the ecological uncanny as a defamiliarizing technique which subverts human-centric ideas of nature as limited and actually inhibiting when it comes to imagining the larger totality of ecosystems that implicate humanity through weird loops. David Tompkins directly ties this with Morton's notion of hyperobjects, noting that akin to other global-scale events such as climate change and mass extinction, hyperobjects work precisely like Area X.[448] We encounter its "local effects" but the larger unity is "literally beyond our ken."[449] Further, Carroll argues that undoing commonsensical notions of nature helps to tap into the "ecological unconscious"[450] through a weirdness that "transcends concepts of natural and

446 William J. Hugel, "Developing Weirdness."
447 Siobhan Carroll, "The Terror and the Terroir," *Paradoxa* 28 (2016), 67.
448 David Tompkins, "Weird Ecology: On The Southern Reach Trilogy," *Los Angeles Review of Books*, 30 September 2014, https://lareviewofbooks.org/article/weird-ecology-southern-reach-trilogy/.
449 David Tompkins, "Weird Ecology."
450 Siobhan Carroll, "The Terror and the Terroir," 76.

unnatural."[451] As the nature-culture dichotomy is dismantled, the ability to "site oneself securely in an inhospitable landscape"[452] is no longer possible in ways that separate the protagonist and the environment, effectively foreclosing any aspirations to detached objectivity. "I had gotten sidetracked," the psychologist contends, "because I melted into my surroundings, could not remain *separate from*, *apart from*, objectivity a foreign word."[453] According to Hartland, this constitutes the gist of criticism offered by *Annihilation*; as he emphasizes, although the uncanniness of the novel's aesthetic is both engrossing and distressing, the work is "not so much about weirdness itself […] as the way in which humans experience or gloss it. It is a novel about the Weird as much as it is a novel of the Weird. It is a form of criticism."[454] This kind of criticism would be premised on the technique of weirding, or defamiliarization that sets free the uncanny dimension of reality in order to produce a "cathartic" effect, as Vandermeer suggests in the article "The Uncanny Power of Weird Fiction."[455] He goes on to argue that bringing coherence to a reading is a hermeneutic horizon built on wishful thinking: "[w]e like to think we understand our universe," he comments, but in his view weird fiction provides a "potentially powerful way in which to find the distance and the universality to grapple with the negation of that idea."[456] The universality he speaks of, however, is not anthropocentric but decentralizing insofar as it places humanity not in the center of understanding or truth, but at the very fringes of cosmic unfolding. Vandermeer employs two powerful metaphors to speak about this. One concerns humanity actually being in its "infancy of understanding the world" – in the era we can identify as the Anthropocene, "we think we are older than we are," which also echoes Malabou's remark about the childhood to come. The discovery of geological time and cosmic co-evolution puts human development in the perspective of much longer processes that have contributed to the rise of *Homo sapiens*. The other trope followed by Vandermeer concerns shipwreck and refers to the 1967 novella by Michel Bernanos titled *The Other Side of the Mountain*, where a maelstrom transports capsized sailors to a "strange land of hostile plants and artifacts that threaten to destroy them."[457] This dovetails with the overarching theme of ship of fools, whose critical thrust consists precisely in a "humbling" that Vandermeer finds to be crucial as a

451 David Tompkins, "Weird Ecology."
452 Dan Hartland, "Review of *Annihilation*," *Strange Horizons*, 3 February 2014, http://strangehorizons.com/non-fiction/reviews/annihilation-by-jeff-vandermeer/.
453 Jeff Vandermeer, *Annihilation*, 236, emphasis preserved.
454 Dan Hartland, "Review of *Annihilation*."
455 Jeff Vandermeer, "The Uncanny Power of Weird Fiction," *The Atlantic*, 30 October 2014, https://www.theatlantic.com/entertainment/archive/2014/10/uncanny-fiction-beautiful-and-bizarre/381794/.
456 Jeff Vandermeer, "The Uncanny Power of Weird Fiction."
457 Jeff Vandermeer, "The Uncanny Power of Weird Fiction."

philosophical stance aiming "to be true to the underpinnings of the world" and continue the "struggle to understand the world" even though no mappings can ever be exhaustive, this being in the writer's eyes "not a failing but a strength."[458] In this sense, cartographic destabilization provides an opportunity to think the world anew and reconfigure the parameters of environmental visibility to show the planet as an active agent that contains and holds humanity as the two metamorphose in unison.

Specifically addressing the question of the Anthropocene, Vandermeer elaborates on this topic in his introduction to the art-and-poetry book by Swedish multimedia artist Johannes Helden, titled *Astroecology*.[459] This original work, which combines photographs and poems, has both a print a version and an online one, where the computer interface facilitates jumping between an overhead pastoral image and a range of nature photographs, with poetry lines emerging in the box below with every click, forming weird loops that connect the two. The tentative map arising from this work gradually emerges in the form of a poem where blanks or blurred elements are brought forth by the user to complete the text. Such innovative approach to building knowledge forms the staple of a speculative cartography suggested by this piece. In Vandermeer's words, it comprises an attempt to "reassess the storytelling ecosystem" as some of the older means of narrative sense-making are proving less adequate in the era of global warming, as also suggested by McKenzie Wark.[460] During the storytelling "interregnum" that Vandermeer situates in the present moment, "experiments and mutations will flourish, […] cross-pollinate" in order to reverse the tendency "when there is so much we render invisible, even in our mundane daily existence."[461] The driving force of this post-cartographic aesthetic, associated by Vandermeer directly with defamiliarization, contributes to "a search for greater granularity and complexity in fictions […] part of that quixotic quest for a more detailed and useful 'truth'."[462] The stakes for him specifically regard the limits of imagination and how storytelling can kindle its growth in directions enabling "ways in which the human experience can merge with the 'natural', so that nature

458 Jeff Vandermeer, "The Uncanny Power of Weird Fiction."

459 Jeff Vandermeer, "Johannes Heldén's Astroecology and Storytelling in the Anthropocene," *Environmental Critique*, 5 April 2017, https://environmentalcritique.wordpress.com/2017/04/05/jeff-vandermeer-on-johannes-heldens-astroecology-and-storytelling-in-the-anthropocene/.

460 McKenzie Wark, "On the Obsolescence of the Bourgeois Novel in the Anthropocene," *Verso Books Blog*, 30 August, 2018, https://www.versobooks.com/blogs/3356-on-the-obsolescence-of-the-bourgeois-novel-in-the-anthropocene.

461 Jeff Vandermeer, "Johannes Heldén's Astroecology."

462 Jeff Vandermeer, "Johannes Heldén's Astroecology."

and culture become one with the least harm to either, and so that we understand and share ghosts of both."[463]

In an uncanny coincidence, when the biologist returns from Area X in the trilogy's third installment titled *Acceptance*, she testifies to her change by referring to herself as Ghost Bird, an endearing term used by her husband, but also an indication of her ghostly, transitory, or migratory status. "The implication is," Gry Ulstein points out, "that Ghost Bird is on the other side of the threshold, looking into the human world."[464] Her trajectory is already noted by the psychologist in *Annihilation*, where she notes that the biologist indeed "changed" and appeared like a flame: "a slow-burning flame […] floating across the marsh and the dunes, floating and floating, like nothing human but something free and floating…"[465] A cartographer of the future, she crosses the earth, measuring it in accordance to a different rhythm than that of conventional degrees of latitude and longitude. In a stunning reversal of knowledge and ecological un-knowledge, she concludes that what we have been taking for reality was in fact a "continuous dream" made smooth by anthropocentric perspective; however, events such as the emergence of Area X can wake one up as "some event, some pinprick even, disturbs the edges of what we've taken as reality."[466] This dream is indeed a cartographical fantasy, one constructed layer after layer through geometrization of space and its reductive anthropomorphizing, hiding the mediated character of map-making behind the illusion of the Apollonian Eye. "We became so comfortable with that map," the biologist claims, "with the dimensions of it, and the thought of what it contained that it stopped us from asking *why* or even *what*."[467] In effect, the map with which the expedition enters Area X dissolves and frays, the territory slipping from under it in a terrifying way.

As territory is transformed into something uncanny, it requires an entirely new term to refer to it. In *Authority*, the second part of the trilogy, one of the Southern Reach scientists, Whitby, turns to a different notion to speak about Area X: "terroir."[468] According to Siobhan Carroll, this term's "connotations go beyond the idea of place," encapsulating a more complex idea than that of a flat world where markers can be freely assigned for purposes of spatial orientation.[469] "Terroir" comes from the vocabulary of wine-making and denotes, according to

463 Jeff Vandermeer, "Johannes Heldén's Astroecology."
464 Gry Ulstein, "'Through the Eyes of Area X': (Dis)Locating Ecological Hope via New Weird Spatiality," in *Spaces and Fictions of the Weird and the Fantastic. Ecologies, Geographies, Oddities*, eds. Julius Greve and Florian Zappe (Cham: Palgrave Macmillan 2019, 139).
465 Jeff Vandermeer, *Annihilation*, 170.
466 Jeff Vandermeer, *Annihilation*, 256.
467 Jeff Vandermeer, *Annihilation*, 92, emphasis preserved.
468 Jeff Vandermeer, *Authority* (Toronto: Harper Collins, 2014), eBook, 182.
469 Siobhan Carroll, "The Terror and the Terroir," 80.

the Oxford Dictionary of English, "the complete natural environment in which a particular wine is produced, including factors such as the soil, topography, and climate." Here, the idea is transplanted into the discourse of uncanny ecology and comes to mean – as Carroll notes in the context of the trilogy's third part *Acceptance* – something like a "colony," reflecting the early Latin sense of *colonia* as "settlement."[470] As she argues, this would be confirmed by the speculative insight offered in the last volume, where Area X is approximated to be a "terraforming organism launched in the wake of an alien biosphere's destruction."[471] In a tug-of-war, the modern paradigm of conquering Earth through colonization is pitted against the situation of being colonized by a more-than-human force that cuts into Earth, forming a line of continuity between the planetary habitat and the cosmic-traumatic dimension of alien life. What comes to be revealed in the process is a "complex ecological system that escapes being fully pinned down in language," although its transformative influences are registered locally by human bodies, "even as they escape the conscious mind's precise identification."[472] In this way, the terroir of Area X looms large as an hyperobject that penetrates the human world, erupting at all of its levels and rendering visible a New Earth, "interconnecting and transforming the entire earth system."[473] As such, it invites a reconsideration of globality in terms of "alien phenomenology," to draw on Ian Bogost's terminology[474], as well as the reinvention of mapping in the form of an alien cartography that rejects the "hegemony of what was real" and makes "the world we are part of now […] difficult to accept, unimaginably difficult."[475] Such an irruption of planetary otherness perforates the map of Earth and unleashes monstrous forces that seep through the gaps.

In light of Reza Negarestani's theory of geotrauma, Area X emerges as a traumatic intrusion of the universal dimension that cuts into the local world, rendering past visions of the world useless and necessitating new synthesis of earthly horizons. In a turn of phrase that perfectly captures the conceptual dimension of Vandermeer's Area X, "[t]hrough trauma as perforation, the universal – contingently and from alternative points of entry – transplants its global expressions and properties within its localized zones."[476] Area X becomes in this sense a traumatic inscription of an uncanny cosmic presence in the heart of the local, which drives incalculable gradational shifts that channel the uni-

470 Siobhan Carroll, "The Terror and the Terroir," 80.
471 Siobhan Carroll, "The Terror and the Terroir," 80.
472 Siobhan Carroll, "The Terror and the Terroir," 80.
473 Gry Ulstein, "'Through the Eyes of Area X'," 141.
474 Ian Bogost, *Alien Phenomenology, or What It's Like to Be a Thing* (Minneapolis: University of Minnesota, 2012).
475 After: Siobhan Carroll, "The Terror and the Terroir," 82.
476 Reza Negarestani, "Globe of Revolution," 36.

versal dimension right through the local one, thus revealing a very different image of Earth, where the horizontal dimension of colonial contiguity is supplemented with a vertical one that renders visible the traumatic core-formation and Earth's deep history on the one hand, and the cosmic origin of matter and life on the other. This correction of perspective discloses a three-dimensional mapping premised on a speculative perspective that inaugurates a different cartography. As Negarestani underscores, "we have to make a new navigational map" in order to render visible the sites that are "inherently susceptible to give rise to carriers of synthetic thought, revolutionary subjects of their regional fields of trauma."[477] The cartographical logic proposed here involves tracing places where intersections of the universal and the local reveal uncanny, weird loops or traumata that form a graticule on which the globe can be finally made to revolve as hyperobject, completing a post-human Copernican turn. Ultimately, syntheses of the global along these lines may also facilitate a true-to-the-universe revolution in human modes of engaging Earth.

These considerations can be fruitfully supplemented with an analysis of Jeff Vandermeer's 2017 short story "This World is Full of Monsters," which takes a different angle to elaborate on Area X, or a similar entity since the trappings of the Southern Reach novel are absent from the story, leaving only hints about its operation. Nevertheless, its main theme – that of subjective metamorphosis, or trans-subjectivization – builds on the trajectory delineated in the narrative of Ghost Bird. The short story describes an anonymous protagonist whose epic journey begins when they are visited by a "story-creature":

> The story that meant the end arrived late one night. A tiny story, covered in green fur or lichen, shaky on its legs. It fit in the palm of my hand. I stared at the story for a long time, trying to understand. The story had large eyes that could see in the dark, and sharp teeth. It purred, and the purr grew louder and louder: a beautiful flower bud opening and opening until I was filled up. I heard the thrush and pull of the darkness, grown so mighty inside my head.[478]

Echoing Vandermeer's discussion of the ecology of stories, the kind "that meant the end" appears in the form a living being, albeit one that straddles animal and plant forms, purring yet also budding. This tiny story does not immediately take the form of a planetary transformative force, but seeps in gradually, taking root in the brain and eventually leading to profound changes. As the story invades the body, it grows and sprouts through the protagonist, ultimately planting them like a tree. Then, the narrator falls asleep for a hundred years and wakes up in a world utterly transformed, where their doppelgänger has taken over their home and old life. This does not last long, however, as a series of adventures plunges the

477 Reza Negarestani, "Globe of Revolution," 41.
478 Jeff Vandermeer, "This World is Full of Monsters" (Tor Books, 2017), eBook, 5.

protagonist into a succession of even more weirder incarnations, reminiscent of Hieronymus Bosch and surrealist recompositions of the body using the Exquisite Corpse technique.

With the world acquiring "a strangeness too vast for me to understand," the weird-biological, quasi-evolutionary metamorphoses take the narrator inside a "school-creature" which "resembled a giant, horizon-consuming fuzzy worm" that probes them and provides "education" that was "clandestine and immersive."[479] After being schooled like Jonah inside the whale, the school-creature takes to water, the narrator pulled down and "trapped by a single-celled creature that kept calling out my name."[480] After separating forcibly from this life-saving raft, they acquire new skills and learn to breathe, although lungs work differently than before. With the beginning of another part of the journey, taking the narrator across the lake, they find provisional shelter inside a "dead-shell."[481] Nevertheless, as with many other entities in this setting, the boat also turns out to be a living thing, growing a mouth and commencing a series of thorough and final transformations that affect the protagonist, turning them inside out and reforming into a marine-astronaut who finally embraces their weird plasticity and its endless chain of becomings.

As it transpires, the Dead-Shell "was a sort of scientist-creature on the order of the story-creature and school-creature before him."[482] In a crucial statement, we learn that the Dead-Shell "communicated to me that the world had been remade against my image and that my form, even much reduced, was the rebellion of the old world against the new, and that this made no sense because the new world embraced the old."[483] The trajectory sketched here follows the procession of forms, which becomes the norm, instead of settled visions of the world that accompany individual iterations of the described weird evolution. The shedding of old forms and the embracing of new ones – a plasticity of material becoming – is the ecopoetic knowledge revealed to the narrator as they are opened up from within: "the golden honeycomb that was not honeycomb at all but the movement of my transformation spun out and pushed out from inside of me until there was more of it outside of me than inside of me."[484] Not losing the thread of the story, the narrator is further disembodied, or re-inscribed into reality in new ways, which is revealed to be the task of Dead-Shell. Once this is achieved, individual consciousness, or brain melt and spill: "even the space that had been my brain softened and spread out to coat the inside of that entire space I must call separate

479 Jeff Vandermeer, "This World is Full of Monsters," 27–28.
480 Jeff Vandermeer, "This World is Full of Monsters," 28.
481 Jeff Vandermeer, "This World is Full of Monsters," 38.
482 Jeff Vandermeer, "This World is Full of Monsters," 42.
483 Jeff Vandermeer, "This World is Full of Monsters," 42.
484 Jeff Vandermeer, "This World is Full of Monsters," 43–44.

from the world. Namely: me."[485] Along these extreme lines of symbiotic and sympoietic development, the narrator leaves their old self behind, with fluidity becoming the central notion of identity rather fixity or separateness, eroding any notions of discrete humanity: "I was so fluid in my shell that I could not at times distinguish the water from my self. I could not distinguish a wave from my thoughts."[486] Eventually, the protagonist concludes, "I did not think I would ever be human again, but I would see things no one of my species had ever seen, and with that thought I began to cry from some excess of emotion that could not go elsewhere."[487] This moment of exhilarated de-naturing and re-naturing creates a different horizon of knowledge and a novel perspective on the environment as a fluid continuum of material flows whose ebbing makes and unmakes the human form, always pushing it towards a future that is biologically different and certainly not predetermined.

At the end of the story, the narrator finds themselves alongside fellow transformed who are all "flung up into the stratosphere and then achieved escape velocity in a holy roar and expulsion, […] until we were all of us tumbling end over end through vacuum […] to become story-creatures."[488] In the end, the narrator becomes a story-creature themselves and joyously accepts the role, taking pride in the fact that they would now "have a world of my own."[489] The arc of the story is thus completed, the protagonist extricated from an individualist life of a late-capitalist human and welded back into the environment, passing through various animal- and plant-based forms, retreating evolutionarily through various stages of life's development, especially by way of the fundamental relationship with water and oceans, and finally reconnecting with the cosmic dimension of being. This last aspect concludes the cycle of the traumatic transplantation that functions like Area X insofar as it demonstrates the full extent of the deep cut in the universal continuum, welding the living planet and cosmic matter into a single line of becoming captured in this more-than-human narrative. As the monsters from the story are revealed to be both the future versions of ourselves, othered and made different, as well as the evolutionary and geological history of forms that we carry within, "The World is Full of Monsters" contributes to the ecosystem of story-telling in the Anthropocene, transforming it in weird and uncanny ways, suggesting new stories and new worlds. In the end, as Donna Haraway aptly put it, "[i]t matters what matters we use to think other matters with; it matters what stories we tell to tell other stories with […]. It

485 Jeff Vandermeer, "This World is Full of Monsters," 44.
486 Jeff Vandermeer, "This World is Full of Monsters," 46.
487 Jeff Vandermeer, "This World is Full of Monsters," 51.
488 Jeff Vandermeer, "This World is Full of Monsters," 53.
489 Jeff Vandermeer, "This World is Full of Monsters," 54.

matters what stories make worlds, what worlds make stories."[490] In this light, Vandermeer's insistence on the appreciation of hybrid and weird interventions in the storytelling ecosystem dovetails with Wark's concern about the obsolescence of certain literary conventions and Haraway's emphasis on the concurrence of worlding and storying.

In *Staying with the Trouble*, Haraway describes "tentacularity" as her preferred model for thinking about reality, where life unfolds along lines of sympoietic "wayfaring" which she illustrates with composting, string figures and arachnid feeling with the help of "myriad tentacles."[491] Her protagonist – *Pimoa chthulhu* – suggests an interesting interplay between the "chthonic powers of Terra" and "material-semiotic composting," which she aligns with the extension of "appendages" that "entwine me in poiesis – the making – of speculative fabulation, science fiction, science fact, speculative feminisim."[492] Her conclusion is that this mode of storytelling, or "patterning of possible worlds" is a way in which we may be able to "tell the story of Chthuluscene."[493] By way of shifting from the old weird to the more self-aware new weird – as fleshed out by Vandermeer[494] – a transition was made from the cosmic horror of Lovecraft's Cthulhu and the traumatizing "demon called Modernity" in whose ruins we live today, to *Pimoa chthulhu* and Anna Tsing's *Matsutake*, which offer future-oriented cartographic models.[495] As such, the shift embodied by Vandermeer's work, along other authors working in the new weird, or engaged in "global weirding"[496] – for example Nora K. Jemisin, who is discussed further – consists in the move from the paralysis and madness inflicted by eldritch terror to the embracing of speculative fabulation whose power is harnessed to produce new cartographies. Such thrust in imaginative mapping of the world reveals a terrestrial dimension where sympoiesis or becoming-together come to the fore. The vision of reality that emerges here is not one that "rounds off" the Earth to form a smooth notion of globality, but one where "contact zones are ubiquitous and continuously spin out loopy tendrils."[497] As the discussed story by Vandermeer shows with vivid detail, terrestrial becoming is "symchthonic, wound with

490 Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016), 12.
491 Donna Haraway, *Staying with the Trouble*, 31–32.
492 Donna Haraway, *Staying with the Trouble*, 31.
493 Donna Haraway, *Staying with the Trouble*, 31.
494 Roger Luckhurst, "The Weird: A Dis/orientation," *Textual Practice* 31.6 (2017), 1057.
495 Donna Haraway, *Staying with the Trouble*, 50. See also: Anna Tsing *The Mushroom at the End of the World On the Possibility of Life in Capitalist Ruins* (Princeton: Princeton University Press, 2015).
496 Gerry Canavan and Andrew Hageman, "Introduction: 'Global Weirding'," *Paradoxa* 28 (2016), 9.
497 Donna Haraway, *Staying with the Trouble*, 33.

abyssal and dreadful graspings, frayings, and weavings."[498] The notion of mapping that transpires here would be informed by sympoiesis, or the idea that life does not unfold in discrete units but along lines that cross myriad dimensions and scales, bridging human and non-human semiotic systems. This entails rejecting any parcellation of issues, which in Haraway's view comprises a form of "looking away"; instead, her focus remains on "staying with the trouble," or painstakingly bringing into visibility "the webs of processes that must somehow be engaged and repatterned."[499] Crucially, she argues, "[s]torying cannot any longer be put into the box of human exceptionalism."[500] Accordingly, Vandermeer's monstrous becomings spin a narrative that goes beyond the human, following a speculative line of metamorphoses that mobilize a vast more-than-human world to trace the changes of what it means to experience the plastic unfolding of the human into a future that is yet to be told but calls for a different kind of storytelling to capture its crucial parameters. In line with the Le Guin's "untold story, the life story," Vandermeer delivers a painful yet speculatively liberating account of how the "story *must* change."[501] His storytelling transversally cuts through the Earth's geological layers as well as biosphere and semiosphere, bringing together "biotic and abiotic powers of this earth" to compose them less anthropocentrically and form "the main story."[502] Ultimately, what Vandermeer utilizes in his writings is a weird biology that indeed makes him into a Chthuluscenic "mad gardener" whose work consists in composting "a much hotter pile for still possible pasts, presents, and futures."[503] In this way, Area X acts as a catalyst for the imagination, or a storytelling force that refracts what it means to make connections and map a more-than-human world in its deep ecological intricacy and entwined fate of terrestrial lives. Through its cosmic-traumatic impetus, Area X cross-sections a lifeworld where material forces compose a symchthonic whole that eludes reductive discourses of modernity yet demands to be thought, felt and probed.

New Weird authors like Vandermeer have developed speculative modes of addressing the metamorphic aspects of humanity as well as the dark underside of modernity.[504] In his defense of the potential inherent in weird fiction, Vandermeer finds it exceptionally capable of "presenting a dark mystery beyond our ken" and making it into a field where "we discover some of the most powerful

498 Donna Haraway, *Staying with the Trouble*, 33.
499 Donna Haraway, *Staying with the Trouble*, 35.
500 Donna Haraway, *Staying with the Trouble*, 39.
501 Donna Haraway, *Staying with the Trouble*, 40, emphasis preserved.
502 Donna Haraway, *Staying with the Trouble*, 55.
503 Donna Haraway, *Staying with the Trouble*, 57.
504 Jeff Vandermeer, "The New Weird: 'It's Alive?'," in *The New Weird*, eds. Ann Vandermeer and Jeff Vandermeer (San Francisco: Tachyon Publications, 2008), xvi–xvii.

evocations of what it means to be human or inhuman."[505] Such dark mysteries could be identified – as Miéville suggests in one interview with Jeff Vandermeer – as today's version of the sublime, now established as "quotidian" because weirdness is discovered to actually underpin reality. Indeed, reality is weird and the horror entailed by this consists primarily in acknowledging the futility of efforts to make it once again feel like home.[506] Thus, against conventional psychological realism, which creates a false sense of stability, formerly exiled modes of genre fiction emerge as important vehicles for fathoming a larger world, expanding cartographical horizons and therefore laying the foundations for negotiation of different accounts of globality.[507] This is necessary because today's ecological crises are experienced indirectly, in an uncanny, creeping way that resembles the operation of Area X. As Vandermeer points out in "Hauntings in the Anthropocene," climate change is a particularly poignant instance of "haunting" since its effects are only felt "under the skin."[508] It is in this sense that former mappings fail to deliver reliable coordinates for grasping reality; at the same time, however, speculative cartographies may help with this task because "mapping elements of the Anthropocene via weird fiction may create a greater and more visceral understanding."[509] As Haraway emphasized in the *Cyborg Manifesto*, such cartographies need to speculatively pierce through anthropocentric limitations in a gesture of accounting for the more-than-human world; in her perspective, the "possibility for changing maps of the world" depends on "building new collectives out of what is not quite a plethora of human and nonhuman actors."[510] Renegotiating the boundaries of the human becomes indispensable insofar as it allows, as Mark Fisher argued, "to see the inside from the perspective of the outside" as "[t]he weird brings to the familiar something that ordinarily lies beyond it."[511] As new cartographers in philosophy and literature traverse the precarious landscape of the Anthropocene, they primarily note uncanny displacement. Defamiliarized reality brings the realization that the specter of a more real life haunts myopic visions of the Earth, revealing with

505 Jeff Vandermeer, "The Uncanny Power of Weird Fiction."

506 Jeff Vandermeer, "Conversation #1: China Miéville and Monsters," in *Monstrous Creatures. Explorations of Fantasy through Essays, Articles and Reviews* (Bowie, MD: Guide Dog Books, 2011), eBook, 741.

507 McKenzie Wark, "On the Obsolescence of the Bourgeois Novel in the Anthropocene."

508 Jeff Vandermeer, "Hauntings in the Anthropocene. An Initial Exploration," *Environmental Critique*, 7 July 2016, https://environmentalcritique.wordpress.com/2016/07/07/hauntings-in-the-anthropocene/.

509 Jeff Vandermeer, "Hauntings in the Anthropocene."

510 Donna Haraway, "The Promises of Monsters: A Regenerative Politics for Inappropriate/d Others," *Cultural Studies*, eds. L. Grossberg, C. Nelson, and P.A. Treichler (New York: Routledge, 1992), 327.

511 Mark Fisher, *The Weird And The Eerie* (London: Repeater Books, 2016), 67.

traumatic force an unstable and unsustainable planetary ecosystem that is running out of control.

Fourth World Musics

Negarestani's alien transplantations in Area X exemplify the traumatic cut that "nests cosmic exteriorities within bounded horizons as inassimilable yet convolutedly interiorized insiders."[512] In other words, the extraterrestrial dimension is complexly nested inside local forms, opening a line of thought that connects the local, the global, and the cosmic. In literary terms, as evidenced by Vandermeer's forays into the New Weird, it creates an uncanny trajectory of subjective becoming, one that connects consciousness with geological dimensions. In prose, this occurs by way of transforming the narrator and destabilizing their cartographical imagination so as to reconfigure the parameters of inside and outside, nature and culture, the human and the non-human. Still, despite the experimental thrust of such literary efforts, which approximate poetry and its experimentation with formal possibilities that resituate the subject, language is not the only area in which this operation can take place. It can be also identified in the medium of sound or music, specifically in the Fourth World Musics championed by American trumpeter Jon Hassell (1937–2021).

The unusual plural form of musics was first introduced in the title of Volume I of *Possible Musics* by Jon Hassell and Brian Eno, originally released in 1980. By emphasizing musical diversity beyond any single, universal model, the title signals a Babel-like scattering of musical tongues over the face of the Earth. Hassell's interest in various forms of musical expression took him from his home town Memphis, suffused with black music as well as the birthplace of rock and roll, to New York and then to Germany, where he studied under Karlheinz Stockhausen. Upon returning to America, he became engaged with minimalists Terry Riley, LaMonte Young and Marian Zazeela, which in turn facilitated acquaintance with Pandit Pran Nath, "a specialist in the ancient kiramic style of singing"[513] who later instructed Hassell in Dehra Dun in India, catalyzing the idea of a "vertically integrated" sound that blends regional or genre-based influences.[514] This turn proved to be central for Hassell's idea of a music that embraces the rich heritage of musical sensibilities and forms cultivated across the world but refuses to prioritize among them, rejecting hierarchies of dominance and the

512 Reza Negarestani, "Trauma and the Outside: 1000 Forms of Cut," *Urbanomic*, 17 May 2010, https://www.urbanomic.com/trauma-and-the-outside-1000-forms-of-cut/.

513 Mark Prendergast, *The Ambient Century. From Mahler to Moby – The Evolution of Sound in the Electronic Age. New Edition* (New York: Bloomsbury, 2003), 152.

514 Mark Prendergast, *The Ambient Century*, 153.

notion that progress ought to displace folklore and older local styles. His pursuit of possibilities inherent in long-standing musical traditions is combined with more recent developments, specifically digital affordances of field recording, dialogic exchange, and amplification of potentiality. As evidenced by *Possible Musics* in both sonic and discursive terms, Hassell explores this idea to the full. "When you pluralize it and say 'Musics'," he explained in an interview with Pat Thomas in the liner notes, "then you are saying what kind of other 'Musics' are there?"[515] The answer to this question lies in the imagination, which is necessary to both embrace the wealth of the past and to unlock the potential of the future by fashioning a different kind of global society whose future-oriented character is indicated by the fact that it is a "faux-tribe"[516] meant to come in the future through an aesthetic merging of humanity's deep past – as embodied by its oldest musical traditions – and a global perspective marked by the use of sampling, field recording, and studio composition. For this reason, Hassell locates the "coming plurality" of sonic futures not in what we have called the "First World," but rather in the "Third," or more specifically: the places where peoples' musical "tradition was still alive and spirituality was inherent in their musical output."[517] This observation points out the need for musical expression to fully reflect the vision of the world embraced by its practitioners, which stands in stark contrast to the rather detached and absolutizing tradition of Western music, as identified both in classical composition and mainstream popular music. Hassell's approach, moreover, importantly discredits the watered-down genre of world music, which pretends to make a global sound but, just like world literature written in compromise-based "translationese"[518], obliterates real differences that make local traditions unique. What appears to be summoned in Fourth World music is a "primitive futurism"[519] that points towards a new, hybrid sonic geography by way of imagining places not in terms of themselves but with regard to their interconnectedness with multiple elsewheres, a concept formulated by Lawrence Buell.[520] This networked idea of sound-relations also comprises an opposition to teleology, as David Dennen has suggested. Hassell's droning and sonorist pieces do not provide a "tonal ground against which we perceive the narrative move-

515 Jon Hassell and Brian Eno, *Fourth World Vol. 1: Possible Musics* (Beverungen: Glitterbeat Records, 2014).

516 John Corbett, "Experimental Oriental: New Music and Other Others," in *Western Music and Its Others. Difference, Representation, and Appropriation in Music*, eds. Georgina Born and David Hesmondhalgh (Berkeley: University of California Press, 2000), 176.

517 Jon Hassell and Brian Eno, *Fourth World Vol. 1.*

518 Term coined by Gayatri Chakravorty Spivak; quoted after: Jeremy Munday, *Introducing Translation Studies* (London: Routledge, 2001), 133.

519 Jon Hassell and Brian Eno, *Fourth World Vol. 1.*

520 After: David Dennen, "From the Jungle to the City: Ecomimesis and Imagining Emplacement in the Music of Jon Hassell," (Academia.edu, 2013), 6.

ment of the subject"; lack of mastery and goal is premised on the fact that any "tonal center" is "incidental," making this kind of music "unrooted, decentered, spatial rather than temporal."[521] The spatial effect of Fourth World is based on fusing different dimensions, specifically the local and the global, which creates a relational soundscape where the listener is both grounded and transported to a planetary elsewhere, revealing a "tambura of Nature" to recall Hassell's own phrasing.[522] Just like the tambura provides a droning backdrop in Indian music, his method reveals the planetary environment from which all sound emerges and surges, an environment that is woven from both Earth, its climate, and the social dimension in which planetary visions are fashioned.

In a poignant commentary and tribute to Hassell entitled "The Debt I Owe to Jon Hassell," Brian Eno explains Hassell's idea behind the album, namely "that music was a place where you conducted and displayed new social experiments."[523] "Jon's experiment," Eno argues, "was to imagine a 'coffee coloured' world – a globalised world constantly integrating and hybridising, where differences are celebrated and dignified."[524] Eno's expounding of the planetary imagination championed by Hassell once again brings to attention the relational nature of the trumpeter's global sensing through sonic cartographies that tentatively assemble a terrestrial model, taking cue from evolutionary differentiation of music, which becomes in this light an expression of human resonance with the habitat and the lifeforms it sustains. By way of surreal composition, or a magical realism that involves creative anthropology and ethnopoetics, Hassell taps into the Earth's musical unconscious, where dreamy and strange landscapes emerge in response to the environment, creating sonic landscape-poetry that facilitates imaginative transport to broader geographies, deliriously tracing lines of flight and dreaming a whole Earth. Akin to Aboriginal Dreaming, such fiction-based territorializations and deterritorializations can be identified as the hallmarks of Fourth World Musics, which fuses the ancient and the futuristic, the local and the global. The trans-subjectivization afforded by this aesthetic involves moving away from horizontal, teleological narrative, or melody, towards a vertical, spatial form of listening in which vibrating together with the world is foregrounded, mobilizing the imagination and creating a space where listeners can listen to themselves listening, thus laying the foundation for a different account of planetary wholeness. In a fascinating turn of phrase, John Corbett described this effect as the revelation of "phantom topography of alternative

521 After: David Dennen, "From the Jungle to the City."
522 David Dennen, "From the Jungle to the City."
523 Jon Hassell and Brian Eno, *Fourth World Vol. 1: Possible Musics* (Beverungen: Glitterbeat Records, 2014).
524 Jon Hassell and Brian Eno, *Fourth World Vol. 1.*

possibilities"[525]; it seems driven equally by Stockhausen's idea of cosmic *Telemusik* and Bernie Krause's acoustic ecology.[526] The latter's insistence on sound as the dimension which indicates a continuous environment is particularly relevant in this context as he emphasizes that each "place conveys a complex sonic narrative loaded with significant messages for any sentient being" while "[e]ach organism is enveloped in more waves of sonic energy – great vibrations that come from everywhere – above, around, and below the ground itself."[527] As Karen Bakker observes, "the planet's infrasonic chorus is continuously sounding all around you"[528], constituting a "resonant Earth"[529] that constantly vibrates and creates a bioacoustic environment where humanity becomes only one of the many sound niches, and resonates with a larger world that cannot be fully heard owing to the physical limitations of the human ear but can be speculatively gestured toward by way of sonic regrounding and imaginative worlding.

Hassell's work within the Fourth World aesthetic has not only prefigured fusion jazz and various kinds of ethnic crossovers, but also established a tradition of experimental musics as showcased by the 2017 compilation *Miracle Steps: Music from the Fourth World 1983–2017*. In the liner notes, anthologizers JD Twitch and Fergus Clark confirm that even though the concept of Fourth World could be traced back to the "marrying of musical cultures"[530] in works by Claude Debussy, for example, objectifying orientalization is resisted from within this aesthetic through its estranging and liberating tendencies, which stands against the argument that politics is vitally missing from the work of Hassell.[531] Navigating the precarious path of "ethnoforgery" or inattentive juggling between ethnic themes or sounds with the goal of creating an exotic sound catering to the taste for otherness experienced from a safe distance, Fourth World Musics offer a "tool for the imagination and speculation" by creating "a sense of genuine bewilderment, an enthralling musical experience which manages to abolish any idea of a perceived time or place."[532] The aforementioned disorientation and decentering are indeed an important element in this aesthetic, which creates an unsettling sense of a larger, inexhaustible globality. By using local traditions as uncanny vehicles facilitating sensual experience of larger totalities, Fourth World merges centuries-old musical conventions, sound palettes and techniques with

525 John Corbett, "Experimental Oriental," 176.
526 Steve Feld, "The Poetics and Politics of Pygmy Pop," in *Western Music and Its Others*, 267.
527 Bernie Krause, *The Great Animal Orchestra* (London: Profile Books, 2012), eBook, 17–18.
528 Bernie Krause, *The Great Animal Orchestra*, 13.
529 Bernie Krause, *The Great Animal Orchestra*, 17.
530 JD Twitch and Fergus Clark, *Miracle Steps: Music From The Fourth World 1983–2017*, OMLP09 (Glasgow: Optimo Music, 2017).
531 John Corbett, "Experimental Oriental," 177.
532 JD Twitch and Fergus Clark, *Miracle Steps.*

electronic devices such as synthesizers and samplers to build a planetary sensorium. This technique aligns with the concept of geophilosophy outlined by Negarestani in terms of traumatic lines connecting the regional (ethnic) and the universal (cosmic). In Fourth World, the sound originates in a locality, defined by musical tradition or place-bound field recording, but is intersected, twisted by electronica-driven overlaying of sounds or additional effects to reveal a vaster terrestrial embeddedness. This kind of defamiliarization bends the regional into a modal expression of a true-to-the-cosmos Earth construed as a speculative totality that acts as both the carrier and condition of sound. Accordingly, a different image of globality emerges, where every sonorous articulation is suspended within a more-than-human network of connections: a speculative cartography fleshed out in sonic experience.

As the Polish translator and intellectual Ireneusz Kania observed, attempts to develop a universal theory of music have so far failed, revealing that musical traditions across the world are irreducible to one another and cannot be brought under the umbrella of a single conceptual or aesthetic framework.[533] And yet, sound constitutes a global flow or process that permeates the Earth and makes it vibrate in ways that do not discriminate between biotic and abiotic, human and non-human. According to Murray Schafer, there is a long-standing tradition, from Pythagoras to John Cage, which holds that "cosmos itself is a musical composition," with the "world soundscape" constituting a "macrocosmic" resonant work that brings forth the idea of the sonic environment as a larger whole.[534] In a commentary to his work *La Selva* [Forest], music artist Francesco Lopez explains that his recordings of the Costa Rican rain forest on the album attempt to capture what he calls "a wonderfully powerful broadband sound environment of thrilling complexity."[535] Not only is it in itself a rich tapestry of sounds produced "invisibly" or "near-audibly," as David Toop notes[536], but also a biotic medium, where the plants, the weather, and material processes create a resounding and vibrating framework that can never be taken out of the picture. "If we listen attentively," Lopez argues, "the topography, the degree of humidity of the air, or the type of materials in the topsoil become as essential and defining of the sonic environment as the sound-producing animals that inhabit a certain

533 Ireneusz Kania, *Czy możliwa jest uniwersalna filozofia muzyki?* (Warszawa: Austeria, 2023), 20.

534 Murray Schafer, "The Music of the Environment," in *Audio Culture, Revised Edition: Readings in Modern Music*, eds. Christoph Cox and Daniel Warner (New York: Bloomsbury, 2017), 29.

535 Francisco López, "Profound Listening and Environmental Sound Matter," in *Audio Culture, Revised Edition: Readings in Modern Music*, eds. Christoph Cox and Daniel Warner (New York: Bloomsbury, 2017), eBook, 262.

536 David Toop, *Haunted Weather. Music, Silence and Memory* (London: Serpent's Tail, 2005), 66.

space."[537] Toop draws on German philosopher Gernot Böhme to drive home the argument that music is basically an "atmospheric art" or "a modification of space as it is experienced by the body," which "forms and informs the listener's sense of self in a space" as well as "reaches directly into his or her corporeal economy."[538] In effect, navigating space and developing a relationship with it is achieved "through a refined awareness of resonance and its atmospheres […] a constant monitoring of sound swelling and decaying."[539] Such a philosophy of geo-location would be premised on utter immersion in a planetary sonic landscape – an ambience that is revealed only obliquely, or indirectly, by way of re-tuning ears to capture what Hassell called "unreported musical events (cultures) on this planet" so that they could "take their rightful place in the evolution of consciousness."[540] The invisibility of traditional cultures along with their deeper environmental awareness, or sense of being inseparable from the lived world, is identified by Hassell to comprise a side-effect of the "overvaluation of cold climate thinking."[541] Aware that this is an oversimplification, Hassell nevertheless goes on to argue that cold-climate tribes historically elaborated technologies so as to achieve some mastery over an unfriendly environment, and then exported them worldwide, thus establishing patterns of knowledge and practice that favor dualism and dominance. The Fourth World, he argues, could be a modality that consists in "a returning to, and a stepping forward at the same time" because any real forays into the future are premised on "a deeper comprehension of the rich multiplicity of the earth's tribal musics."[542] This approach has two important dimensions. First, it is built around the notion of diversity that boosts the imagination by coordinating nature-cultures with respect to each other and their dialogic exchanges rather than any hierarchical system. Second, it reworks the central Western idea of progress – as expressed in the horizontal mode of listening focused on "forward flow – based on where the music is 'going' and 'what comes next'"[543] – by shifting emphasis to the present moment, or what Hassell calls "vertical listening" and describes as "letting your inner ears scan up and down the sonic spectrum, asking what kind of 'shapes' you're seeing, then noticing how that picture morphs as the music moves through time."[544] A way of listening to yourself listening, it is a mode of tuning attention to the broadband

537 Francisco López, "Profound Listening and Environmental Sound Matter," 254.
538 After: David Toop, *Haunted Weather*, 63.
539 David Toop, *Haunted Weather*, 63.
540 John Hassell, *Atmospherics* (Los Angeles: Ndeya, 2023), 26.
541 John Hassell, *Atmospherics*, 31.
542 John Hassell, *Atmospherics*, 31.
543 John Hassell, *Atmospherics*, 59.
544 John Hassell, *Atmospherics*, 59.

sonic environment made alive by the planet as medium and channeled through a dense plurality of voices.

In the Fourth World aesthetic, alternative forms of mapping enabled by experimental music-making are also communicated through album art, where quasi-cartographical images abound. In the case of *Possible Musics*, it is a barely recognizable aerial photograph of an area south of Khartoum, whereas the *Miracle Steps* gatefold cover features variations on cartographical themes which are surreally transformed into organic forms. The play with abstraction that borders on readability clearly agrees with key aspects of the musical aesthetic represented by these recordings as the clarity of cartographical representations becomes blurred and dissolves into a state of possibility, where different meanings can be formed against ideas of perfect legibility and transparency. Such imagery hints at alternative visions, or surreal totalities that may be gleaned only after taking a detour into the vaster universe through speculative methods of sonorous transport, or metaphor-driven modes of cognition. As Deleuze noted in his discussion of artworks by Francis Bacon, a canvas confronted by the painter is never empty[545]; in fact, he argues, prior to the first brushstroke the artist must cleanse the surface of the clichés and banalities that suggest themselves automatically or constitute pre-given coordinates. A similar argument could be made with regard to the images of the global. As the New Weird and Fourth World aesthetics demonstrate, speculative cartographies are formed by unmooring Earth from its fixed coordinates. In the idiom of Negarestani, a new kind of geophilosophical realism begins with perceiving Earth as perforated, or shot through with a cosmic dimension that pierces the global with cosmic traumata. Only a position of this kind can produce a revolutionary subject who may begin to conceive alternative modes of terrestrial imagination necessary to assemble Earth as a living and political whole. For this reason, both the New Weird and Fourth World operate through dislocation and disorientation, taking as their aim the remaking of subjectivity in the effort to open a line of communication between the regional and the cosmic, facilitating formerly inconceivable relations with the globe. Alternative modes of cognitive mapping can be thus argued to rely on the speculative component in their aesthetic since it is indispensable for the fundamentally imaginative and fiction-driven home-making in the ecological sense of making-with, or "becoming-earth."[546] The work of speculative cartographies would be ultimately not limited to a certain area of enquiry or artistic creation but embraces all kinds of *poiesis*, or making, whether theoretical, literary, musical or in the visual arts, as long as forms of thinking the global are

545 Gilles Deleuze, *Francis Bacon: The Logic of Sensation*, trans. Daniel W. Smith (London: Continuum, 2003), 86.

546 Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013), 66.

pushed within them to a limit that enables fathoming an ungrounded globe as a whole whose composition remains the vital task of the Anthropocene.

As part of my practice-driven research in the area of Fourth World, I have prepared a mixtape that showcases this many-sided phenomenon, titled "Fourth World Musics."[547] With over two hours of musical material, this mix primarily responds to the vibrant and zestful spirit that prevailed in the School of Ecopoetics at Warsaw's Institute of Reportage, offering accompaniment to the group's practical and speculative preoccupations. The tracklist features artists orbiting around Hassell's primitivist-futurist melding of traditional ethnic styles and avantgarde composition. Through this concept, he has helped to develop a listening-based planetary consciousness in music, encompassing different biomes and strata. From the planet's molten core to the high orbit, along tectonic plates, rivers basins and convergence patterns, the pieces are arranged in six chapters and offer sonic excursions into territories and habitats both real and imaginary. The mix features a diverse range of musical languages, from the Papuan Kosua and Peruvian Kagabas tribes to ancient Eurasian techniques of singing, gamelan, and even Ursula Le Guin's collaboration with Todd Barton on imaginary music from Kesh. Combining field recordings, electronica, electroacoustic work by Valentina Goncharova and Else Marie Made with the *musique concrete* of Bernard Parmegiani, the mix tries to capture a tradition that spans the post-industrial experiments of Coil and Nocturnal Emissions, the surrealist avantgarde of Ghédalia Tazartès, and the new-movement folk of Emmanuelle Parrenin – an alternative canon or tradition whose aesthetic common denominator is spatial defamiliarization that builds on a plurality of musical languages, both human and non-human. Going beyond classic notions of ambient music, it attempts to develop a "weird perspective" of the planet, which the British electronic music duo Future Sound of London have termed a "re-evaluation of yourself in your space, rather than escapism."[548] In line with goals set out in the School of Ecopoetics, it is a mode of trans-subjectivization, where listening catalyzes recognition of a metamorphic planet by coordinating two kinds of awareness, or forms of listening described by Pauline Oliveros as focal and global attention. In *Deep Listening. A Composers' Sound Practice*, she describes the two as important aspects of the human ability to inhabit space, because in her view listening is essentially both spatial and temporal, revealing a continuous world.[549] The possibility to focus attention on details is necessary but a more distributed and fuzzy awareness of one's surroundings, or a larger sense of the environment

547 *Fourth World Musics*, https://soundcloud.com/szkolaekopoetyki/muzyki-czwartego-swiata.
548 David Toop, *Ocean of Sound. Ambient Sound and Radical Listening in the Age of Communication* (London: Serpent's Tail, 2018), 57.
549 Pauline Oliveros, *Deep Listening. A Composers' Sound Practice* (iUniverse, 2005), eBook, 27.

built around sound is also vital for all lifeforms. The latter emerges as a variant of cartography that mobilizes hearing as "whole body" vibration and attention in the service of a fundamental spatial process of situating oneself in the world. Beginning with details emerging in the soundscape one is immersed in, listening can expand – using resonance, echo, and finally imagination – towards much larger planes of attention. "The depth of listening," Oliveros writes, "is related to the expansion of consciousness brought about by inclusive listening"; in effect, she concludes, "Deep Listening has limitless dimensions."[550] As such, it is a listening-based modality of sensing and understanding the larger world, a mode of map-making that is not just concerned with passive hearing but actively fashions a network of coordinates driven by attention, which wanders and oscillates, tracing lines and connections in an acoustic continuum. According to Oliveros, "Deep Listening comes from noticing my listening or listening to my listening and discerning the effects on my bodymind continuum, from listening to others, to art and to life."[551] Deep Listening can be thus regarded as a form of speculative cartography, a mode of developing world-visions that bases on the idea that human consciousness is distributed and earthly. Fourth World Musics show that musical practice as a form of listening to the planet and amplifying its forms of expression can enable us to listen to deep history and reimagine Earth beyond extractivist boundaries.

Broken Earth

Gathering the above threads, the geological life of Earth is awakened in speculative fashion through philosophies and artistic practices that promote more-than-human attentiveness, which taps into terrestrial processes of "form-taking" that mobilize "inorganic existence," as Elizabeth Grosz contends, taking cue from Jakob von Uexküll, Gilbert Simondon and Raymond Ruyer.[552] Drawing on the last of these three thinkers, she posits that limiting the concept of the brain to humans is misleading because "there are many things which have a brain and which are self-forming."[553] If the world is indeed full of "micro-brains" that have poietic potential unleashed in contact with their *Umwelt*, then it becomes much easier to embrace the concept of an Earth-Brain as well as the sorcery that it weaves in planetary scale. Grosz captures this using a musical metaphor, where everything that is alive, or capable of producing self-differentiation, performs "a

550 Pauline Oliveros, *Deep Listening*, 27.
551 Pauline Oliveros, *Deep Listening*, 15.
552 Elizabeth Grosz, "Deleuze, Ruyer and Becoming-Brain: The Music of Life's Temporality," *Parrhesia* 15 (2012), 2.
553 Elizabeth Grosz, "Deleuze, Ruyer and Becoming-Brain," 4.

melodic line that comes from the world in which it lives."[554] Listening to these melodies is a work that charts a world map on which these unfoldings are assembled into a polyphonic cosmos. To grasp this mode of deep listening it is helpful to turn to the practice of "sessing" described in the speculative-fiction trilogy titled *Broken Earth* by American writer Nora K. Jemisin. In her fantasy vision of a planet that suffered terrible environmental collapse in deep past, the Earth is personified as an angry Father who unleashes a torrent of havoc-wreaking seismic activity in order to punish the living. In this apocalyptic world a special category of people exist – "orogenes" who are able to "sess" the earth's activity and affect tectonic processes thanks to their "sessapinae" – organs located at the brainstem, one of the evolutionarily oldest parts of the human brain. Through training and attuning to these powerful geological forces, it becomes possible for certain individuals – including the novel's main protagonist Essun – to glimpse vast earthly forces as a "magic" that "derives from life," or even past lives that are all sedimented in something much bigger – a vast "network" of

> […] silver threads interlacing the land, permeating rock and even the magma just underneath, strung like jewels between forests and fossilized corals and pools of oil. Carried through the air on the webs of leaping spiderlings. Threads in the clouds, though thin, strung between microscopic living things in water droplets. Threads as high as your perception can reach, brushing against the very stars.[555]

Jemisin's magic emerges in this light as a mode of mapping the planet and simultaneously transforming it, or partaking in its multifaceted sentient life. Notably, the novel puts these fantastic themes in a world-building-driven context that spans politics, class hierarchies, slavery, systemic racism and inequality as well as difficulties in handling planetary-scale crises. By nesting these traumas, she presents a continuity of geological, biotic and social life, which necessitates thinking them together. Tracing these silver threads, or Haraway's string figures, also makes Jemisin into a counter-cartographer, or a revolutionary in what Kathryn Yusoff termed "countergeoraphic imagination."[556] The latter author's study *Geological Life* identifies places revealed through such cartographical multimodal weavings as "rifts" – gaps engaged through "insurgent geology." Its goal can be well explained in the words of Jemisin, who emphasized the work of rich world-building and imagination as focused on the sphere of potentiality, with the "realists of a larger reality" synonymous with "engineers of possibili-

554 Elizabeth Grosz, "Deleuze, Ruyer and Becoming-Brain," 4.
555 N. K. Jemisin, *The Obelisk Gate* (New York: Hachette, 2016), eBook, 490.
556 Kathryn Yusoff, *Geologic Life. Inhuman Intimacies and the Geophysics of Race* (Durham: Duke University Press, 2024), 111.

ty."[557] En route to become a true-to-the-earth geophilosopher, Essun's daughter Nassun literally travels to the center of the Earth through its many layers, from the geological and biological to social and political, experiencing something uncanny yet sublime when her relationship with the Earth is finally changed, releasing regenerative potential:

> The forward view is indistinct at first, just red amid gray and brown and black, but Nassun understands instinctively what she's seeing. They have entered the mantle, and her fear finally begins to ebb amid fascination. […] Here in this strange deadciv contraption, she is part of the earth, perhaps more so than any orogene before her has ever been. It is her, it is in her, she is in it.[558]

557 N. K. Jemisin, "N.K. Jemisin's 2018 Hugo Award Best Novel acceptance speech," *YouTube*, 20 August 2018, https://www.youtube.com/watch?v=8lFybhRxoVM.

558 N. K. Jemisin, *The Stone Sky* (New York: Hachette, 2017), eBook, 1319–1321.

Chapter 3: World-making, or Ecopoetics

Horror

Catherine Malabou contends that the primary task in the Anthropocene is to refuse limiting the life-world to pre-existing categories that frame humanity and Earth, and instead work towards a more functional image of the planet and its dynamics. As she vividly put it, opening the dominant extractivist cartographies to new possibilities of envisioning Earth must begin from locating nodes that are not locatable using older conceptual graticules.[559] In this perspective, such places act as a lever for prying open a dysfunctional concept of the planet, revealing a troubled and uncanny relationship with Earth's deep history. Such nodes include phenomena that are primarily the side-effects of globalized capitalism: inequality, dire labor conditions, precarity, pollution, disaffection and deterioration of mental health or loss of biodiversity and water shortage. One event stands out among them, however: climate change. Like Meillassoux's arche-fossil, climate change proves in many ways unthinkable and irreducible to human categories, planting a stick in the gears of correlationism. It reveals itself partially in Guattari's three dimensions of ecosophy (mental, environmental and social), significantly impacting mental health, remaking the environment, and transforming social bonds. Omnipresent yet difficult to indicate directly, the climate is a force whose operation also traces an outline of a New Earth that looms through cracks in prevalent conceptions of the global, heralding a renewal of the relationship between humanity and the environment. As Eugene Thacker writes, this progressively unthinkable world of "planetary disasters, emerging pandemics, tectonic shifts, strange weather, oil-drenched seascapes, and the furtive, always looming threat of extinction" becomes aesthetically conceivable in the genre of horror, where the human and the non-human are negotiated, typ-

559 Catherine Malabou, "Whither Materialism? Althusser/Darwin," in *Plastic Materialities. Politics, Legality, and Metamorphosis in ihe Work of Catherine Malabou*, eds. Brenna Bhandar and Jonathan Goldberg-Hiller (Durham: Duke University Press, 2015), 58.

ically in violent fashion.[560] Horror seems to be best able to capture the sense of an uncanny kinship with the long history of geological and biological transformations on Earth. From Lovecraft's staging of cognitive breakdown in the face of superior non-humans to the geo-trauma of earth-formation in Nick Land and Reza Negarestani, the push towards less anthropocentric perspectives in philosophy often entails forceful confrontations with vistas that dwarf humanity and dethrone it from its privileged position to one of thorough dependence on, and entanglement in biological life as well as geological-climatic forces. As Thacker contends, the burning philosophical problem lies in the increasing incomprehensibility, or unreadability of a reality we need to share with non-humans, "and of comprehending this politically."[561] This has also proven a challenge for literature, music and art, urging to push the boundaries of various media in order to provide tools for imagining and thinking globality in different terms than those imposed by colonialism and capitalism. Part of the problem, Thacker claims, lies in the notion of the world we uphold and its implicit denotation as a world-for-humans. Overthrowing this idea entails turmoil in all dimensions, as Guattari argues: reshaping the relationship with the more-than-human world entails transformation of subjectivity and setting it on a different political trajectory. As was the point of departure for Meillassoux, Thacker examines the effort to conceptualize the world-without-us and argues that doing so entails making room for something thoroughly intimate yet out of grasp. The idea of a world-without-humanity entails the speculative gesture of finding a place that is not present on our maps, as demanded by Malabou. Thacker's operational terms for making these fine distinctions are worth scrutiny for their form: "World," or the world-for-us; "Earth," or the world-in-itself; and "Planet," or the world-without-us. Notably, the Planet functions in his account much like a proper Harmanian object, "receding" and "not revealing itself" and thus resisting scientific objectification yet necessitating speculative construction in both science and art. No discourse can exhaust the Planet; "by necessity" it must be "occulted"[562] for it opens onto cosmic dimensions of the universe's history and as such frames the world before and after humanity. This echoes what Negarestani postulated as the ground for geophilosophical realism, namely that thinking the Earth requires acknowledging its deep dimensions: the history of the stars and the material accretion of this very planet. Thacker follows a similar course, asking about the possible cosmological perspective on Earth and arguing that the world-without-us is not only found in outer space, but seeps through from the Planet to Earth and World, revealing a "dark intelligible abyss" that underpins what we typically

560 Eugene Thacker, *In the Dust of This Planet* (Winchester: Zero Books, 2011), eBook, 7.
561 Eugene Thacker, *In the Dust of This Planet*, 9.
562 Eugene Thacker, *In the Dust of This Planet*, 15.

take for granted as a stable and unchanging reality.[563] This philosophical re-centering brings forth a "Dark Earth" whose long heritage is carried by all life, including humans, their biological form and material composition. Confronting this reveals a limit to human thought when faced with "the enigmatic thought of the unknown."[564] Horror would then be less about eliciting existential fear and more about the dizzying confrontation with "the paradoxical thought of the unthinkable."[565] As such, it is not just an aesthetic mode or cultural trope, but also "a mode of philosophy" that turns to the abysmal *Ungrund* and attempts to think the human by first tackling the subject of what could be called the un-human ground.[566]

Ben Woodard brings Schelling's concept of *Ungrund*, or the un-thought, primordial abyss to zoom in on the idea of a world where there is no stable ground or base stratum holding earth in place. Instead, the earthly foundation would be located on "the dark ground of nature" which may be glimpsed only through "a larger system of forces […] at the cosmic scale."[567] As a "darkly productive monster," Earth evokes horror because it escapes human cognition.[568] A wanderer *planetes* as the Greek etymology of the word "planet" suggests, it takes flight into the cosmic dimension, revealing the work of its deep interior or otherwise hiding within phenomena whose scale transcends human enquiry. And just as astronomers have been tracing the course of other planets in the sky, Earth has also been on the move, an ever-becoming "stratified globule, a festering confusion of internalities powered by a molten core and bombarded by an indifferent star."[569] This tellurian un-ground puts a bracket on what we think we know about it. Traversing the thought of Spinoza, we could say we still do not know what the Earth can do. Consequently, sensing it and forming an idea of one's place on ontological shifting sands becomes problematic. Evoking Malabou's dictum of not reproducing the image of world, Woodard concludes by emphasizing the need to "search for a new earth […] that does not re-transcendentalize the original earth."[570] This surely entails possible dissipation of earthly homeliness; the Planet is sublime, evoking horror and beauty at the same time, disturbingly combining the familiar with the strange, offering refuge yet threatening life. To update the parameters of seeing ourselves on Earth it be-

563 Eugene Thacker, *In the Dust of This Planet*, 16.
564 Eugene Thacker, *In the Dust of This Planet*, 17.
565 Eugene Thacker, *In the Dust of This Planet*, 17.
566 Eugene Thacker, *In the Dust of This Planet*, 193–194.
567 Ben Woodard, *On an Ungrounded Earth. Towards a New Geophilosophy* (New York: Punctum Books, 2103), 84.
568 Ben Woodard, *On an Ungrounded Earth*, 86.
569 Ben Woodard, *On an Ungrounded Earth*, 83–84.
570 Ben Woodard, *On an Ungrounded Earth*, 95.

comes necessary to embrace a veritable geophilosophy that leads through the non-human. However, this route also involves reforging subjectivity, socialization and forms of expression.

Cosmopolitics

A new-materialist geophilosophy consists in returning to Earth as the root of all thought by transversally tracing "the materialist configurations of financial collapse, global inequality, war, and climate change."[571] Such mappings, Arun Saldanha argues, are not limited to the function of marking the Anthropocene as a calendar mark and pointing to capital as the inhuman force of subjugation.[572] Through their world-making function, new-materialist mappings are both critical and creative in the sense of intervening in the world by revealing its untapped possibilities. Methodologically, Saldanha seeks to identify the "machinic phyla," or the mediating "umbilical cords to the earth" by regrounding processes in their broader material dimensions through "stratanalysis," a practice of unearthing layered materialities and temporalities within the "mechanosphere."[573] Saldanha draws attention to the suffix "-sphere," as elaborated by Deleuze and Guattari who use it to denote the material foundation of converging dimensions that include mental, social and environmental ecologies. For Saldanha, the suffix heralds "an ontology that rethinks the sphericality of earthly processes"[574] premised on acknowledging Earth's depth along with "the role social formations play in altering it."[575] On an ungrounded Earth, the mechanosphere does not hold the Earth together; instead, it highlights the "stratification of its flows insofar as they produce planetary thinking."[576] However, the unilaterally financial globalization does not provide an image that accounts for these strata and their configurations. As Saldanha aptly notes, all sorts of holistic ideas of the global are teleological or introduce transcendence through the back door. One notable example of this is the image of the Earth as seen from space, which evokes a sense of care and fragility yet builds safe distance by hiding all the actants who contributed to the making of this picture. Nowhere to be seen is the long umbilical cord tying the photographer and camera to Earth. It is for this reason that

571 Arun Saldanha, "Is There Life After Man? Geophilosophy, Geocommunism," in *Posthumous Life. Theorizing Beyond the Posthuman*, eds. Jami Weinstein and Claire Colebrook (New York: Columbia University Press, 2017), 228.
572 Arun Saldanha, "Is There Life After Man?," 231.
573 Arun Saldanha, "Is There Life After Man?," 232.
574 Arun Saldanha, "Is There Life After Man?," 233.
575 Arun Saldanha, "Is There Life After Man?," 235.
576 Arun Saldanha, "Is There Life After Man?," 236.

speculative cartographies of the global work with materiality and always stick to the plural of maps and atlases rather than a singular treasure map that renders all other maps obsolete. Decolonial counter-cartographies have shown that treasure maps in fact work as extractivist beacons, forever tying the geographical relationship to financial terms: an ontological gold standard. Indeed, as seen in the case of Allan Sekula's photographic works, tracing capitalism requires multiple cartographical efforts before we even outline the basic parameters of its planetary functioning. This requires a renewal of cartography, discarding dualisms and the concept of nature as a "harmonious whole" while replacing it with that of mechanosphere understood as "variously intermeshing assemblages in which collective thought attempts to intervene."[577] In this sense, the concept of mechanosphere unmakes the perfectly spherical Platonic Earth by revealing its deep geological foundation and a layered, more-than-human history. Such ideas keep emerging because the story of the Earth is obviously incomplete and can never be reduced to a single narrative, which invites a consideration of the ecology of storytelling, as suggested by Jeff Vandermeer. To rephrase the title of Bruno Latour's seminal work *We Have Never Been Modern*, it is possible to say that we have never been global. This asks two questions at the same time. First, what would it mean to become fully global on today's terms? And second, what other ideas of the global can we come up with? In the epoch of climate change, the status-quo precarization of life spreads across the globe, deeply disturbing ecosystems. To grasp these vectors, the very concept of global concerns needs to be realigned and re-coordinated on the basis of a different conceptual graticule, one focused on ecological assemblies as well as possible alliances in the face of global-scale threats.

In *We Have Never Been Modern* Bruno Latour holds that the ultimate yet unachievable goal of modernity has been to separate nature and culture. However, efforts to purify one from the other are invariably accompanied, Latour argues, by the unceasing work of translation, which spawns nature-cultural hybrids through "progressive reblending."[578] Local climate change effects and broken distribution chains have confronted the moderns with a world populated by long networks of quasi-objects which in fact underpin a world that is only later split into social and environmental halves. As Latour claims, nowadays "it behoves us to pursue them, while we simply become once more what we have never ceased to be: amoderns."[579] In an increasingly complex world, painstakingly separating nature and culture is counter-effective because it obscures the non-

577 Arun Saldanha, "Is There Life After Man?," 245.
578 Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge: Harvard University Press, 1993), 76.
579 Bruno Latour, *We Have Never Been Modern*, 90.

dualist global picture rather than contributes to operable maps of the world. The past- and future-facing turn towards amodernity signals the need to take a different route, displaying vast networks where actants operate on a level field, without discriminating along demarcation lines such as sentient and non-sentient, animate and inanimate. Reconstructing networked, democratic cartographies becomes in this sense a way to develop different notions of collectivity and agency. This variant of the Copernican turn reveals the need to form assemblies that include humans and non-humans, heralding a more-than-human politics that embraces quasi-objects and regrounds all life in the dense mesh of actants, which includes not only monetary systems but also microbial pathogens and sea levels. The task of mapping networks involves embracing materialism and showing how human culture is undergirded with the material world: "to bring it back to specific places, trades, instruments, and media, and to let it circulate again but without losing a moment of what in the industry is called its traceability."[580] The long traces that send us back to the material conditions of planetary life are the prime subject of Latourian actor-network analysis, a cartographical enterprise that cuts through many dimensions and cannot be communicated in representational cartography.

In the context of globalization, Latour turns to Peter Sloterdijk's *Spheres* trilogy to find confirmation of his intuitions about the "rematerialization and relocalization of the global."[581] Indeed, as both authors hold, the cognitive and political challenge of the Anthropocene is to see how "[t]he global is part of local histories."[582] Just like in the case of other hybrid objects traced by Latour's actor-network theory (ANT), this model "accompanies" the concept of the global "back to the rooms in which it is produced."[583] This comprises conceptual globalization in reverse: from the idea of the global down to its deep material entanglement in material planetary processes and phenomena. Such a trajectory of enquiry brings together a plethora of diverse objects, following their global distribution and grounding them in the planetary dimension, which involves realignment of cartographical coordinates and the emergence of a different image of the Earth. The idea of circumnavigating the globe takes a different form in the Anthropocene since "the consequences of our action travel around the blue planet and come back to haunt us: It is not only Magellan's ship that is back but also our refuse, our toxic wastes and toxic loans."[584] Still, it not easy to compose the world

580 Bruno Latour, *Spheres and Networks: Two Ways to Reinterpret Globalization*, lecture at Harvard University Graduate School of Design, 17 February 2009, *Harvard Design Magazine* 30 (2009), 142.
581 Bruno Latour, *Spheres and Networks*, 142.
582 Bruno Latour, *Spheres and Networks*, 142.
583 Bruno Latour, *Spheres and Networks*, 143.
584 Bruno Latour, *Spheres and Networks*, 144.

along these lines since this task requires finding forms of expression fit to articulate the global and overcome hasty unification that divulges "a world dominated by corporate capitalism or as a world at risk."[585] Escaping this dire dichotomy entails not only "complex shifts of conceptual register" but also "knowledge of scientific principles and processes as well as recourse to metaphor."[586] Metaphorical transport facilitates conceptual leaps across different scales, contributing to the production of new graticules for developing a revised notion of Earth, or building a "sense of planet," as Ursula Heise terms it: "a sense of how political, economic, technological, social, cultural, and ecological networks shape daily routines."[587] Metaphors of Blue Planet or Global Village, she argues, offer narratives that simplify the intricacy of earthly processes and allegorize them, unlike the "collage" where "all the parts are connected but also lead lives of their own."[588] This echoes Latourian compositionism and the network trope, which operate in the material ruins of allegory, excavating and tying concepts down to the life-enabling mesh of planetary forces that can be woven together in imaginative cartographies, contributing to collage-like atlases that combine science and metaphor.

At its root, the concept of globalization is a metaphysical category. As the above discussion shows there exists a sense of the inadequacy, or a scalar problem that opens the human to the universe. What emerges from a reevaluation of globalization is a different possibility of seeing Earth. Heise calls it a "sense" of planet, not a full representation. This is connected with the elusive *planets*, highlighting Thacker's idea to speak of a darker planet, or ungraspable celestial body that does not offer a ready-made home for the human species. The planet-as-wanderer is invariably on the move, changing itself as it changes us. In this way, it refuses to be immobilized from a fixed external point of view, or Apollo's Eye as Denis Cosgrove termed it in his discussions of global phenomenology.[589] To obtain the quasi-divine perspective Western cartography has extricated humanity from earthly entanglements through nature-cultural purification. This is especially the case with the Earthrise and Marble Earth photographs, which create the illusion of being taken from a godlike perspective and present Earth as weightlessly hovering in space. This effect has indeed spiritual connotations, contributing to what is known as the "overview effect," and having a powerful influence on the select few who were able to glimpse Earth from the

585 Ursula K. Heise, *Sense of Place and Sense of Planet. The Environmental Imagination of the Global* (Oxford: Oxford Univeersity Press, 2008), 27.
586 Ursula K. Heise, *Sense of Place and Sense of Planet*, 39.
587 Ursula K. Heise, *Sense of Place and Sense of Planet*, 55.
588 Ursula K. Heise, *Sense of Place and Sense of Planet*, 64.
589 Denis Cosgrove, *Apollo's Eye. A Cartographic Genealogy of the Earth in the Western Imagination* (Baltimore: The Johns Hopkins University Press, 2001), 3.

orbit or the Moon.[590] Often compared to a transcendental experience, it contains a sublime component that envisions a fragile, miraculous home cast against the backdrop of near-infinite outer space: dark, empty and unwelcoming. Nevertheless, what disappears from the image is the extensive mediation necessary to achieve the possibility of such glimpses. There is a long chain of actants who facilitated space exploration – a long umbilical cord that has been dragged into space from habitats that actually sustain life. This, however, is rarely seen from space, and certainly not on these famous images. In fact, the overwhelming global vista appears to be very difficult to process, even though such imagery has become the staple of marketing in freight forwarding and global delivery services, offering a fascinating example of banal globalization in practice, as has been elucidated by Simon Ferdinand.[591] Images of the global are hugely enticing and capture the imagination, suggesting effortless movement of people and goods, unhampered by the complex interdependencies that shape actual material fluxes. At the same time, it has been increasingly challenging to consider locality as coevolving with other localities around the world. For example, as Andrzej Leder demonstrates, owing to global capitalism's monetization of all value systems, Western culture finds it difficult to define its relationship with non-Western cultures otherwise than through financial categories.[592] It has been a daunting task to imagine everyday actions, such as driving a car, to be connected with socio-politics in countries extracting and processing fossil fuels burned by the vehicle. Since climate change has become an urgent subject, it can be observed that processes of this scale pose a huge challenge owing to their counterintuitive character. Suddenly, the driver of the car is transported elsewhere, mapping the journey and charting space for reflection and action. From the perspective of evolution, leaps of this kind have seldom been necessary because vast and complex geographies were rarely a matter of direct threat to human survival in the key stages of shaping the path of human development as a species. It would seem that we are better equipped to handle regional knowledge and practices. Still, there were certain evolutionary pressures in the past, for example related to tectonic shifts in the Great African Rift three million years ago, which have pushed human intelligence on the path of radical change.[593] Similarly, embracing

590 See: Grzegorz Czemiel. "Weirding Earth: Reimagining the Global Through Speculative Cartographies in Literature, Art, and Music," in *Other Globes. Past and Peripheral Imaginations of Globalization*, eds. Simon Ferdinand, Irene Villaescusa-Illán, and Esther Peeren (Cham: Palgrave, 2019), 213–216.

591 See: Simon Ferdinand, "Seeing the Self in the World: Attending to Banal Globalism in Urban Visual Cultures," *Journal of Urban Cultural Studies* 5.2 (2018): 249–254.

592 Andrzej Leder, "The Limits of Representation and What Lies Beneath," *Eidos* 6.1 (2022), 65.

593 Lewis Dartnell, *Origins. How Earth's History Shaped Human History* (New York: Basic Books, 2019), eBook, 36–37.

today's world geologically may prove to be a formative experience that could unlock the potential to think the entirety of Earth in terms of a single *ecumene* – the single known world. Opening this window, however, requires caution so as not to regard space as empty and beckoning to be conquered because this has historically led to wiping out native nature-cultures and installing a colonial framework of production, circulation and geopolitics. It remains a challenge to pursue conceptual graticules that could help to disclose the empty world of colonialism as teeming with life and knowledge yet participating in the global economy from a position of inequality, as shown by Kei Miller.

There is certainly nothing wrong with using latitude and longitude but they are conceptually short-handed. When we treat them as media, it becomes apparent that they too distort the image of the planet by representing some aspects and not others. Assembling the planet goes far beyond encapsulating it in a network of abstract lines whose final effect is the production of a perfectly spherical globe that can be engaged only through dematerialized thought as a geometrical object perceived from outside. Tim Ingold describes that the process of separation entailed by globalization as dividing the global habitus from lifeworld, the latter also becoming a sphere but perceived from the inside.[594] Finally, Cartesian-style graticules of the globe are strictly ocularcentric, thus failing to hear spheres as ecosystems that vibrate and resonate. A different map is created through hearing, or the experience of sonic immersion in a chamber crisscrossed with sounds and echoes.[595] By forsaking a "resounding" lifeworld for geometrical globality, "'the world' […] is drawn ever further from the matrix of our lived experience."[596] According to Ingold, the prevalent perspective is that "the world as it really exists can only be witnessed by leaving it, and indeed much scientific energy and resources have been devoted to turning such an imaginative flight into an achieved actuality."[597] This kind of global image is colonial insofar as it creates a view where the surface remains passive, "waiting to be occupied" and thus "an object of appropriation for a collective humanity," both in the sense of seeing the world as pre-formatted for humanity, "already constituted," and basically a stage for human interactions.[598] In short, Ingold contends, the global imagery of a flat world beneath our feet leads to the alienation of people from their environment.[599] In anthropological terms, he shows that Western civilization has favored a "global ontology of detachment" rather than a "local ontology

594 Tim Ingold, *The Perception of the Environment. Essays on Livelihood, Dwelling and Skill* (London: Routledge, 2002), 209–210.
595 Tim Ingold, *The Perception of the Environment*, 211.
596 Tim Ingold, *The Perception of the Environment*, 211.
597 Tim Ingold, *The Perception of the Environment*, 211.
598 Tim Ingold, *The Perception of the Environment*, 214.
599 Tim Ingold, *The Perception of the Environment*, 215.

of engagement."[600] Drawing on categories developed by Niklas Luhmann, Ingold ties this with the triumph of technological globalization over cosmological imagination. Technology is concerned with acting "upon the world," whereas the latter with acting "within the world."[601] The cosmological dimension importantly involves building knowledge about the world from inside the web of material entanglements, acknowledging the consequences of actions and establishing a self-conscious relation with the environment.[602] Much of the anthropological material that Ingold examined comes from non-Western or pre-modern societies characterized by cultivation of cosmologies that produce worlds from the inside rather than outside. And since the global imagery that prevails in mainstream Western discourses about the environment favors the technological perspective, the often endangered "local or indigenous cosmologies of engagement" valuably offer a contrasting perspective on assembling the world into a living planet according to a-modern parameters.[603]

The above accounts of the globalized world foreground what Bronislaw Szerszynski and John Urry have called "banal globalism": hasty assembly of the world into a perfect sphere by taking a shortcut usually based on specific ideological positions of power and territorial control. This method of composing the Earth entails a relationship model based on geometrical coordinates or monetary value – two key parameters in the flat world of extractivist capitalism. Ultimately, in the age of cheap flights and rampant social media, "humans are increasingly seeing and experiencing the world from afar, 'at home' only within the multiple mobilities of late modernity."[604] Indeed, uninterrupted access to products, services and media has marked the boundaries of twenty-first century ecumene, impairing the practice of "dwelling" where knowledge and lifestyle are always situated and contextualized. At the same time, however, there is no denying that climate change necessitates thinking both locally and planetarily, but not "globally." Szerszynski and Urry underscore the need to pursue, in theory and practice, the kinds of "cosmopolitics" that would mobilize cosmological compositionism in the sense given to this term by Bruno Latour: following actor-network lines to draft maps of the lifeworld that reveal other possibilities for larger systems to thrive.

600 Tim Ingold, *The Perception of the Environment*, 216.
601 Tim Ingold, *The Perception of the Environment*, 216.
602 Tim Ingold, *The Perception of the Environment*, 216.
603 Tim Ingold, *The Perception of the Environment*, 217.
604 Bronislaw Szerszynski and John Urry, "Visuality, Mobility and the Cosmopolitan: Inhabiting the World from Afar," *The British Journal of Sociology* 57.1 (2006), 127.

As Timothy Clark emphatically put it, "we live with no intuitive or significantly internalized sense of the Earth as a planet."[605] For this reason, he regards "terrestriality" as a pivotal concept that gestures toward the cognitive challenge of living in the Anthropocene. It tears down an important fantasy, namely that of a life-world pre-made and "natural" in a stable and reassuring sense, providing an easy sense of familiarity and at-homeness. What the Anthropocene has revealed is a "darker earth" beyond human feet, permeating all planetary life as the material basis of sustenance yet also implicating cosmic dimensions of exorbitant proportions to the human experience of time and space. The illusion of a firm surface masks what Clark calls, after Hans Georg Gadamer, the "*unvordenklich*": something un-pre-thinkable, or impossible to conceive in advance using humanocentric terms.[606] This dovetails with Meillassoux's quest to reveal slits in correlationist discourses that reduce the world-in-itself to a world-for-us. However, globalism has been busy closing gaps and ensuring the continuity of the graticule that favors colonial and extractivist parameters of engaging reality. Such a geometrical homogenization of the world – a mark of crisis in thought, according to Edmund Husserl, who identified it at the beginning of the twentieth century[607] – entails what Greg Garrard calls the "globalisation of imagination" that contributes to a "monoculture of the mind" and presupposes a notion of "natural standards" against "contingency and indeterminacy."[608] Garrard himself, in turn, contrasts this vision of a pre-formatted Earth with "the poetics of responsibility" which "recognises that every inflection is our inflection, every standard our standard" and refuses to "disguise political decisions about the kind of world we want in either the discredited objectivity of natural order or the subjective mystification of spiritual intuition."[609] The last element would be tied in this context to the quasi-mystical overview effect, which is too sudden and ephemeral to actually contain the whole Earth and conceptually lift it. It would mean that astronauts can take the job from god Atlas in holding the world on their back. Composing it, however, is a far more daunting task that entails renegotiation of nature and culture on the basis of a different project of world-making.

According to Ayesha Ranachandran, one pivotal moment in the history of worldmaking occurred in the sixteenth and seventeenth centuries when an "epistemological crisis" resulting from a clash of cosmologies led to "increasing

605 Timothy Clark, *Ecocriticism on the Edge. The Anthropocene as a Threshold Concept* (London: Bloomsbury, 2015), 36.
606 Timothy Clark, *Ecocriticism on the Edge*, 33.
607 Edmund Husserl, *The Crisis of European Sciences and Transcendental Phenomenology*, trans. David Carr (Evanston: Northwestern University Press, 1970), 24ff.
608 Greg Garrard, *Ecocriticism* (London: Routledge, 2004), 178–179.
609 Greg Garrard, *Ecocriticism*, 179.

emphasis […] on worldly plurality, contingency, and the limitations of human perception and knowledge."[610] The Anthropocene marks another crisis of this kind as humanity is faced with planetary-scale consequences of its actions yet finds it difficult to develop a "comprehensive vision of the whole – global and eventually cosmic – by attending not only to large-scale macro-historical processes, but to conceptual, imaginative, and metaphysical challenges posed by the task of envisioning an abstract totality."[611] Just like in the discussed early modern period, today's worldmaking demands reconfiguring individual elements in relation to larger wholes, especially when faced with scalar differences so vast that they require "an act of imagination" or "a leap of theoretical speculation" in order to tie the various local coordinates provided by empirical science.[612] Ramachandran highlights that worldmaking is a practice of casting networks of meaning in a "radically uncertain world" and is supported by *poiesis*, an "artful making" that consists in "making sense of the pieces" or arranging them in a meaningful mosaic that maps worldly existence.[613] As *poiesis*, worldmaking is a practice of developing forms with available materials, which Ramachandran aligns with the anthropological concept of *homo faber* who mobilizes "rhetoric, aesthetics, *poiesis*, and the speculative imagination."[614] In the present context, the novelty that this category introduces is the artful elaboration of the notion of world as neither pre-given to humanity nor having a stable structure, which makes it necessary to continuously engage in pre-Enlightenment or a-modern worldmaking "as a politically potent, morally compelling category."[615] Notably, by exploring non-Western perspectives, Ramachandran distills and reclaims an important aspect of early-modern worldmaking impulses that were widespread prior to the triumph of technology, navigation and capitalism, which sealed the earthly graticule in the model of globalized world. The great project of modernity has led to colonialism, but at its root one can locate the challenge of worldmaking, one very similar to the test entailed by the era of climate change: the impulse to make sense of the larger world in times when former visions of global harmony fray and wither when faced with monstrous hyperobjects and deep, geological time. Importantly, through notions of *homo faber* and *poiesis*, worldmaking emphasizes ethical and imaginative engagement with "forces of entropy."[616] It is also a practical demonstration of Malabou's plastic reading:

610 Ayesha Ramachandran, *The Worldmakers. Global Imagining in Early Modern Europe* (Chicago: The University of Chicago Press, 2015), 2.
611 Ayesha Ramachandran, *The Worldmakers*, 2.
612 Ayesha Ramachandran, *The Worldmakers*, 7.
613 Ayesha Ramachandran, *The Worldmakers*, 8.
614 Ayesha Ramachandran, *The Worldmakers*, 10.
615 Ayesha Ramachandran, *The Worldmakers*, 17.
616 Ayesha Ramachandran, *The Worldmakers*, 20.

deconstructing modernity is one thing but salvaging from it the fundamental impulse of worldmaking opens up the possibility of a different future, one that "resists the closures of hegemonic universalisms even as it seeks to gather up disparate parts into a coherent vision of wholeness."[617] Cartography is the primary locus of these tensions and transformations. It is for this reason that speculative cartographies are nested in a longer history of worldmaking.

The alienation from the natural world experienced in late modernity partly stems from offloading the work of "comprehensive spatial representation" to physical maps, instruments and devices.[618] Technology has become the external means of storing information about one's location and trajectory, with most of the navigation given up to specialized applications. However, a different kind of knowledge about the environment is possible: one organized around places encountered in movement – not around immobile locations reduced to geometrical coordinates. Anthropology has identified a number of alternatives, which are analyzed by Ingold. One model is "wayfinding": a practice that is more akin to storytelling and memory-mapping rather than the map-making in the conventional, Western sense of the term, premised on maritime navigation. In Ingold's ecologically-inflected discussion of wayfinding, it is shown as "the unfolding of a field of relations established through the immersion of the actor-perceiver within a given environmental context."[619] The mapping process at work here is thus experimental and invariably perspectival. Even though scientific cartography has enshrined the view from above as a theoretical possibility, all maps index the "cognitive schemata" of mapmakers; "every map," Ingold emphasizes, "is necessarily embedded in a 'form of life'."[620] This shift of perspective moves map-making from high above to down below – to the material flows traced by way of a "lateral mode of integration" where knowledge about the environment is constructed "in the passage from place to place, and in histories of movement and changing horizons along the way."[621] As Ingold shows on the example of the Ongee (Southeast Asia) and the Walbiri (Australia), space can be seen not as an abstract, empty container but "a region concatenated by the place-to-place movements of humans, animals, spirits, winds, celestial bodies, and so on."[622] The seemingly incidental "and so on" is perhaps quite significant in the present context as it provides striking contrast to the notion of space as an empty grid, as was ironically exemplified in the empty graticule presented as a map by

617 Ayesha Ramachandran, *The Worldmakers*, 227.
618 Tim Ingold, *The Perception of the Environment*, 219.
619 Tim Ingold, *The Perception of the Environment*, 220.
620 Tim Ingold, *The Perception of the Environment*, 225.
621 Tim Ingold, *The Perception of the Environment*, 227.
622 Tim Ingold, *The Perception of the Environment*, 228.

Art & Language.[623] This rhetorical detail suggests a large web of actants in a dense, more-than-human geography. Mapping is also an ongoing process, just like knowledge about the environment is subject to continuous changes, making it "ambulatory" and performative: "The traveller or storyteller who knows as he goes is neither making a map nor using one. He is, quite simply, *mapping*."[624] Understood in this way, the capacity for mapping can have evolutionary roots, as Denis Wood suggested.[625] This concept is most fully demonstrated, however, by Rebecca Schwarzlose, who has shown that brain-maps indeed work pretty much like wayfinding, with embodied knowledge assembled from warped and un-map-like cartographies of movement and action performed at neuronal level.[626] This is most easily gleaned when visitors ask locals for directions. In response, there is always the irresistible urge to use hands and the body to enact wayfinding rather than plot locations in abstract space.[627] Ingold's insistence on wayfinding as storytelling leads him to conclude that maps may be by-products of story-telling since they comprise imaginative reenactments of journeys that are experienced as narratives.[628] In contrast to this stands the immobile map model developed by post-Enlightenment cartography, one that "creates the appearance that the structure of the map springs directly from the structure of the world."[629] This is a crucial distinction because the price of the cartographic illusion that facilitates the view-from-above consists in the suppression of both actual journeys and the bodily dimension of mapping. Unlike the maps of North American Natives, the Inuit, and Micronesian seafarers, maps founded on the cartographic illusion do not account for the plasticity that Malabou defines as the capacity to give and receive form. In consequence, "the world it [the modern topographic map] describes is not a world in the making, but one ready-made for life to occupy."[630] Ultimately, it emerges that the aesthetic compromise leading to the erasure of detail, texture and movement from maps for the sake of navigational clarity entails subjective and social transformation of notions of space and environment. Empty maps connote a world ready for extraction and inscription. Given ongoing ecological crises and the unsustainable path of fossil-fuel-based social organization, the need for collective wayfinding emerges as more urgent than ever. No pre-laid paths await humanity in the Anthropocene and no ways of life

623 Art & Language, *Map of Itself* (1967). See: Katherine Harmon, *The Map as Art. Contemporary Artists Explore Cartography* (New York: Princeton Architectural Press, 2009), 13.
624 Tim Ingold, *The Perception of the Environment*, 230–231, emphasis preserved.
625 Tim Ingold, *The Perception of the Environment*, 231.
626 Tim Ingold, *The Perception of the Environment*, 224.
627 Tim Ingold, *The Perception of the Environment*, 233.
628 Tim Ingold, *The Perception of the Environment*, 234.
629 Tim Ingold, *The Perception of the Environment*, 234.
630 Tim Ingold, *The Perception of the Environment*, 235.

have been preordained for that occasion. Part of the problem lies with the cartographical tradition that casts the world as immobile and prearranged, because this solution requires little otherwise than following ad nauseam the paths that are already there. In contrast, worldmaking or wayfinding require intense effort in encountering the world on its terms, meeting the universe half-way as Barad vividly put it, and weaving the threads together to assemble a complex embodied model.[631] "Every living being," Ingold concludes, "grows and reaches out into the environment along the sum of its paths. To find one's way is to advance along a line of growth, in a world which is never quite the same from one moment to the next."[632] Life is always in the making and so must be philosophy, aesthetics and the images of the world that arise from them. Accordingly, in the Anthropocene, the chief challenge concerns enhancing skills related to wayfinding rather than map-making. This is what speculative cartographies are preoccupied with in the first place: encountering the world regionally yet persistently tracing its organic and inorganic flows as they are made and unmade together, embedded in structures that have hugely expanded owing to the last two hundred years of development in human understanding of geological, evolutionary and climatic processes.

Cartography's earliest examples demonstrate that their primary function was to establish relations between a variety of disharmonious elements, and to forge a relationship with the environment by cultivating pictorial accounts of encounters among people as well as between humans and non-human nature (without the iconic split into political and geographical maps). Mediaeval *mappae mundi* favored the cosmological function over accurate representation of spatial relations yet populated space with built environment and natural phenomena.[633] Indeed, even imperial maps of the British Empire from the mid-nineteenth century create an image of the world with Britannia weaving a web of marine routes over the world and literally commanding the planet by ruling its waves.[634] Mapping has also become a popular metaphor for plotting complex sets of relations on the surface of spatial abstraction, prolifically used throughout the humanities as well as in education and workplace. As brain science demonstrates, an important part of human cerebral activity consists in the establishing of neuronal complexes responsible for processing perception patterns, which chart

631 Karen Barad, *Meeting the Universe Half-Way. Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007), 26.

632 Tim Ingold, *The Perception of the Environment*, 242.

633 *The History Of Cartography, Volume One. Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean*, eds. J. B. Harley and David Woodward (Chicago: The University Of Chicago Press, 1987), 286ff.

634 Peta Mitchell, *Cartographic Strategies of Postmodernity. The Figure of the Map in Theory and Fiction* (New York: Routledge, 2007), 54–57.

maps in the brain. And since these maps are always prone to destabilization, they exhibit plasticity, which means that the brain-as-environment is itself mutable and can be shaped just like other environments. The brain's plasticity means that it is embedded in its immediate habitat, forming one of Guattari's three interlocked ecologies and, as such, remaining responsive to social and ecological factors. Taking cue from object-oriented ontology, it is possible to argue that in all these instances we in fact encounter mistranslation, or mis-mapping. Distortion begins with brain maps and continues throughout all of its forms, which is shown by Ingold. As it paradoxically turns out, mapping has never really been about quasi-mimetic resemblance but more about fiction, storying, fabulation and world-building. This recognition sets the map free, returning map-making to its source, which lies with storytelling as worldmaking. In this light, a limited understanding of cartography as belonging merely with geolocation, global positioning and geographical information systems, runs the risk of eradicating profoundly important modes of engaging space. Perhaps, in a decolonial reversal of terms, cartography could be defined as a subset of more general map-making that has stronger evolutionary roots and connects human imagination with biosemiotic processes.

Spice

The pairing of storytelling and worldmaking has been also elaborated by Nicola Masciandaro in the essay "Becoming Spice: Commentary as Geophilosophy."[635] This text deploys the image of spice as the unity of matter and desire, thus traversing dualism to speak of geophilosophy as embracing geography in two ways – as planetary facticity, established scientifically, and as anagogic earth-writing (*geo-graphein*) in a literary, mystical and metaphor-driven sense of discursivizing the planet.[636] Accordingly, geophilosophy produces the experience of Earth as "the site of thought's passage to the absolute" and "encodes this experience in the form of spice."[637] Taking cue from Martin Behaim's 1492 "annotated globe," Masciandaro emphasizes that the geographical placement of Spice Islands is accompanied on this early modern globe by commentary in the ancient genre that "seeks to sphericize the text, to surround it on all sides."[638] In this way, the spice enveloping the globe is not just a global commodity but in fact a form of earth-writing, "a movement that marks and remarks relational net-

635 Nicola Masciandaro, "Becoming Spice: Commentary as Geophilosophy," *Collapse VI* (2010), 21.
636 Nicola Masciandaro, "Becoming Spice," 28.
637 Nicola Masciandaro, "Becoming Spice," 28.
638 Nicola Masciandaro, "Becoming Spice," 29.

works."[639] In other words, spice is performing the writing as well, implicating us in its vectors. In what could be called geo-hermeneutics, Masciandaro envisions geophilosophical engagement with the Earth as a peripatetic "interpretive movement *around* that draws forth from what cannot be penetrated."[640] All thought is rooted in the Earth and can produce spice, a "hermeneutic psychedelic"[641] in order to hallucinate the planet, surrounding it with fictive pathways, and asserting that "its truth belongs *here* in the most palpable and factical sense, that it is *written into* the place of reader and text."[642] At the same time, commentary-as-spice entails continual interruption that facilitates "exposure to the otherwise": "denaturing of the text into the earthy, ontic immanence of what it represents."[643] To put it differently, commentary is a fictive intrusion that "deforms the object of understanding precisely so as to understand it, as the only way it can *actually* be understood."[644] Echoing Graham Harman's ontological model of the real object receding beneath the sensual crust and his notion of "allure," which works along similar lines, geophilosophy encircles the Earth, enveloping it in relational thought, just like commentary "twists the text spatially" in order to sphericize it.[645] The curvature of the Earth emerges then by bending and twisting discourse through immanent fictive modes of engagement. "Accordingly," Masciandaro argues, "commentary works to hold forever open and totally fill writing's space, as if to absolutely disclose the space of writing, which means to realize it as curved space, the immanent space-becoming-place through which everything leads back to itself."[646] This perspective ties together geography and writing by casting both as part of the same process in which the globe is made and revealed, although not in a mimetic sense that presupposes a subject-object relationship. Just as the global is traced by following a line from lived experience to the cosmic absolute of the Great Outdoors, writing is released from the limitation of a purely mimetic horizon and made endless: an abode of imagination that can oscillate between the actual and the virtual, augmenting the potential to think the Earth otherwise. Such writing, Masciandaro concludes, is characterized by "unending beginning" premised on "the sphericization of the space of writing or our finding of the page as *unbounded finitude*, a surface for limitless writing whose every mark is first and last."[647] It is this expanded sense of

639 Nicola Masciandaro, "Becoming Spice," 29.
640 Nicola Masciandaro, "Becoming Spice," 30, emphasis preserved.
641 Nicola Masciandaro, "Becoming Spice," 45.
642 Nicola Masciandaro, "Becoming Spice," 46, emphasis preserved.
643 Nicola Masciandaro, "Becoming Spice," 48–49.
644 Nicola Masciandaro, "Becoming Spice," 49, emphasis preserved.
645 Nicola Masciandaro, "Becoming Spice," 50.
646 Nicola Masciandaro, "Becoming Spice," 54.
647 Nicola Masciandaro, "Becoming Spice," 55, emphasis preserved.

writing as always already earth-writing that dovetails with its understanding in the critical perspective of ecopoetics.

Ecopoetics

What the above approaches respond to is the challenge concerning the limits of representation in times of rapidly expanding reality, which became populated by objects of dazzling scale, much different from what humanity has grown accustomed to prior to the arrival of the Anthropocene. Speculative cartographies can be thus regarded as *poietic* efforts to creatively explore the fringes of representation, aiming to forge categories of visibility that would reveal a weirder yet more accurate reality, at least partly freed from the shackles of colonial or extractivist anthropocentrism. At the heart of such ways of making is the manipulation of projection, understood not just as a specific mode of rendering a sphere on a plane, but also as a certain convention of illusion – a feature it distinctly shares with literature and writing. It is the burden of inherent distortion while transposing or metaphorizing towards making reality operable and navigable, or meaningful yet pragmatically addressable. With the dispelling of the illusion of Apollonian gaze, it becomes necessary to review the meaning of cartography's real accuracy. This argument was made by Peter Turchi in the context of literature, where he argues for a much broader sense of authorship, against concepts of "implicit intention" or "authorial intention" developed in literary studies.[648] Reading this argument from an ecopoetic perspective, Turchi moves from an individualistic to a more-than-human context shaping specific literary works and maps. Literature, after all, is also an ecosystem. "Like species," Forrest Gander argues, "poems are not invented, but develop out of a kind of discourse [...] like casts of wormtrails in a sandstone."[649] In Gander's view, this is a huge asset that "alludes to the stunning diversity, the breadth of the unrecorded, the unchampioned."[650] In this sense, speculative cartographies primarily offer a glimpse of the possibility-driven vastness of the Great Outdoor and index material planetary processes. Thus, Turchi also gestures toward darker, submerged territories as he immediately goes on to quote critical cartographer Denis Wood, who locates the power of maps in their ability to reveal "a reality that exceeds our vision, our reach": only on the backdrop of "the invisible or the

648 Peter Turchi, *Maps of the Imagination: The Writer as Cartographer* (San Antonio: Trinity University Press, 2004), 91.

649 Forrest Gander, "Nymph Stick Insect: Observations on Poetry, Science and Creation," *The Literary Life*, (March-April, 2001), https://forrestgander.com/essays-reviews/poetry-science/poetry-science.html.

650 Forrest Gander, "Nymph Stick Insect."

unattainable" does it become possible "to link all elaborately constructed knowledge up with our living."[651] This is a much different take on mapping because it relinquishes ideas of objectivity in the name of, on the one hand, revealing immanent nature as a surreal potentiality, and on the other – of setting parameters that produce graticules conducive of re-assembled knowledge about the scale of life processes on Earth along with humanity's place within them. As Robert T. Tally Jr observes, the work of writers, narrative or not, shows in a nutshell how the world is produced in the text, "rendering it meaningful" by bringing it to life in a situated manner.[652] However, he points out, the stakes in this task are much higher insofar as this entails regarding life as submerged in evolutionary possibility. In such ventures, in fact, failure means for the reader or narrative to become "lost" in space.[653] Again, this dovetails with the climate change crisis, which becomes visible only through unknowing and disorientation that loom over the Anthropocene. Its attraction for thinking is more than a trend in the humanities because it basically testifies to a shortage of imaginative tools to navigate the dangerous waters in a world suddenly made less humanocentric. The sense of being lost is certainly part of the collateral damage that the intrusion of Gaia has caused but it is simultaneously an asset that opens a way out, or a line of flight from myopic representational regimes. As seen in the perspective of Malabou and Negarestani, such stultifying brain wounds can be interpreted as geotraumatic, or revealing the deep link between the brain and its long evolutionary history, which connects it with the ecosystem, geological strata, and ultimately the cosmic absolute. However, this also means that they connect subjectivity with deep history, mobilizing scalar thinking and ushering in a more ecological mode of self-perception, one that is uncanny insofar as it causes to recognize sublime planetary alterity within oneself.

This is strongly echoed by Gander, who attentively discusses the quandaries of literary creation in light of planetary entanglement. Adopting biocentric metaphors, he writes of "evolution" and "proliferation" of "poetries" that introduce difference and difficulty into an otherwise smooth experience of the global. This allows the poet to shift discussion from efficiency and accuracy to the generational powers of life-assemblages on Earth. "There is another world," Gander writes, quoting the French poet Paul Eluard, "but it is inside this one."[654] Such dark-ecological perspective embraces nature as surreal: existing contingently yet "all-animate" as Alexander von Humbolt noted in a turn of phrase that Gander finds to match the idea of coevolution between earthly processes and human

651 Peter Turchi, *Maps of the Imagination*, 91.
652 Robert T. Tally Jr, "The Space of the Novel," in *The Cambridge Companion to the Novel*, ed. Eric Bulson (Cambridge: Cambridge University Press, 2018), 161.
653 Robert T. Tally Jr, "The Space of the Novel," 161.
654 Forrest Gander, "Nymph Stick Insect."

creativity. According to the American poet, a parallel can be drawn here with the underground biomass, focusing attention on the fact that it "might be more than double the living mass at the surface of our planet."[655] Such expansion of the scope of life and art does not stop, we are reminded by the writer, at the level of species, but involves deeper planetary processes that connect the formation of the planet's core with the arrival of tool-making bipedal creatures. The eponymous insect that Gander examines "evolved from the moveable, articulated gill plates of ancient, aquatic insects escaping those fish [bottom feeders]."[656] In a gesture of winding back time as far as "three hundred million years ago," Gander replaces the content-based foreground of the poem for its deep-historical background. Through this lens, creativity and writing appear much more akin to evolution: not progressing in stages of isolated inventions but by being always busy with writing and experimenting.

Ecopoetics must be experimental if it wishes to probe possibilities through working with the "geological unconscious," which connects the lithic with the poetic, as Jason Groves put it.[657] Such a perspective, he argues, is necessary if we are to "think through the derangements of scale in a time of natural-historical emergency" or simply "make sense of the Anthropocene."[658] The power mobilized in this account is that of "connecting separate and diverse elements," as Gander holds in "Nymph Stick Insect." In another ecopoetic text of his, titled "Carboniferous and Ecopoetics," he ties the formation of coal with the crisis that its use as fossil fuel has engendered, defining ecopoetics as "a variable set of technical and conceptual strategies for writing during a time of ecological crisis."[659] Gander importantly ties this not only with poetic forms that push the boundary of their medium but also with the shift from an ego-logical and binary view of nature as passive to an eco-logical plurality of agents who influence human cognitive processes. He turns to Félix Guattari to reassert in this context that subjectivity is not self-sufficient but exists multiply, "a collective singularity"[660] that undermines widespread conceptualizations of nature and culture, where individualization has grown rampant. This carries important implications for seeing language and writing as being of this world and hence partaking in transforming it, albeit not only in instrumental, extractivist ways, but reflexively or bidirectionally. In the end, poetry does make something happen, as Gander

655 Forrest Gander, "Nymph Stick Insect."
656 Forrest Gander, "Nymph Stick Insect."
657 Jason Groves, *The Geological Unconscious. German Literature and the Mineral Imaginary* (New York: Fordham University Press, 2020), 7.
658 Jason Groves, *The Geological Unconscious*, 14.
659 Forrest Gander, "Carboniferous and Ecopoetics," in *Redstart: An Ecological Poetics*, eds. Forrest Gander and John Kinsella (Iowa City: University of Iowa Press, 2012), 11.
660 "Carboniferous and Ecopoetics," 12.

refutes W.H. Auden, although its effects are not revealed through an individual "I" – they are in fact collectively articulated: "What if structures of perception are not 'subjective' (that is, added by humans to raw data) or "objective" (provided by things themselves)," he asks, "but are articulated within a media of relation and interaction such that to speak is to surge up into a medium that is not projected, but is ongoing like an environment? Might we see ourselves then as participants in a noninstrumental language?"[661]

By posing these tentative formulations as questions, Gander orients readers to the future, gesturing towards possible forms of using language as a planetary medium coextensive with the environment. In the effort to think through the ongoing climate crisis, he extends the scope of perception, in reading and writing, from the Carboniferous to the Anthropocene, thus drawing a meridian that connects deep history, language and the current political impasse regarding ecological crises.

Congenially to Gander, American experimental poet and theorist Leslie Scalapino develops an eco-logical program for writing, suggesting that a poem can "place together" subjectivity and the outside as part of the same process.[662] She argues that in the act of reading the self is set in motion, drawn into a becoming at the verge of the present and the future, thus unfolding, or "altering" itself, as she puts it.[663] The structure of this encounter dovetails with Paul Celan's meridian-based logic, which creates the spatial relation between geography and mental life, "the two placed beside each other" and the text comprising an "altered space" where situatedness is negotiated both with regard to the local and the cosmic.[664] "Poetry," Scalapino writes, "can be structures that are relations and interactions between spheres in spatial apprehension."[665] This statement, which echoes Gander's questions regarding the categories we use to make the world visible, concerns the crucial aspect of ecopoetics, defining it as a writing or making that is capable of shaping the relationship between humanity and the environment. Echoing Celan, Scalapino concludes that in the act of reading poetry, one is grounded as "holding a place" by measuring the distance between one site and another.[666] She follows him and stresses that we "must enlarge," inviting the expansion of imagination along meridians crossing through vaster, more-than-human realities. In her view, active reading is a path of "sustained attention" that remains engaged in the practice of world-building, creatively envisioning the

661 "Carboniferous and Ecopoetics," 17.
662 Leslie Scalapino, "Eco-logic in Writing," in *)((ECO(LANG)(UAGE(READER))*, ed. Brenda Iijima (New York: Nightboat Books, 2010), 60.
663 Leslie Scalapino, "Eco-logic in Writing," 61.
664 Leslie Scalapino, "Eco-logic in Writing," 66.
665 Leslie Scalapino, "Eco-logic in Writing," 69.
666 Leslie Scalapino, "Eco-logic in Writing," 77.

parameters of one's situatedness, or staying with the trouble, as Haraway has it. Concluding on a somber note, Scalapino suggests that addressing the subject of extinction makes it necessary to foster an ecological imagination that would balance mass dying of species with a sensibility that embraces change and sees it as an opportunity. In the end, then, literature does make something happen insofar as it landscapes the future brain of the Anthropocene. The following sections examine instances of this in works by several contemporary poets.

Drift

The theme of the ship of fools emerges in updated form in Caroline Bergvall's 2014 conceptual poetry book *Drift*. As her point of departure she chose the journey of a ten-meter-long rubber boat from Libya to Italy, carrying seventy-two people from a nearby camp and following a well-known trail of migration, the vessel itself provided by the Libyan army.[667] Only nine survived the passage, after help was declined to the thirsty and exhausted group numerous times. Certainly, the fools in this tragedy, enabled by mishandling of military, political and ecological crises, are not the ones who embarked on the perilous journey but those who fail to see this tragedy for what it was. In dispassionate tone, Bergvall recounts with great detail, providing times and coordinates where possible, how the ship's transit was recorded in a network of technological and geographical coordinates, traced and surveyed but not really seen as a life-threatening situation suitable for immediate reaction. When the ship drifted back with its unconscious crew to the Libyan coast, survivors were provided with minimum medical help and incarcerated. The ship's dismal trajectory, however, does not testify in this case to the navigational ineptitude of those steering the boat. Their meagre resources along with the enforced character of the passage gave these people slim chances at survival. The larger point, Bergvall shows, consists in the failure to map the whole situation in ways that could render it visible: not just as an isolated tragic incident but as a product of toxic global processes – both military and ecological – which underlie such events. The nearly blind movement of the rubber boat becomes in this light a figure of humanity drifting on a perilous sea without sense of direction. The heterotopia of the ship, or "the greatest reserve for the imagination" as Foucault described it[668] raises questions regarding the course that humanity is taking globally in a changing world. Since "heterotopia is capable of juxtaposing in a single real place several spaces, several

667 Caroline Bergvall, *Drift* (New York: Nightboat Books, 2014), 71.
668 Michel Foucault, "Of Other Spaces," trans. Jay Miskowiec, *Diacritics* 16.1 (1986), 27.

sites that are in themselves incompatible"[669], the ship's long history of geography, navigation, and naval power can act as an intersectional point where several planes converge.[670] Crucially today, these three dimensions need to be seen as crisscrossing parts of larger processes that have global reach and constitute the framework of an extractive political contest for leadership. Effectually, this creates what could be called a necropolitical dispositif by drawing on Achille Mbembe and Michel Foucault, respectively: a planetary more-than-human life-regulating machine built around the logic of profit-making, which reduces human relationships to monetary terms, outsources death, and degrades the environment. Bauman's "wasted lives"[671] comprise the repressed by-products of prioritizing financial value. It is towards other logics of framing global processes that Bergvall gestures here, a different graticule of categories, one that would afford visibility to otherness and facilitate mappings that tap into what is possible.

Bergvall's "forensic architecture" account sits in the middle of the book in a section printed on black pages, which reverses the category of light as knowledge like a photo negative. It also includes a barely recognizable blow-up of the vessel's aerial photograph, along with a set of maps. The former is scattered in pixelated blow-up and barely recognizable, while the maps are wholly anonymous. Without title, scale and legend, the black pages on which small white blips demarcate the boat's route reverse the logic of what is visible and what remains hidden in a cartographical rendering. Importantly, Bergvall follows the ship's passage using other mappings: London underground route, a course from London to Geneva, and even the Zodiac in the sky. These various maps therefore appear to be nested and part of a larger ecology of cartographies. In *Drift*, the darkness surrounding the ship's dotted passage, as in other mappings used to contextualize it, gestures to the unknowing and unseeing that is entailed in reading them. This is achieved by using the page as a map where the boat would indeed appear when mediated through localization technology and coastal military optics. At the same time, by minimizing artistic means, Bergvall visually conjures other possible routes and constellations. This technique combines formal innovation, which foregrounds the materiality of the medium, with a speculative, reader-oriented opening to other, broader interpretations: ones capable of rescuing from this tragedy a vision of a more just and equitable world formed around care for refugees and a different vision of globality, one where they do not have to die en route.

669 Michel Foucault, "Of Other Spaces," 25.
670 Richard W. Unger, "Introduction: Maps and Mapping," in *Ships on Maps. Pictures of Power in Renaissance Europe* (Cham: Palgrave, 2010), 9.
671 Zygmunt Bauman, *Wasted Lives: Modernity and Its Outcasts* (Cambridge: Polity, 2004).

As Áine McMurtry put it, one of the goals in *Drift* consists in "giving a syntax to the cry."[672] She aligns this aim with the Deleuzian concept of deterritorialization as an artistic practice of disruptive transformation that manifests in *Drift* as cartographical defamiliarization. Deterritorialization is followed by reterritorialization: the formation of new representations, or reconfiguration of existing ones. Importantly, to connect this with Woszczek's concept of the primacy of potentiality, Deleuzian deterritorialization proceeds to "decontextualize sets of relations and render them virtual."[673] In the latter's account, the virtual is in fact more real because it forms a local system of conditions that are creative and unpredictable. As Levi Bryant elaborates, "the virtual is the concreteness of a situation and the differential relations that an entity entertains with its milieu in undergoing development."[674] Accordingly, the cartography suggested by Bergvall foregrounds the virtual by charting how certain events were possible and what futures can be saved from them. This may be the kind of grammar that McMurtry suggests by her elaboration on the concept of syntax, which in Bergvall's case goes beyond text itself.

Drift incorporates other media, notably at the beginning of the volume, which opens with sixteen drawings of lines. Significantly, they depict gradual (though irregular) deterioration of a lineature-like arrangement as it becomes scrawled over with chaotic lines, the last drawing presenting a tornado-swirl of ovals over a barely recognizable suggestion of parallelism. As a mute expression of the cry, the refusal to use words and the erasure of geometrical textual space also deterritorialize and dismantle the traditional aesthetic framework of elegiac grief, reconfiguring it as a poetic philosophy of being lost at sea.

To that aim, Bergvall mobilizes the history of seafaring, turning specifically to the Anglo-Saxon poem *Seafarer* and a Gnomic poem of Norwegian origin from the *Elder Poetic Edda*, along with a different history of disappearance: that of the thorn from the English alphabet.[675] Documenting its own making, the book also contains a "Log," a longer piece that reveals methodology and composition – the work's source code, as it were, which expands *Drift* by casting it as a process that extends from conceptual work to the live performance of the text along with audiovisual accompaniment of projection and percussion. By foregrounding even its own vagaries, *Drift* is indeed "a piece of nomadic testimony" that "calls up an ocean voyage full of risk through a shifting field of archaic words, multilingual neologisms and textual slippages that metonymically enact instances of

672 Áine McMurtry, "Sea Journeys to Fortress Europe: Lyric Deterritorializations in Texts by Caroline Bergvall and José F.A. Oliver," *Modern Language Review* 113.4 (2018), 44.

673 Áine McMurtry, "Sea Journeys to Fortress Europe," 11.

674 Levi R. Bryant, "Potentiality and Virtuality," *Larval Subjects*, 27 May 2007, https://larvalsubjects.wordpress.com/2007/05/27/potentiality-and-virtuality/.

675 Caroline Bergvall, *Drift*, 186.

human dislocation and re-connection."[676] The important driving force here appears to be translation by foreignization, which emphasizes the turmoil and dislocation of passage rather than idealized equivalence.

Kate Lewis Hood makes an insightful link between Bergvall's opacity as encountered in moments of what the poet describes as "non-transmission, local untranslatability" and opacity manifesting as fog, which she interprets as the work's very "conditions of possibility."[677] In the poem "Halfville 2" we read: "The f og was sodense that they l ost all s sense of dirrrtion and l ost thr course at sea […] a fog so th th th thik k overed us that we could scarecly see."[678] Reverse of focus reveals the background from which meaning can emerge: potentiality itself along with the horizon of its material depth. Thus, counter-intuitively, fog becomes a "sustaining element" that comes through whenever we face the unintelligible: meaning halts upon revealing the medium's operation in a "multimedia ecology" of interactions taking place across "languages, mediums and social and physical bodies."[679] From this perspective, Bergvall can be seen to engage in a cartography of potentiality, which does not aim to erase previous cartographic media but enlarge and resettle them in an environmental dimension rife with possibility. This would not mean to diminish the tragedy of what happened but to weave the kind of map over it so that it could be revealed within its complex context, seen from a multi-modal or multi-media ecological perspective as well as producing appropriate emotion, compassion and grief. To draw on the words of Joan Retallack quoted by Lewis Hood, speculative cartographies open gaps so as to "amplify the knowledge of/in our silence" as is necessary to "create new forms of intelligibility that are resonant with our values."[680] For this reason, kinds of poetic practice that probe the limits of representation can create opportunities for glimpsing planetary otherness and allowing it to take foothold in our world.

Echoing Walter Benjamin's famous formulation about the art of losing oneself as a prerequisite to making a discovery, Bergvall elaborates on the "loss of one's course at sea" (*hafvilla* in Old Norse) in the sequence "Halfville."[681] A dense fog descends on sailors who subsequently lose all sense of direction. As the poem progresses, letters begin to disappear, gradually swallowed up into the whiteness of the page, leaving mostly undecipherable strings submerging into silent yet potent blankness. Eventually, when the barely visible "b t" [boat] is enveloped in

676 Áine McMurtry, "Sea Journeys to Fortress Europe," 53.
677 Kate Lewis Hood, "Clouding Knowledge in the Anthropocene: Lisa Robertson's *The Weather* and Caroline Bergvall's *Drift*," *Green Letters* 22.2 (2018), 188–189.
678 Caroline Bergvall, *Drift*, 37.
679 Lewis Hood, "Clouding Knowledge in the Anthropocene," 189.
680 Lewis Hood, "Clouding Knowledge in the Anthropocene," 189.
681 Caroline Bergvall, *Drift*, 36–45.

fog, it literally sets off across the page and, as it turns out after flipping the page in the book, continues its passage for two remarkable, perfectly symmetrical pages, charting an unknown course. The sequences of t's brings the long stutter to an end midway through the next page, where "t" becomes "to" and thus invites a verb, opening the phrase to an intelligible yet paradoxical message: "t t t t t t / t go / t go off / t go off course / t go off course halfville."[682] These fugue-like "states of halfvilla," Lewis Hood argues, are related to "an inability to find adequate wording in order to navigate or pass through physical and linguistic disorientation."[683] The stuttering calls attention to the materiality of language as voice, print or image, and to the limitations of the medium. Awareness of material mediation is crucial here because climate change, among other crises, necessitates "interrogating humans' technological adaptation to (and of) their environments."[684] In other words, what needs rethinking is how the environment is mediated and, in the process, shaped and developed in an epoch where humanity has become a factor of geological scale yet cannot coordinate its agency in planetary terms.

Bergvall makes it explicit that sense is material, ultimately conflating matter and meaning. This comes across literally in her sequence of thorns, where the same obsolete letter is repeated again and again, descending into blotched amalgamation and eventually blackness, the latter suggested to be the opposite of nothingness: a space so densely covered with entangled elements so as to render it increasingly illegible, building an "aural fog and visual noise (like the repeated 't's of Halfville')" that "manifest their materiality as sites of 'local untranslatibility'."[685] Linguistic and literary excavations performed by Bergvall in *Drift* render some of it decipherable but never promise anything but loss at the sea of language. She reveals unfathomable, perilous depths beneath surfaces of seemingly stable meanings – dangers that face the human boat in a world that has once again become menacing and mysterious, not far from early-medieval seafaring, just on a different scale. Weaving together stories separated by much time and space, Bergvall develops a photo-negative cartography that charts the realm of potentiality – foregrounding the fog from which meanings and events emerge – and the conditions of their arrival as mediated through language, art, politics, law and geolocation technologies, among others instruments of visibility. She brings together a variety of media to the worktable in order to produce a complex mapping that situates the tragedy of the seventy-two people who manned the boat, placing it within a multi-dimensional context of stories about loss, disap-

682 Caroline Bergvall, *Drift*, 42.
683 Lewis Hood, "Clouding Knowledge in the Anthropocene," 191.
684 Lewis Hood, "Clouding Knowledge in the Anthropocene," 191.
685 Lewis Hood, "Clouding Knowledge in the Anthropocene," 193.

pearance and disorientation. These nested traumas provide clues about the kinds of media ecologies that have engendered blindness to tragedy, enabling people to unsee it despite advanced tracking afforded by surveillance technologies. Silences and gaps, in turn, reverse the image to show its foggy negative, indicating ways to distribute attention in order to bring forth an image of the world that fosters navigational skills required to chart viable courses through the fog of the Anthropocene. It is a study of listening to silences; like gaps, they mark important coordinates for an ethics of planetary care.

Bergvall's art-and-poetry volume *Drift* also works as a script for live performance, featuring reading, percussion, and a screen projection with clusters of words drifting and forming archipelagic shapes, then moving on to other parts of the map. These migrations of words speak not only to the changing character of language but also to the inherently nomadic and hence cartographic thrust of human expression. As much as drifting can have negative connotations, denoting for example aimlessness or inertia, in this context it emerges as the norm and condition of encountering difference and engaging in any exchanges. The kind of mapping that *Drift* offers in this respect is the revelation of the deeper layers of potentiality, with the aim to better understand the tragic events in the Mediterranean, and to discern ways of tackling a crisis that branches out into myriad dimensions, including more-than-human ecosystems and media. In this light, the cartography encountered in *Drift*, when considered as a multimedia atlas of journey and loss, is not representational but speculative. It does not aim to track and grasp objects, placing them within a specific mimetic system of coordinates, but to understand these trajectories as stemming from a range of possibilities, which in turn helps to envision lines of flight that could grant safe passage into the future over the perilous sea of the Anthropocene. The important point about such cartographies is that they refuse to replicate the necropolitical model in which it becomes possible for anyone to be marked as "left-to-die."[686] As Lucinda Newns observes with regard to Bergvall's book, the sea has become a Schmittian state of exception, where rules are suspended, facilitating dehumanization of migrants and forming a death-ecology in which lives can be rendered obsolete. "To speak of a necropolitical ecology," she writes, "is to consider how more-than-human nature is brought into the services of such border maintenance."[687] In this optic, the waters themselves emerge as "a central character in a story of human migration" because only a sea-perspective can open a view on the tangle of issues that Newns identifies in *Drift:* climate crisis,

686 Caroline Bergvall, *Drift*, 185.

687 Lucinda Newns, "Necropolitical Ecologies: Creative Articulations of Nature's Death-Work in the Borderzone," *Interventions. International Journal of Postcolonial Studies* 26.1 (2023), 6.

trans-corporeal plastics and other kinds of pollution, accelerating extinction, and other global forces that crisscross locally. Opening up these vistas, Bergvall "traces a line between the capitalist exploitation of the non-human world and the migrant bodies on the edge of Europe."[688] This follows Mbembe's line of thinking, which aims to consider the exploitation of human bodies and nature as parts of a larger process in which the colonial *nomos* has come to extract value from otherness and reduce it to a resource.[689] In contrast, Bergvall takes the side of what is other in this framework – human and non-human forms of alterity immobilized by Apollo's gaze. In effect, a different set of coordinates emerges, enabling location of human loss in a wider, less anthropocentric perspective. Bergvall takes cue from the idea of forensic architecture, which can be also understood – as Adalaide Morris suggests – to comprise "forensic listening," or an "oceanography" of more-than-human assembly of voices.[690] They are made audible by the poet's assembly of meticulous research as well as open discussion of her methodology and creative process in the quasi-documentary self-commentary "Log," which occupies a significant portion of the book.[691] Morris underscores the meaning of *forensis* as related to the forum, or public dimension, and emphasizes the poetic scope and essayistic (or experimental) form of *Drift* as a multi-modal long poem that aims to "test generally accepted forms of cognition."[692] What it affords is "discognition" – a form of cognition that is disrupted, or lost, yet at the same time subtended to bring out the extremities of its powers by glimpsing what it means to cognize differently, as other.[693] Further, when realized as a live performance, *Drift* combines the aural and the visual to create space for sounding the potential. Such poetic sonar-like work[694] does not aim to capture and tame but to outline "spaces which evoke that which has yet to be written or read and is nonetheless urgent and present."[695] Perhaps this comes to full realization when *Drift* is performed. As Zoë Skoulding suggests, its visual dimension draws attention to "the role of visual technologies in our navigation of contemporary political space" because the "programming is a virtual exploration

688 Lucinda Newns, "Necropolitical Ecologies," 14.

689 Achille Mbembe, *Necropolitics*, trans. Steven Corcoran (Durham: Duke University Press, 2019), 68.

690 Adalaide Morris, "Forensic Listening: NourbeSe Philip's *Zong!*, Caroline Bergvall's *Drift*, and the Contemporary Long Poem," *Dibur Literary Journal* 4 (Spring 2017), 80.

691 Caroline Bergvall, *Drift*, 125–181.

692 Adalaide Morris, "Forensic Listening," 81–82.

693 Steven Shaviro, *Discogniton* (London: Repeater Books, 2016), eBook, 11.

694 Catherine Humble, "Exposed to the Other. Responding to the Refugee in Caroline Bergvall's *Drift*," in *Wild Analysis. From the Couch to Cultural and Political Life*, eds. Shaul Bar-Haim, Elizabeth Sarah Coles, and Helen Tyson (London: Routledge, 2022), 109 and 112–113.

695 Susan Rudy, "A Queer Response to Caroline Bergvall's Hyphenated Practice: Towards an Interdependent Model of Reading," in *Reading Experimental Writing*, ed. Georgina Colby (Edinburgh: Edinburgh University Press, 2019), 180.

of this space, rather than a representation of it."[696] In other words, it brings forth the dense historical nexus of human and non-human exchanges that have shaped trajectories of migration as well as cultural and linguistic evolution.

To echo Forrest Gander's formulation, this kind of poetry is primarily written not to dominate the stage with individualistic monologue, but instead to listen and thus make room within its medium for a discognitive attentiveness to what Niall Martin called the "potential of indeterminacy to generate meaning"[697], which offers a different kind of geo-localization than the extractivist gridding of passively conceived geometrical space. Poetry's fabulation-based ability to bring together different times and spaces as well as work across text and sound is deployed in *Drift* to create a hybrid atlas that challenges readers to rewrite, or retranslate the parameters of their cognition and ways of envisioning the world. To put it differently, as an aesthetic experience, *Drift* moves from conventional lyricism and pushes the poetic form toward a cartographical performance, equally produced by the source material, its poetic elaboration, and active listening or reading. Such an artistic setup mobilizes the audience's imagination, each of those unique meaning-making instances partaking in the composition of a more-than-human world.

Curb

A similar framework to that of *Drift* is used in the 2021 poetry book *Curb* by the Tamil-American conceptual poet Divya Victor. Likewise a work spanning a variety of media, *Curb* stands as monument to four killings of Asian citizens in the US in the wake of anti-Asian hatred in Trump-era America. Just like *Drift*, *Curb* considers these tragedies from the lens of multiple languages, specifically those of bureaucracy and its underlying system of values as well as legal, spatial and cultural practices, pitting them against expressions of "settlement" as one of the opening poem calls it, or precarious home-making.[698] Another instance of forensic listening after *Drift*, *Curb* is premised, according to Małgorzata Myk, on a "poetics of extreme witnessing," or "listening for the archive's soundscape.[699] By recontextualizing and rewriting legal forms and other elements from discourses of control over migration and refugee flows, Victor develops a minoritarian cartography drafted "from the margins" or "edge" – curbs that shape not

696 Zoë Skoulding, *Poetry & Listening. The Noise of Lyric* (Liverpool: Liverpool University Press, 2020), 73.
697 Niall Martin after: Zoë Skoulding, *Poetry & Listening*, 47.
698 Divya Victor, *Curb* (New York: Nightboat Books, 2020), 3.
699 Małgorzata Myk, "Duration of the Archive: Soundscapes of Extreme Witnessing in Divya Victor's *Curb*," *Text Matters* 13 (2023), 37.

only physical but also social space, guiding attention to the conceptual borders inscribed on bodies, or the demarcations that situate and frame them within specific sets of coordinates. Through poetic intervention, categories of capture by state apparatus are repurposed to reveal "the edges of domestic and public spaces as battlefields," as Victor argues, where visibility is brutally negotiated.[700] The larger curbs – ones of the imagination – concern the limitations of representations afforded by conventional forms of modern global situatedness that produce wasted lives. A decolonial perspective on representational curbs reveals a rigidified necropolitical framework, which is exposed by Victor through the act of "refiguring the archive" in order to display "the inhuman scale of interpellating, marking, misrecognizing, misidentifying, and murdering entire groups of citizens."[701] The Polish critic takes cue in this respect from Michael Leong to identify the aim of Victor's documental poetry as "reconstituting the social"[702] – an instance of both Malabou's plastic reading and Latourian compositionism, where the text's afterlife after deconstruction can be adapted as a point of departure for the formulation of different sociality based on a more-than-human constitution. Such plastic cartography of discursive forms that situate individuals in larger frameworks combines, as Myk shows, two important dimensions: on the one hand, the visual regime of visibility (location), and on the other – sonic agency, or expression (locution)[703], bringing them together to suggest their plastic potential. As Victor shows, certain words or discursive practices related to migration can act as curbs, capturing people by "misrecognizing" them, as was literally the case in one of the murders. In turn, the physical curbs that demarcate the boundaries of public space, or the spatial regime of modernity, are premised on conceptual graticules used for framing the environment tout court. In effect, similarly to Kei Miller, Divya Victor is using the "curb" as her poetic meter, finding for herself a measure that integrates location and locution, producing a speculative cartography around the "milestones" of embodied experience in marking and being marked. This measure is organized around the poetic line as a sonar-like device used to perform acts of echolocation, which mobilize not just emission of sound but primarily listening, the kind that combines local and global awareness, to invoke categories of listening developed by Pauline Oliveros. In this framework, the geo-location that pins down the cases described Victor by providing GPS coordinates in the corner of some pages becomes just one aspect of the complex mapping that involves navigating an ocean of human and non-

700 Małgorzata Myk, "Duration of the Archive," 37.
701 Małgorzata Myk, "Duration of the Archive," 45.
702 Małgorzata Myk, "Duration of the Archive," 45.
703 Małgorzata Myk, "Duration of the Archive," 43.

human voices, with listening revealing a more complex environment than the surveying, oculocentric gaze of colonial cartography.

As Victor argues in an interview with Andy Fitch, her poetics of situatedness can be defined in terms of echolocation, which is a recurring theme that emerges in Bergvall, Victor, and is further discussed in the context of works by Evelyn O'Reilly and J.R. Carpenter:

> I write to emit sound, and the environment of the poem returns this sound to my ear, triangulating my location within an imagined community I belong to ("kith"). This compositional act becomes a co-constituted environment, where the poetic line is the azimuth – a way of imagining a direction towards a place where kith lives, rather than a geographic residence in itself. There is no home in these poems. There are no timeless representations. Like all animals that echolocate, writers who compose from or into diaspora are always measuring distance and displacement from a roving origin. I am the sonic register of delayed messages that are returning to a home in my ears, from where I write.[704]

This commentary offers crucial insight into Victor's poetics of echolocation because it foregrounds the material dimension of poetry as a medium, and acknowledges human situatedness in a larger, co-constituted environment, with all the complications this entails in the era of global interconnection. Composition takes places in an environment and participates in finding direction: not just from one place to another but in the sense of developing a kith ethics of cohabitation informed by a vision of the world that would be no longer dehumanizing but embracing the other and more-than-human as its kin "in lines of inventive connection."[705] This ecopoetic formulation sets up composition as a kind of home-making that is not about insulation but rather opening to more-than-human voices. In this effort, the poetic line can work as a meridian – a line of flight that goes around the world and returns, forming a parameter for envisioning the global. The delay of message testifies to the material mediation and temporality of echolocation, where meanings never return back quite the same. In this model, it is not sameness but difference – like cartographical gaps and tilts – that reveals the parameters of the world by tapping into the larger field of potentiality and suggesting a different notion of the global. Echoing Celan's formulation of the poetic line as meridian, Victor expresses the urge to free herself from modes of being captured in an oppressive system of coordinates by introducing her own ways of measuring distance and developing identity.

704 Andy Fitch, "A Home in My Ears: Talking to Divya Victor," *Los Angeles Review of Books Blog*, 15 February 2019, https://blog.lareviewofbooks.org/interviews/home-ears-talking-divya-victor/.

705 Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016), 1.

In a review for *Poetry Foundation*, Jay Gao likened *Curb* to "an epic and sprawling map, insistently exploring how the diasporic body unfolds over various pressure sites within cartographies of injury and empire."[706] In this sense, the book works like a decolonial counter-map that pursues not strictly representational goal but outlines ways in which the spatial and discursive ramifications of global modernity implicate themselves through power relations in the embodied experience of the diaspora, evidencing the movement, drift or displacement entailed by global capitalism. In a conversation with writer Snigdha Koirala, Victor recounts that the experience of cartographical folding (as pressure) and unfolding (as flight) is actually replicated in the art book designed by Aaron Cohick, which was in fact *Curb's* initial published form in 2019.[707] It opens up in accordion-style, foldable in different ways and thus radically de-centered, with a "rhizomatic spine that could expand wide enough to house the South Asian diaspora and yet shrink enough to acknowledge the fetal-shaped and folded interior that subjects of diaspora create when they are reading themselves."[708] Gesturing towards topological spaces of continuity, or something like Möbius strip, Victor's art-object *Curb* makes paradoxical connections "as readers travel across an unstable horizon of the book's horizontal axis."[709] In this way, the book facilitates experimental, topological construction and re-construction of space in ways that would seem impossible, opening the sphere of possibility by envisioning different forms of connection or kith- and kin- making.[710] Shifting away from a stable and rooted sense of identity, Victor embraces a subjectivity that remains "confident in our splintering, our many partitions, our desire to roam and touch each other across differences in tongues and faiths."[711] This perspective embraces dis-location and dis-locution as an opportunity for drafting maps that would not replicate a smoothed-over vision of reality, but stumble and stutter in search of vantage points affording larger peripheral views of the world, as well as revealing the edges of visibility and legibility.

Reinforcing the dislocation of poetic content and weaving it into a larger form of knowledge, an atlas of *Curb* was made by the artist in online form, assembling a variety of sources: passages from the book, critical commentary as well as visual and sound art, all of these elements interconnected through hyperlinks, opening

706 Jay Gao, "*Curb* by Divya Victor," *Poetry Foundation*, 2021, https://www.poetryfoundation.org/harriet-books/reviews/155751/curb.

707 See: https://mcbaprize.org/aaron-cohick-divya-victor-curb/.

708 "A Conversation With Divya Victor, Author of *Curb*, and Writer Snigdha Koirala," *Nighboat Books*, 20 August 2021, https://nightboat.org/a-conversation-with-divya-victor-and-snigdha-koirala/.

709 "A Conversation With Divya Victor, Author of *Curb*, and Writer Snigdha Koirala."

710 Donna Haraway, *Staying with the Trouble*," 89.

711 "A Conversation With Divya Victor, Author of *Curb*, and Writer Snigdha Koirala."

up a variety of passages through the website's material.[712] Amaranth Ravva's six contributions to the online map of *Curb* are particularly significant in light of the present discussion because of the employed technique, namely that of superimposing satellite image, cartographical grid, and embedded video "windows" that stream images from different places.[713] Ravva uses the square form of the grid as a window through which we can see a looped video image of water flowing in a different location than the one showed on the orbital photograph. By connecting huge distances and using Earth as medium, Ravva's cartographical collages offer glimpses of environment as agential matter hidden under the static grid of strict geometrical positioning accompanied by photographic appropriation. In the artist's statement, he ruminates on how "we attempt to place tragedy by location, by coordinates" although it remains uncertain and problematic "what lies beyond the coordinates we choose."[714] This imaginative gesture undermines the categories of visibility rendered by Google Earth or other Earth-imaging platforms in the post-digital era. Disruption of flat and immobile visions of reality by opening gaps can be seen as a means of piercing through global representations that mask just as much as they reveal. In this context, Myk argues that such web-based works oppose repetition automatism through disruption or by placing "curbs" in its path to reveal the limits of certain modes of imaging: the physical curbs that shape the flow of material processes.[715] *Curb*, as an experimental poem, archive and atlas, aims to jam, disempower or realign the curbs that direct the flow of people moving across the globe in ways that produce suffering and death. Victor outlines the cartographical, decolonial framework in a longer piece at the center of the book, titled "Milestones: A Theory of Marking / Being Marked."[716] It contains a longer poem and a sequence of five shorter "Milestones" built around Uber journeys, even including dialogues with drivers and specific routes provided on the margin as a spatiotemporal sequencing of the poem. The regularity and predictability of these rides is suddenly opened up to cosmic dimensions in the "Last Milestone (We Look Out & Up At The Sky, Away From The Road)."[717] Instead of the usual "your uber has arrived" that opens other poems, this one begins with the line "your destination has arrived," reversing causal logic and creating a Copernican-like effect of the world suddenly snapped from under one's feet, forming a weird loop and suggesting how consequences of our actions can catch up on us, even though they may have to cross the whole world. This sudden dark-ecological elation causes "privacies" to "barely hold,"

712 *Map of* Curb(ed), https://divyavictorcurb.org/Map.
713 "Amaranth Ravva," in *Map of* Curb(ed), https://divyavictorcurb.org/Amarnath-Ravva.
714 "Amaranth Ravva."
715 Małgorzata Myk, "Duration of the Archive," 53.
716 Divya Victor, *Curb*, 60–75.
717 Divya Victor, *Curb*, 75.

and foregrounds "the darkness / of this movement between us": the virtual, or potential domain from which relationships can emerge carried by technology or metaphor. Further, this moment is "chaste / touching / borne by a chassis / of steel." Bodily presence while sharing a vehicle, or "sharing a journey" in the larger sense of metaphorical transport and the ship-of-anthropos, suddenly reveals possibilities of connection that look "away from the road" of everyday habit and repetition when it comes to conceiving space at global scale.

The longer poem that precedes "Milestones" begins with a detailed account of bodily positions aligned in specific geographical directions. Rooting movement and orientation in the body, Victor writes that "[t]he wedging body creates a space, insisting on mattering."[718] With emphasis on both meaning and materiality, "mattering" perfectly captures the bodily origin of meaning- and map-making. To capture the dimension of becoming, or traversing space, Victor underlines transition, or "metaphor" as a real, material, bodily inscription of space, "a loud / & insistent mark of movement, change" rather than a marker "you are here" slapped on a frozen representation of space.[719] Essentially, milestones offer a kind of measure that carries forward and marks the body in its temporal unfolding, not only "to measure the distance" but also to celebrate "fleshy / anniversaries of days on which I have not died."[720] Milestones are living measures of refugee, diasporic and migrant identity, a rhythm evoked also by Kei Miller: one that is poietic rather than geometric, material rather than disembodied. The abstracted view of colonial cartography, expounded and criticized by Miller, obviously fails to address the key question posed by Victor: "How do we measure the tension & displacement of a body in memories of having traversed, of having been moved, or having been so utterly moveable? What is the force that can lift a child into the air and throw her across the world?"[721] Speaking from her own experience of being born to a Tamil family and brought up in India and Singapore, Victor draws attention here both to the relational aspect of human life in general as well as the painful encounters with those "curbs" that enforce certain kinds of movement and expression (location and locution), showing this on the example of violence suffered by Asian Americans. With attention to these curbs, the poet also traces the parameters of racism and exclusion in discursive forms and lived space. In an attempt to mobilize the poetic line as a means of bridging continents, languages and traditions, the author shows the oppressive conceptual borders that separate people yet seeks to kindle solidarity and community across these divides, "to make a map for a country made of vein &

718 Divya Victor, *Curb*, 61.
719 Divya Victor, *Curb*, 62.
720 Divya Victor, *Curb*, 66.
721 Divya Victor, *Curb*, 64.

sinew […] a map for a country of two."[722] In light of Victor's decolonial cartography of Asian-American diasporic experience, these "two" can be read not only as two ethnicities (dominant and minoritarian) but also more generally as myself and the other, a subject position marked by dislocation and decentering yet capable of prioritizing care over dominance, collectivity over division, in a shared world that sustains myriad bodies in perpetual movement. As the Indo-Guyanese poet Natasha Ramoutar shows in her cartographically-themed collection *Bittersweet* (2020), poetry is an essential vehicle for tracing complex mappings of post-colonial subjectivity, assembled "from the remnants of melted sugar cubes, […] from a sweetness that mixes with cardamom hanging in the air […] from a line of bittersweet women."[723] Her notion of the "bittersweet" is carefully woven from colonial history and diasporic life as well as embodied experience and inherited trauma, combining the sweetness of poetic celebration with the traumatic bitterness that marks a long and troubled history of dislocation. A decolonial speculative cartography is thus precisely about "trying to trace my body through maps / that spanned the world" as well as "drawing maps in the margins / of a place called No Homeland."[724] Echoing Negarestani's theory of nested traumas, Ramoutar shows that poetry can be a way of tracing a "buried lineage, / a sunken ship / from an unfamiliar home" in the effort to "unravel a history of trauma, / that which is woven within you" or "weave long-scorched ends in with the new."[725] Finally, such cartographies are assembled out of the double impulse of "wanting to hold the world / and wanting the world to hold me."[726]

Transmission

Curbs are shown by Victor to be quite literally forms used to shape not only material street limits in the urban context but also markers on pathways of becoming in material territories as sites of struggle for dominance. The subduing mode of geometrizing space renders it visible according to parameters such as borders, international agreements or military potential. In a world designed on this basis, little room is left for the porousness of human and non-human life as rigid frontiers are established, bringing violence and anxiety because they curb the cartographical and hence social imagination. The world depicted in imperial cartography emerges in this context as one premised on purification, or segre-

722 Divya Victor, *Curb*, 41.
723 Natasha Romoutar, *Bittersweet* (Toronto: Mawenzi House, 2020), 7.
724 Natasha Romoutar, *Bittersweet*, 17.
725 Natasha Romoutar, *Bittersweet*, 79.
726 Natasha Romoutar, *Bittersweet*, 60.

gation of reality into neatly parceled dualisms whose cartographical grid obfuscates the deep entanglement of hybrid objects proliferating beyond the scope of military or capitalist eye. The painstaking work of speculative cartography consists in undoing these knots, or exploring the gaps that hide extensive hybrid webs, instead of turning to extractivist categories of objectification and exploitation. In effect, as Latour suggests, it becomes possible to glean longer chains of biotic interdependency, necessitating a revision of humanocentric notions about agency and planetary entanglement. Anthropocentrically self-aware[727] and speculative, art brings these revolutionary findings to the discussion table. This urge originates in the significant question about the meaning of creativity in the age of the internet and climate change. One poignant result of formal experiments in poetry that tries to tie together these poetical, ecological and ethical concerns is the work of Canadian multi-media artist J.R. Carpenter, who offers vital insight into how these areas permeate and find expression through creative processes that account for more-than-human factors and actants. Her output is saturated with cartographical imagery and concerns; it develops new categories of mapping by showing reality through a series of media, including locative media, art as well as poetry books, digital works, and performance.

One work that combines the above aspects in compact form is "TRANS. MISSION (A.DIALOGUE)," which Carpenter described as "a computer-generated narrative spanning generations of transatlantic migrations, propagating across long-distance communications networks."[728] From a poietic angle, the fundamental question posed by Carpenter is whether "digital networks serve as narrative structures for stories of place and displacement resonating between sites, beyond nations, confusing and confounding boundaries between physical and digital, code and narrative, past and future, home and away."[729] Such self-aware poetics brings forth the oceanic space in-between, which encompasses human migration, trade routes, traveling information, physical cables and hubs, as well as servers and their power sources. This ghostly space can be tapped into by disrupting, de-tuning media, or their poetic manipulation that facilitates the discognition necessary to acknowledge earth-nested media in a line of enquiry defined by Jussi Parikka as geology of media. In Carpenter's "mediumistic"

727 Lynn Keller, *Recomposing Ecopoetics. North American Poetry of the Self-Conscious Anthropocene* (Charlottesville: University Of Virginia Press, 2017), eBook, 18.

728 J. R. Carpenter, "TRANS.MISSION [A.DIALOGUE]" (2011), *Lucky Soap*, https://luckysoap.com/generations/transmission.html.

729 J. R. Carpenter, "TRANS.MISSION [A.DIALOGUE]: Locating Narrative Resonance in Transatlantic Communications Networks," paper presented at the "Network Archaeology" conference at Miami University in Oxford, Ohio, USA, 19–21 April 2011, https://luckysoap.com/pdf/JRCarp_TRANSNetArch.pdf.

spectacle based on the ancient formula of strophe-antistrophe-chorus, a range of media reveal their agency and paradigms.

The opening exchange of greeting "Begin Transmission" and the response "Why" or "How" are performed not just by the reader but also by the browser, local CPU, network connections, servers and hubs: all the traffic instigated by JavaScript files that orchestrate a dialogue across the oceans. This feels uncanny because such mode of "listening to the void," as Carpenter explains in her methodological paper, "has returned many an uncanny result."[730] As she lifts the veil, the audience is confronted with a hybrid tangle that literally shifts and readjusts in front of our eyes while the script reshuffles and updates the lines in the dialogue displayed onscreen. The uncanny sense of not being the sole participant in this exchange seems appropriate in the face of someone or something else reading and writing at the same time. The hermeneutical decentering caused by the shifting text hinders the possibility of human epistemological governance. The rhythm of the fluid exchange does not match anthropic cognitive capacities in a way that resonates with today's flooding of information – a development that has become increasingly difficult to navigate. From another angle, much like Joyce's *Finnegans Wake*, "TRANS.MISSION" is, first, circular, the last line being "Please try again," and second, precludes any mode of interpretation seeking to establish meaning exhaustively over and above the material grounding of language as well as communication and mediation.

In her seance, Carpenter conjures an entire chorus of voices that contribute to the fluid, never-ending dialogue of media speaking across global networks. Consequently, what emerges from the work is that just like every exchange, creativity is conditioned by the present and historical context of media and material entanglement. From this perspective, the background of potentiality is revealed as a more-than-human "ocean of static" that includes discursive and locative practices and exchanges. It is an ocean teeming with agency. Carpenter's hauntological media archaeology ultimately calls into question the situatedness premised on bordering and purification, instead embracing a more-than-human complicity in sense-making through engagement with an entire range of media as well as ways in which they have historically shaped imagination. However, this also entails loss of mastery and acceptance of "absurdity" and "weirdness" as "default modes of long-distance communication, migration, displacement and difference."[731] By "externalizing" what she calls "a poetics of technology," Carpenter built a "sentence machine" that does not have to be anthropomorphically sentient to create meaning. In consequence, long networks of actants are brought forth, with their own agency and distortion mechanisms as the actual distributed

730 J. R. Carpenter, "Locating Narrative Resonance."
731 J. R. Carpenter, "Locating Narrative Resonance."

brain at work. This is acutely exemplified by the printed version of the work, included in the book *An Ocean of Static*, where instead of a particular instance of dialogue, the author provides the JavaScript code itself, revealing the underlying script behind the work, or its mesh of potentiality. In this way, her inclusion of computer code in a book of poetry elevates this more-than-human language to the rank of an expressive mode in communication. In a weird, discognitive reversal, the reader has to step into the shoes of the compiling machine which interprets the code, translating it into the binary language of computer performance, just like humans translate meaning into an operational asset – something to be addressable and communicable. This defamiliarization has a powerful effect that consists in holding within one's mind a set of variables – or potential states – out of which meaning can arise, causing the user to confront their own modes of processing meaning, both potential and actual. Such oscillation between actual and virtual realms also reveals meaning-making as rooted in the medium of the brain as a material basis for thinking. Its intelligence, however, is only one possible mode of sensing and acting among many other forms of mineral and biotic intelligence, which do not necessarily correspond to anthropomorphic categories of sentience.[732] Discovering the distribution of agency and intelligence, including map-making and creativity, has enabled enquiry into subjectivity from the angle of cartographical concerns but following the tentacled media rather than geometrical longitude. This deterritorializing thought traces different, weird meridians across a more-than-human world where a variety of media form geologically-deep networks that condition life and meaning, tying the two together as has been the leading hypothesis in biosemiotics. "TRANS.MISSION" delivers a dialogue that does not allow any gaps to be closed, constantly reopening them elsewhere. Moreover, the modern-day journey of information becomes the subject itself, a mission into the unknown, where passage occurs across agency-enabling media: deep into a more-than-human, uncanny world of deep-sea fiberoptic connections and signals exchanged over networks of servers talking to each other, busily negotiating protocols necessary to carry the message across. The sense of dislocation and discognition this entails is at the same time an opportunity for relocation or reconfiguration along different, "weirder" lines that organize and sustain forms of cartographical imagination that refuse to replicate dominant visions of globality.

Given that "TRANSMISSION" allows to adjust the speed of reading in the browser, the asynchronous movement of text across, beyond, and through a continuum of forms provides an inkling of the vaster ocean of static that lurks behind any instance of communication. Indeed, information does not arrive in neat little packages that pop out of nowhere, delivered right to the footsteps of

732 Steven Shaviro, *Discognition*, 10–11.

our brains.[733] It is rather the sum of refractions by a series of nested media. In fact, the text displayed onscreen is a multiple-stage translation performed among servers, JavaScript, and the browser, which finally renders the source code legible on a computer. Ultimately then, as Barbara Bridger argues, "TRANSMISSION" is primarily characterized by "interrogation of its own modes of operation: an approach that is less concerned with deciphering the meaning of a piece of work, and more interested in the structures that allow this meaning to be transmitted."[734] The cartographical dimension of the work can be identified in the way it measures the distance between possibilities and actualities, imagining the world on a graticule comprised by many lines of active becoming rather than predetermined, inert structures.

As Carpenter described it, the computer code used in the piece (itself borrowed), is "[t]echnically, less a craft than a crude life raft, […] a transmutation, a wilful mutilation, a hack."[735] Drawing on McKenzie Wark's *Hacker Manifesto*, Carpenter foregrounds questions like "How does it work?" and "How can I change or use it?", taking interest in how the long chains of media can be repurposed to produce the "odd difference in the production of information," as Wark put it.[736] This incessant refraction is finally underlined by the transiency involved in reading: the reader can never quite reach the end of the transmission since mid-way through a new version is invariably generated.

Carpenter's poetics also rhymes with Bryant's onto-cartography, which aims to "map fields of coupled machines functioning as media for one another and how these fields preside over particular local manifestations."[737] Her own "mechanical construction" is a machine that works by instantiating communication in a situation where more-than-human agency is foregrounded and seen as participating in the semiotic process. The decentering of human hermeneutical powers and ideas about creativity is described by Bryant as the realization that "we can only discover the being of a machine, its powers, through acting upon it and varying its relations to other machines to discern what local manifestations and becomings arise as a consequence."[738] In the discussed work, exchange of information is not just a local manifestation but the product of myriad machinic assemblages; envisioning this traces a more-than-human line, or speculative

733 See: Ursula K. Le Guin, "Telling is Listening," in *The Wave in the Mind: Talks and Essays on the Writer, the Reader, and the Imagination* (Boston: Shambhala, 2004), eBook, 351–357.
734 Barbara Bridger and J.R. Carpenter, "Call and Response: Towards a Digital Dramaturgy," 2013, https://luckysoap.com/pdf/CallAndResponse_BridgerCarpenter.pdf.
735 J. R. Carpenter, "Locating Narrative Resonance."
736 J. R. Carpenter, "Locating Narrative Resonance."
737 Levi R. Bryant, *Onto-Cartography*, 45.
738 Levi R. Bryant, *Onto-Cartography*, 46.

meridian that captures something important about the material and biotic entanglement of human communication by connecting many strata.

For the last reason it is also clear that the work can be seen as a vertical map: one that combines multiple strata, in the sense developed by Benjamin Bratton.[739] His concept of the Stack is the product of geological-scale theory of design, which renders the Stack as still in the making: a future-oriented project that unites theory and practice, map and territory. Carpenter's work showcases all levels of the Stack: that of the "user" because it challenges the reader's information-processing competences and puts them on a par with other users, human and non-human; and that of the "interface" because the browser becomes the facilitator of meaning, turning the computer window into a stage where the dialogue can be interpreted in human categories, yet also making it into a boat floating on waves of information, a tiny vessel of humanity on the ocean of the Anthropocene, or a digital-era ship of fools on a perilous sea. Further, by depending on long-distance circuits of information for the performance of its script, Carpenter's digital piece brings to attention processes of "addressing" by foregrounding digital protocols that mediate the basic exchange of call and response. The "city," "cloud" and "earth" strata, finally, are brought out in how the artist made the poem, or digital work, into a place where seemingly disembodied digital exchanges can be actually seen, just like other information circuits, as materially rooted in specific parameters of terraformation and geology.

As a piece performed live, the work can be staged using three voices: call, response and interference. This remediates the book as a script for performance that involves voice and its emission, adding to the meridian-flavored theme of a signal returning to the source yet resonating with its entire voyage traced across networks. Reinterpreting the ancient formula in this way, Carpenter draws attention to how meaning and communication are incessantly diffracted and distorted in long chains of articulation. It is the resonance of this deep history of entanglement that fills "the spaces between places separated by time, distance, and ocean, yet inextricably linked by generations of immigrants."[740] What can be gleaned from the poem is a more-than-human "discourse propagating across, beyond and through long-distance communication networks created and necessitated by generations of transatlantic migration."[741] To map one's way in a reality suddenly made vast and deep is the main challenge in the Anthropocene because it involves not just being able to acknowledge large-scale processes but also to see oneself as a site where these forces converge, which entails dislocation

739 Benjamin H. Bratton, *The Stack: On Software and Sovereignty* (Cambridge, Mass.: Massachusetts Institute of Technology, 2015), eBook, 279ff.
740 J. R. Carpenter, "Locating Narrative Resonance."
741 J. R. Carpenter, "Locating Narrative Resonance."

from seemingly universal categories into a reality that is irreducible to human categories, ultimately resisting any efforts to foreclose it anthropocentrically. This is the point of departure for speculative cartographies in the effort to stimulate creative world-building that is necessary to build the Stack understood as an operational model, or chart a map to the future that needs to be assembled both imaginatively and materially, the two eventually converging in ecopoetics as imaginative and cosmic home-making. It involves constructing the world and oneself within not as a blinking dot on a computer screen but as a living entity whose roots go back in eons of evolution to the Earth's geological formation, long before the laying of fiberoptic cables.

At a time of profound changes ushered in by climate change and the digital revolution, J.R. Carpenter's work offers a glimpse of what forms writing can take to account for the more-than-human forces that operate under the content-surface of literary creativity. She locates her poetic practice at the nexus of environmental shifts and cultural traditions that go beyond poetry understood as an isolated, individualistic lyrical expression. Just as she accounts for the situatedness in a world transformed by human activity and in turn transforming subjectivity, her work acknowledges its rootedness in a variety of practices that form a long tradition of *poiesis*, or making. "I came to writing," she admits in an interview, "through the material practices of sewing, sawing, drawing, crocheting, photographing, photocopying, cutting with scissors, and pasting with glue," which she categorizes as "making" or "collecting, building, assembling, and arranging."[742] This position locates writing in a wider spectrum of anthropologically defined practices of making, seen as a material work that builds on a range of techniques, all of which gesture towards composting, recomposition or remix rather than immaterial creation *ex nihilo*. As she emphatically puts it in the essay "Writing on the Cusp of Becoming Something Else," which resonates with Malabou's ideas, "books are made of other books" and "culture feeds on itself," making it even "cannibalistic."[743] In the age of "self-conscious Anthropocene"[744] creativity emerges rather as aptitude for interventions in what is already there, bringing to the foreground the weave of cultural practices and material entanglement present in all creativity: another world inside this one, to recall Paul Éluard's idea cherished by Forrest Gander. As such, a writing that embraces its implication in the history of media and the ecological backdrop from which it

742 J. R. Carpenter, "Interview by Elle Eccles," *Penned in the Margins*, 8 July 2018, http://www.pennedinthemargins.co.uk/index.php/2018/07/im-trying-to-think-about-migration-as-a-condition-of-being-in-between-places-j-r-carpenter-on-poetry-and-translating-the-digital/.

743 J. R. Carpenter, "Writing on the Cusp of Becoming Something Else," in *Whose Book is it Anyway? A View from Elsewhere on Publishing, Copyright and Creativity*, eds. Janis Jefferies and Sarah Kember (Cambridge: Open Book Publishers, 2019), 243–266.

744 Lynn Keller, *Recomposing Ecopoetics*, 39–42.

emerges, heralds an approach where room is made for much more than individualistic expression and detached self-reflection. By inviting readers to consider the different dimensions of a poem performed across a variety of media – book, voice, image, script, computer code – it transpires that ultimately writing cannot be seen as "residing in any if these media but rather operating across and through multiple media at multiple times."[745] The crucial point Carpenter makes by employing computer code and data transmission is that writing in fact comprises a much larger process than human communication. In fact, the internet teaches us a valuable lesson in this respect insofar as "the vast majority of the text produced by computer systems – protocols, listings, programmes, temp files, error logs, and binary codes – is never seen or read by humans."[746] With the expansion of the internet of things and the dazzling accumulation of big data across platforms, there is indeed more and more communication that humans not only fail to see but also have no idea about, although this does not mean it fails to affect people, also through its sheer volume. Akin to "immapancy," this situation contributes to something like "analphabetism," Carpenter argues, because the failure to see the nested character of human communication is precisely the kind of short-sightedness that limits the grasp of long networks that bind human life to its material foundations. The predicament described by Carpenter is not limited to the lack of awareness of machines talking to each other, but involves a much bigger scope of seeing one's actions and expressions as embedded in a more-than-human, continuous environment that comprises both the digital domain as well as the sum of ecosystems that sustain life and meaning.

These issues are elaborated in *This is a Picture of Wind*, originally developed as an application, but also existing in the form of a book, an automatized bot on Twitter, and also a basis for live performance. Written in response to the violent storms that ravaged south-western England in 2014, the work employs as its material the various forms of linguistic expression used to describe wind – an elusive phenomenon that remains invisible save for the effects it creates in the world. It can be experienced on a variety of scales – from movement felt on skin to digital imaging based on meteorological data – and can have a range of results that affect not just individuals but entire regions, economies and communities, as the weather event which spurred the described piece shows. The application takes as its input live data about the wind, specifically its strength and direction, and uses it as the basis for reshuffling language snippets gathered by Carpenter, creating poems that continually shift on the screen. Displayed on the backdrop of

745 J. R. Carpenter, "Writing on the Cusp of Becoming Something Else," 262.

746 J. R. Carpenter, "Grappling With the Actual: Writing on the Periphery of the Real," *Electronic Book Review*, 3 May 2020, https://electronicbookreview.com/essay/grappling-with-the-actual-writing-on-the-periphery-of-the-real/.

a calendar framework featuring months, the work chronicles wind in the form of a poetic diary that does not aim to bottle the meaning of weather but rather brings it forth as a real-time climatic force that continually escapes the frameworks we use to bind it to human experience. What the piece offers is a flowing verbal canvas moved by the wind, registering its effects on a particular landscape through language recycled and recomposed from a wide range of sources that include weather reports from news sources assembled by Carpenter, Luke Howard's *Barometrographia* (1847) and Vita Sackville-West's notes on gardening (1946). As a poetic "almanac," it brings together the form of a calendar, weather diary and even poetic quasi-centon, producing a literary history of wind told from a situated perspective to chronicle how language strives to catch up with such distributed, complex phenomena.

As Carpenter put it, this piece draws attention to climate change "by picturing through variations in language the disturbances and sudden absences left in the wake of wind."[747] In this way, the gaps in understanding created by the recomposition algorithm and shifting lines conjure up a sense of more-than-human cartographical whole that encompasses climate, language and landscape. The work of art comprises in this context an onto-cartography whose "mapping" – in the sense given to the term by Levi Bryant – scrutinizes "couplings between machines and how they modify the becomings, activities, movements, and ways in which the coupled machines relate to the world around them."[748] In the posthuman global ecology, where large-scale formations of nested media, including wind and language, plug into one another, a relational network is revealed, in which Earth emerges as a tangle of material processes that shape life and communication. The gaps created by coupled machines – such as the human-computer interface or wind-and-landscape – disclose a relational network that includes the poem, its readers as well as the geological and climatic environment in which communication takes place.

In consequence, the picture painted in *This is a Picture of Wind* "is not only of wind, but also of whims, moods and troubles, the aspirations of breezes and pressure systems changing."[749] In transversal lens, the wind can be outlined as its vector cuts through a variety of scales, tracing a line of articulation that can begin a more precise cartographical graticule no longer premised on segmentation into nature and culture, subject and object. As Johanna Drucker underscores, works like these help to "mark the volatile moments of our physical and cultural at-

747 J. R. Carpenter, "This Is a Picture of Wind," *Lucky Soap*, 2018, https://luckysoap.com/apictureofwind/about.html.

748 Levi R. Bryant, *Onto-Cartography*, 35.

749 Johanna Drucker, "Dynamic Poetics: J. R. Carpenter's This is a Picture of Wind," in J. R. Carpenter, *This is a Picture of Wind* (Sheffield: Longbarrow Press, 2020), 23.

mospheres."[750] Putting both the human and more-than-human within a single stream of changes and transformations constitutes an attempt to think time and space beyond anthropocentric limits. In Carpenter's metamorphic calendar, the physical and cultural dimensions are rendered as a continuous field of material operation and mediation. And inasmuch as this closes the dualist "gap between being and knowing, sensing and representing"[751], other gaps are created in the process, revealing the "volatile" and metamorphic character of life as large-scale coevolution and cohabitation.[752] As we read in the poem "March" from the sequence "A Year at Tottenham (after Luke Howard)," tracing weather and recording it in language is invariably accompanied by "[i]mpediments presented to navigation," both in the practical sense of "vessels lying in wait" in anticipation of change in wind, and in the larger sense of navigation understood as the process of locating oneself in a reality seen from the angle of its unpredictable and unmasterable character.[753] This is also reflected in the compact formula of remix poems: they are mostly based on short sentences, often of just one or several words, five to nine lines in length. The "shorthand" style of on-the-spot recording creates a sense of immediacy, or reading notes taken in situ, with a very particular weather and sky in mind. At the same time, the lapidary brevity of some of these observations lends the pieces a slowness arising from the short sentences which – often due to the lack of predicate – draw attention to the presented image or phenomenon as well as the material layer of language itself.

Ocean

An Ocean of Static begins with a gesture similar to that in TRANS.MISSION. The opening piece "Once Upon a Tide" is preceded by a legend explaining the meaning of computer code used in this work. Carpenter's employment of the JavaScript computer language entails a different kind of textual progression or logic, primarily because it requires readers to step into the shoes of the compiling machine, choosing from a host of phrasing options and threading one's unique way across a linguistic ocean of potentiality, or the eponymous "static." By tracing a line of flight on a map that foregrounds possibility over actualization, reality becomes an active, self-differentiating plenitude rather than a fixed, inert and passive bundle of matter. As the reader is drawn into the role of a cartographer who assembles the world from a more-than-human perspective, a dif-

750 Johanna Drucker, "Dynamic Poetics," 23.
751 Johanna Drucker, "Dynamic Poetics," 23.
752 Johanna Drucker, "Dynamic Poetics," 23.
753 J. R. Carpenter, *This is a Picture of Wind*, 39.

ferent mode of map-making emerges: one that exchanges the question about what exists and can be rendered in static representation for the question about co-becoming and its multiple vectors. The latter option is not just processual but monistic insofar as such a position does not replicate the dichotomy between reader and text, representation and reality, fiction and truth. Instead, they are cast together within a larger material process of unfolding. Because of that, the reader, the text and the environment emerge as parts of the same more-than-human ecosystem that is being mapped not just in a detached, observational sense but on-the-fly, in the making, experimentally and always on the cusp of non-meaning. Echoing the legendary inscriptions on maps that would claim "here be dragons" (*hic sunt dragones*), we could say that Carpenter's mappings push the limits of poetic form in order to provide maps with another kind of commentary: "here be climate" (*hic est climatus*).

The literal navigation of the text in search of a traversable, sense-making route is usually done from the perspective of a finished text, or in the case of poetry – along the coastal lines of archipelagic or continental stanzas. In "Once Upon a Tide," however, the poem expands to the physical limit on all sides. It is as if the poem's unconscious plane of potentiality were revealed in the whiteness of the page. A revelation of a longer text in invisible ink, it showcases the ocean of language from which archipelagos and continents of meaning rise over the body of water, although the bulk of their mass remains hidden in oceanic depths. Conjuring up these masses of sense and possibility is an important step in realigning poetic sensibility towards an environmental stance. As Forrest Gander likes to emphasize, one of the mysteries revealed by the poetic line or word is that it could have always been different, otherwise. His shift of perspective refocuses from individual expression to the lands and waters crossed by the poet on their journey to make a meridian, to go across into the unknown, seeing in it a possibility, not cruel fate. I would argue that the activation of cartographical imagination in this piece is an expression of a search for poetic language that could address and make visible the things otherwise concealed or marginalized in dominant modes of seeing and understanding. In J.R. Carpenter, we encounter a way to experiment with more-than-human modes of seeing reality, where subjectivity is not just in it but strictly of it. Consequently, meaning would be also material – a route charted on the ocean of static, or delineated in the almost imperceptible hum of a deeper ontological backdrop that is teeming with possibility. As Carpenter put it in the preface to "Ten Short Talks About Islands… and by Islands I Mean Paragraphs": "Flocks of books open and close, winging their way webward. A reader is cast adrift in a sea of white space veined by blue

lines of longitude, of latitude, of graph, of paper."[754] The avian image of literature reveals it as always in motion, or in constant migration on an ocean comprised by the living history of human and more-than-human communication. The alienating character of current global visions has made it impossible to understand the world as old media and representational strategies become obsolete in the face of newly recognized geological and climatic forces. The difficult task of assembling a map for these territories becomes the key challenge for humanity in the Anthropocene as former modes of world-building collapse under the pressure of factors that have revealed humanity to be both environmentally embedded and simultaneously at the mercy of monsters it created itself such as inequality and ecological crises. To contain this world, nevertheless, certain ways of speaking can be developed, ones aware of the history of media and oriented towards expanding global-scale thinking about Earth as a planet that holds and sustains life.

According to Barbara Bridger, what we see in Carpenter is an attempt to "modify the literary model of the transferrable pre-script and instead attempt to apply a whole range of writing practices to the performance process."[755] Thus, a performative map-making lies at the heart of her work, evoking the wild productivity of nature, which is not predetermined but given over to contingency. Further, she reflects on the history and character of media that variously refract and remodel reality, reminding us that visions of the world are always in the making while the world is constantly changing, with more-than-human forces sweeping over human life in innumerable discrete ways and through different material layers. And just as we are changing along with it, maps crucially reflect the ways in which their makers mediate the world and see potentiality. This partly answers the problem recognized by Shannon Mattern, who emphasized that "we need to keep asking critical questions about how machines conceptualize and operationalize space. How do they render our world measurable, navigable, usable, conservable?"[756] As Carpenter argues, the larger cartographical meaning-making complex needs to be understood as composed of "writing machines, of machines of surveillance, of the GPS tracking devices we carry in our pockets, and of the Google Street view cameras paving the way for a world navigable by self-driving cars"; notably, she maintains that it is paramount to pose "these questions backwards, applying this critical frame to earlier navigational regimes."[757] *An Ocean of Static* does precisely that insofar as it constitutes a mis-translation of

754 J. R. Carpenter, "Ten Short Talks About Islands… and by Islands I Mean Paragraphs," *Lucky Soap*, 2013, https://luckysoap.com/statements/andbyislands.html.

755 Barbara Bridger, "Dramaturgy and the Digital," *Exeunt Magazine*, 1 February 2013, https://exeuntmagazine.com/features/dramaturgy-and-the-digital/.

756 Shannon Mattern, "Mapping's Intelligent Agents," *Places Journal*, September 2017, https://placesjournal.org/article/mappings-intelligent-agents/.

757 J. R. Carpenter "Grappling With the Actual."

the myriad voices resounding in the North Atlantic, weaving a complex literary patchwork out of its vast natural and cultural histories, sifting through the corpus of writings about the Ocean, and incorporating elements of computer code into her repertoire of experimental techniques. Her approach renders writing as movement, a material process that also involves the body and a sense of situatedness regarding both immediate and larger reality. Carpenter's personal heritage is specifically marked by trans-Atlantic crossings, which involves translation and reflection on the ethics of transitioning. Indeed, translation rests firmly at the root of these processes as it involves activation of possibilities through rewriting, repurposing and rearranging. This also shows translation, seen as plastic re-moulding, to be close to Carpenter's formal approach: a modern-day reworking of the centon, the mesostich, or other montage techniques, notably ones fostered by the avant-garde in response to early-twentieth century modernity. However, Carpenter's stakes are higher because her digital poetics of recomposition provides a framework for internet-age repurposing of texts in works expressive of how "multiple and diverse texts communicated with each other."[758] In this light, the creative act is distributed across a range of media, all of which contribute to the expressive intelligence of the poem. The implications of this involve reconfiguring the parameters of lyrical expression further away from the Romantic notion of individual genius. Elsewhere, Carpenter confesses: "I borrow and bend and blend and cobble books together."[759] In this sense, she foregrounds the non-human dimension of writing, emphasizing how texts are always a translation, remaining in transition, and perpetually branching off. Foregrounding the dimension of potentiality problematizes the status of the author and gestures towards a plastic understanding of consciousness as a form that is both shaping and shaped. Thus, Carpenter represents a new attitude to writing, signaling its possible future, or at least disrupting it in a way that reveals – as Malabou has it – the kind of new form that was not present before yet somewhat inherent in texts.

One representative instance of such practice is a longer piece from *An Ocean of Static* titled "Notes Very Necessary": "a collaboratively authored web-based multi-media essay that aims to address climate change by remixing images, text, and data generated by centuries of imperialist, colonialist, capitalist, and scientific exploration in the Arctic."[760] The base text for this work is the eponymous 1580 work by two English explorers Arthur Pet and Charles Jackman who – as authors J.R. Carpenter and Barbara Bridger ironically note – tried to show "how

758 Barbara Bridger, "Dramaturgy and the Digital."
759 J. R. Carpenter, "Interview by Elle Eccles."
760 "Notes Very Necessary," *Lucky Soap*, 2015, https://luckysoap.com/notesverynecessary/notes.html.

to conquer new territories by taking copious notes."[761] The online, mobile collage partly shares its form with the Bayeux Tapestry: a long page scrolled from left to right, but in the present case "charting the shifting melting North"[762]: a map that proceeds or unfolds horizontally from the significantly named "Home Bay" to the distant shores of the unknown.

In line with Mattern's injunction to examine past media and forms of imaginative world-building in order to understand the present parameters of addressing a globalized Earth, Carpenter represents a new attitude to writing that can be considered a form of media archaeology. In this, she is signaling a possible future of writing that combines both past and present ways of rendering reality visible and meaningful in the form of nested media. When engaging older forms of representation and mediation, she is not immediately discarding them as colonial and imperial but disrupting them in a way that reveals – like Malabou's plastic reading – a new form that was not present before yet is inherent in the adopted source texts. More than deconstruction, this method not only reveals the irreducible tangle of difference at the bottom of these enunciations, but tries to recompose them, salvaging a possible future.

The text by Pet and Jackman is not the only one utilized in this piece because its source material also includes writings by Darwin, various accounts of travels and explorations, and other material, literary or other, especially compelling when it comes to the visual culture from the early modern period. "Notes Very Necessary" draws on a number of discourses that pertain to the study of ice, plants, wind, taking observations rooted in geometry, biology and cartography, making calculations and developing both descriptions and drawings. Within their original paradigm, these are premised on Enlightenment rationality deployed in processes of appropriation by a possessive eye that feigns being Apollonian but in fact is simply speaking from the position of dominance, attempting to preserve it by excluding any form of otherness, specifically relations with local peoples and cultures. They are posited in a binary exclusion that places the home – England – as the measure against which everything is defined, otherness rendered merely as a coastline, not the real land mass beyond its outline. In this light, the ending, captioned with the words "tout le reste est inconnu" ("all the rest is unknown"), becomes ironically ambiguous since Carpenter's perspective reverses the margin of the unknown, turning it into the starting point rather than a negligible periphery. Therefore, "everything else" grows from insignificance into a priority in rendering the world. Effectively, however, this

761 "Notes Very Necessary," *Lucky Soap*. Full title of the original 1580 work by Pet and Chatham: "Instructions and Notes Very Necessary and Needful to Be Observed in the Purposed Voyage for Discovery of Cathay Eastwards."

762 "Notes Very Necessary," *Lucky Soap*.

operation does not stop at deconstructing notions of otherness, but pushes the source material through a plastic reading in order to reveal something that is neither imperial-colonial nor a turning around of it, a world-making impulse open to *poietic* work. This would importantly resolve the fundamental dualisms, specifically ones encountered in nature-culture, sameness-otherness; in an ecopoetic perspective, this embraces fundamental reciprocity, or plasticity, where environment and subjectivity are constituted together. This paradigm facilitates an enlarged reality, in the sense given to this phrase by Paul Celan and discussed further. Weaving the perspectives of biology, cartography and anthropology reveals a new horizon for humanity as embedded in the environment through numerous entangled practices.

Once again, this can tied with Bryant's onto-cartography, where all discrete entities are machines on a level field of democratic ontology, humanity not being privileged in any way. Building larger assemblages of machines in order to produce specific ways of construing reality is characterized by him as the work of plasticity. "All machines," he writes, "are more or less characterized by plasticity. There is no machine so rigid that it is not haunted by a plurality of virtual manifestations and becomings that may or may not become actualized."[763] As Carpenter demonstrates, mediating machines can be known both through their local manifestations and production of manifold powers. Bryant paraphrases Spinoza, arguing that we still do not know what a machine can do. Consequently, he argues, machines are knowable when we experiment with them and their relations. A similar thing happens in "Notes Very Necessary": by probing aspects of world-building from the onset of globalization, Carpenter examines their modes of forming relations, which later may solidify as a certain epistemological framework. At the same time, by introducing "new material mediators" in the form of digital processing and plastic reading, this long media ecology of globalization is reformed by injecting entropy into these assemblages and pointing to future, as yet unknown forms of globality. "With the advent of mediators such as writing, the printing press, and smart phones," Bryant argues, "older worlds are no longer able to negentropically perform operations as they once did. New linkages between machines are forged, reducing the strength of old relations and operations."[764] According to him, interfering with the operation of mediators both weakens the worlds they used to produce, and actively "contributes to the formation of new worlds and social relations"; as he concludes, this is indeed what "allows creativity to occur within a world."[765] To recall Bridger's argument, this involves shift of focus from meaning and interpretation to engagement with

763 Levi R. Bryant, *Onto-Cartography*, 46.
764 Levi R. Bryant, *Onto-Cartography*, 122.
765 Levi R. Bryant, *Onto-Cartography*, 122.

the structures that facilitate the conduit of sense-making and worlding processes. In this way, Carpenter expands the scope of poetry to cover the post-digital and post-human realities, gesturing towards nature as something much bigger than was fathomed before, and at the same time defamiliarizing the digital sphere to glimpse its wider geological ramifications. Consequently, her poetics is that of speculative unknowing, invoking the need to take a lesson of epistemological humility against self-assured Enlightenment Eurocentrism. She postulates a more radical understanding of culture as an open-access resource that can be repurposed, remixed, and remade creatively, against the idea of post-romantic poetic genius and insular imaginativeness. In result, the mutability of her work is strategically deployed to bring certain things to visibility without mimesis, especially phenomena like climate change. Her ocean of static, where potentiality reigns supreme, is truly larger than life as well as an instance of a world-making that delivers functional maps.

Echolocation

Drawing on Carpenter's concept of "an ocean of static" and Skoulding's "noise of the lyric"[766], the multi-modal speculative cartographies of Bergvall, Victor and Carpenter do not just deliver meanings, or produce imagery that can be read mimetically, but primarily create lyrical spaces that cause reverberations and facilitate listening, thus contributing to the formation of an image of space that goes beyond the visual regime. This mode of composition is explored in Evelyn Reilly's volume of poems titled *Echolocation*, which is dedicated "to all those who navigate by sound in the dark."[767] Echolocation is a powerful metaphor for situatedness premised on the kind of creativity that combines expression and listening. As Skoulding remarks in her sound-driven study of works by poet Carol Watts, when regular signification breaks down and fails, Watts suggests "we all fall back on song & / echolocation of an ancient kind."[768] This "ancient" mode of finding one's place and sensing the larger reality would consist in "listening to patterns of echo and reflection through song and speech" and finding one's bearings as "the poem reveals the material processes that connect sound and environment."[769] As an art that is sonic first and only subsequently visual, poetry can mobilize echolocation as an activity that, in the words of Tim Ingold, would be "generative of both space and time" and "as much a means of

766 Zoë Skoulding, *Poetry & Listening*, 18.
767 Evelyn Reilly, *Echolocation* (New York: Roof Books, 2018), 7.
768 Zoë Skoulding, *Poetry & Listening*, 96.
769 Zoë Skoulding, *Poetry & Listening*, 97.

active inquiry and of orienting oneself in the world as is looking."[770] In this light, a poetry book like *Echolocation* can be regarded as an atlas of maps that trace the becomings of lyrical subjectivities. Reilly problematizes identity formation in the Anthropocene in the opening cycle "Self," which establishes some of the basic coordinates for reflexive thinking, expressed in a characteristic mix of poetic spacing, ironically-tinged criticism, and dynamic phrasing. In the opening poem, "Song Of" – titled deliberately to stop right before saying "myself" as would be the case with Walt Whitman, for example – the lyrical voice places herself not over and above the poem but "among other fugitive / super-permeable / spoke-screatures / of posthumanity."[771] In the next part, she continues to blur the boundaries of her self and expression, asking "why should our bodies end at our skin?"[772] Reilly meditates on the cages of our cognition, and at the end of the piece she turns to non-Western cartographical practices in Polynesia, encouraging to study this "navigational diagram / made solely of sticks / and cowry shells" in marvel of the kind of material mapping that combines way-finding and enacting a world-vision; she takes cue from this to reflect back on the Anthropocenic "journey to becoming true / post-national animal subjects."[773] Sticks and shells are material tools for speculative fabulation, underscoring continuity of matter and meaning as well as suggesting that maps are indeed made in and of this world as ways of tracing passage "from one / oceanic speck to the next." In her own medium, Reilly radically limits her material to scattered, short lines and arrangements of symbols in the style of concrete poetry in "Human Imprint," a section of the book that can be interpreted as an underlying map or reverse of "Self." Beginning with remarks on water and its untranslatability across languages, Reilly turns to quasi-cartographical symbols and legends, experimenting with ways of denoting water, its flows and her own position vis-à-vis the river. In effect, she turns the poem into a resonating chamber where it becomes possible to "triangulate," according to a formulation by Divya Victor, so that the "compositional act becomes a co-constituted environment, where the poetic line is the azimuth."[774] In this way, Reilly utilizes the space of the poem and the poetic line to create a mapping in order to orient herself in a world she is immersed in at countless levels, and then taking the poetic line on a walk through the Anthropocene landscape in search of new ways to circumnavigate the more-than-human planet.

770 Tim Ingold, *The Perception of the Environment*, 274.
771 Evelyn Reilly, *Echolocation*, 14.
772 Evelyn Reilly, *Echolocation*, 15.
773 Evelyn Reilly, *Echolocation*, 17.
774 Andy Fitch, "A Home in My Ears: Talking to Divya Victor," *Los Angeles Review of Books Blog*, 15 February, 2019, https://blog.lareviewofbooks.org/interviews/home-ears-talking-divya-victor/.

British poet Alice Oswald has also taken recourse to the metaphor of echolocation in the context of mapping rivers, in her case the river Dart. As Angela Davis has underlined in her exploration of this concept, Oswald's method is based on listening: in the effort to engage with place, she listens to the landscape "as a physical score […] grammatical waves coming off things," while during composition, she is led "to presume that it's not really my poem, it's a poem that's already there and I'm listening out for it."[775] Oswald admits that her understanding of what she calls a "primitive kind of echolocation" is that it "operates by sending a sound out and receiving it back altered by what it bounces off," forming a "mediation" in which the traditional roles of nature and culture collapse.[776] Her method is best evidenced by the book *Dart*, which charts a map of the eponymous river in a winding long poem that makes room for multiple voices, both human and non-human, all of which resonate through the river's poetic body and contribute to "a sound-map of the river, a songline from the source to the sea."[777] In a conscious allusion to the Australian First Peoples' animist "songlines" or "dreaming tracks," the river is brought to life as a subject who speaks in many languages at the same time. Oswald attempts to listen to this soliloquy, and then to poetically translate the Dart's "mutterings," "this jabber of pidging-river," or "this dreaming of Dart."[778] Her sound collage comprises a poetic geography where forms of expression gleaned in the natural world are seen as existing on equal footing with human voices, the two flowing together in one stream of life: "This is me, anonymous, water's soliloquy, // all names, all voices, Slip-Shape, this is Proteus, / whoever that is, the shepherd of the seals, / driving my many selves from cave to cave."[779] Oswald's cartographical method consists in deep listening and protean translation rather than individualistic self-expression and colonial appropriation; her *Dart* constitutes a kind of poem that brings to attention "what speaks when no one speaks," as she put it in one piece from the volume *Falling Awake*.[780] Taking cue from this line, Oswald's Polish translator and critic Magda Heydel concludes that the British poet "creates in her own language a place where the world can resound," sharing the space of the poem in a non-anthropocentric gesture of welcoming multilingual nature into her own

775 Agnes Davis, "The Use of the Gap in Alice Oswald's Poetry," MA dissertation, *Academia.edu*, 2014, https://www.academia.edu/10060030/The_Use_of_the_Gap_in_Alice_Oswalds_Poetry, 17–18. See also: Jack Thacker, "The Thing in the Gap-Stone Style: Alice Oswald's Acoustic Arrangements," *The Cambridge Quarterly* 44.2 (2015), 103.

776 Agnes Davis, "The Use of the Gap in Alice Oswald's Poetry," 18.

777 Alice Oswald, *Dart* (London: Faber and Faber, 2002), author's preface on unnumbered page.

778 Alice Oswald, *Dart*, 15 and 28.

779 Alice Oswald, *Dart*, 48.

780 Alice Oswald, *Falling Awake* (London: Cape, 2016), 10.

discourse.[781] This fundamentally ecopoetic gesture brings together poetry as a way of sounding the world through echolocation and non-representational cartography as a practice of reading these complex sonic relations, weaving them into an image of more-than-human world – an image that can only be a translation, a tentative course traced in the static, or noise of reality.

781 Magda Heydel, "Co mówi, kiedy nikt nie mówi. Praktyka poetycka Alice Oswald jako przekład," *Poznańskie Studia Polonistyczne* 33 (2018), 311.

Chapter 4: Meridian

In the poem "The World is Not Round" by Sinéad Morrissey, the Northern Irish author ironically declares that "Beyond the West Coast / There is no Pacific, no Japan / And no globe to suggest / A continuous journey."[782] In an interesting choice of words, she does not refer to Earth or planet, but "world," pointing to the lived, or experienced terrestrial reality. Playfully tinged with the sarcastic idea that we may still all be flat-Earthers, the piece gestures toward the metaphysical concept of a "continuous journey" as the key idea behind globalization. Instead of smooth passage and unhampered circumnavigation, however, Morrissey conjures a vision of a "precipice" and the "Fall that the sailors / Failed to feel" as the edge of the world reveals a morbid landscape "[p]iling up with apartment blocks, / Bullets and drugs." In a nutshell, her argument appears to be that globalization has never been completed except in the imagination of Columbus who "set faith / On the skyline." The perspective of the sailor from Genoa is predominantly religious, or rooted in absolute belief about his entitlement to make the world round. The Fall in the poem, which is ironically turned against Columbus, entails violence, marginalization and inequality – the long-term effects that the brave sailors could not foretell in the fifteenth century but which have become the real story of globalization. Indeed, the predominant story of rounding-off Earth has been marked by the reduction of alterity to sameness premised on Eurocentrism and profit-making. This has entailed not only geopolitical subjugation by the military and trade companies, but also the colonization of minds, weakening the potential to put together a different story about sensing the planet. By muffling the voices of the suppressed, capitalist discourse has streamlined a vision of the global that traces the coordinates of the Empire, as Hardt and Negri call it: a "new global form of sovereignty" organized chiefly around nodes related to trade, finance, trans-shipment, industry and

782 Sinéad Morrissey, *There Was Fire in Vancouver* (Manchester: Carcanet, 1996), 24.

extraction.[783] Formerly colonial, this global system has evolved, recently deterritorialized by the digital revolution and platform capitalism[784], so that "its present powers are not limited to any region"; accordingly, "[t]he geography of these alternative powers, the new cartography, is still waiting to be written – or really, it is being written today through the resistances, struggles, and desires of the multitude."[785] Importantly, the rise of the Empire has transformed the environment in unprecedented manner, leading to ecological catastrophes and birthing the "wretched of the earth" as Frantz Fanon called them: "ones who attest to the sacrificial system that will have been the history of our modernity."[786] This unified and extractivist vision of globality, however, is not the only possible one despite intense efforts to naturalize it by bringing capitalism and xenophobia under the fold of science and establishing a single, monetization-based measure for all humanity. A symbolic example of this is the establishing of the Greenwich meridian, which left a lasting imprint of the British Empire on the cartographical graticule. Certainly, there is nothing problematic about the method of measurement itself but its deployment as a global medium of sensing the planet certainly carries over the vital component of Western cartographical reason: the Cartesian notion that the world is a blank graticule awaiting to be filled with objects identified and handled through instrumental reason by those holding military power. This strongly correlationist position exhibits the extractivist perspective on the world by casting it as inert and passive: a resource that can be made meaningful only through human extraction and instrumentalization. And yet, this model has been ruptured by the advent of the Anthropocene, which brought to immediate attention the larger-than-human forces at play in extreme weather phenomena or collapsing ecosystems. Both physics and biology show that space is indeed not an empty container where objects are suspended in abstract, mathematizable positions. The theory of spacetime continuum and the fascinating extent of humanity's biological and geological entanglement are at odds with all kinds of dualisms that set humanity aside from the material flows of life on Earth. Moreover, today's default model of individualism continues to separate the subject from the world and fosters development of geometrical models for navigating reality and expanding agency. Against this story of spatial and subjective orientation, the path that follows alterity reveals a much more complex world of more-than-human interactions that constitute a web of life

783 Michael Hardt and Antonio Negri, *Empire* (Cambridge, Mass.: Harvard University Press, 2000), xii.

784 Nick Srnicek, *Platform Capitalism. Technology after Capitalism* (Cambridge: Polity, 2017), 44–45.

785 Michael Hardt and Antonio Negri, *Empire*, xvi.

786 Achille Mbembe, *Necropolitics*, trans. Steve Corcoran (Durham: Duke University Press, 2019), 172.

from which no individual entities can fully extricate themselves. Such image, however, cannot be easily gleaned with Google Maps, for example, which deploys the model of Cartesian space to represent reality, marrying it with capitalist valuation of what can come into view as a node of financial circulation. Nevertheless, an alternative to this perspective can be established by turning this picture into its negative, or refocusing from commerce and transport to environmental categories, ranging from soil retention to sustainable housing. What emerges is the ecosystem as a nurturing ground that was previously relegated into the background as an inert setting for human life. The deep network of connections that tie together human and non-human life calls for a different notion of space and the material flows that compose it. Mapping these processes, which humans can only observe through ever more complex technological and intellectual mediation, requires an altogether different set of coordinates for conceiving space. Just like brain maps create bent and twisted representations, as demonstrated by Rebecca Schwarzlose, speculative cartographies seek different perspectives and graticules in order to bring forth formerly repressed and disregarded aspects of reality. Refusing to replicate the world, as Catherine Malabou urges, drives the speculative impulse to seek vantage points that would acknowledge otherness, both within oneself and as planetary life.

Translation

In *Poetry's Geographies. A Transatlantic Anthology of Translations*, editors Katherine M. Hedeen and Zoë Skoulding have gathered a stunning variety of languages and poetics brought into English from Arabic, Korean, Russian, Spanish, Swedish, Tamil, Persian, Galician, and French. This polyglottal mosaic mediates a sense of globality experienced not directly or intuitively but refracted by inter-lingual transport, cultural differences, geographical particulars, and the body, including "its maps and capacities" as Skoulding argues in the introduction, drawing on Erín Moure.[787] In her perspective, owing to translation's inherent "errancy," "dissent" and "wandering," it can provide – as Katherine Heeden does in her poetic afterword – a system of "counter-coordinates" that unmakes received maps of reality, instead inviting readers to use literature to pose fundamental questions: "Which thread is the one that tells our story / and lends substance / when there's no trajectory / by which to make sense of our-

787 Zoë Skoulding, "Introduction," in *Poetry's Geographies. A Transatlantic Anthology of Translations*, eds. Katherine M. Hedeen and Zoë Skoulding (Swindon: Shearsman Books, 2022), 23.

selves?"[788] When former maps of the world crumble and dissipate, Skoulding concludes, we find ourselves in the situation of having "conversations with strangers": planetary fellow beings encountered not through financial relations but as true others, fellow terrestrial beings. Indeed, translation provides, in this sense, a functional model of encountering otherness.

After translation studies expanded outside the purely linguistic domain through the cultural turn that remodeled this discipline, it became the locus of philosophical investigation, where the problem of untranslatability comes to the fore as an important boundary for thought and communication. In order to capture vital aspects of engaging planetary life on Earth, it is therefore helpful to turn to theories that implement translation tools to tackle the question of globalization and its modern representations. The crucial notion in translation studies is equivalence and the way it discloses translation as necessary yet impossible.[789] The untranslatability of Earth is openly tied to environmental concerns by Gayatri Chakravorty Spivak in her entry on "planetarity" in the *Dictionary of Untranslatables*.[790] She steers away from the notion of "the planet" which, as an object for reason, can become easily entangled in abstraction or dogmatic appropriation. Planetarity, by contrast, "does not refer to any applicable methodology" for it remains "in the species of *alterity*, belonging to another system […] we inhabit it, on loan."[791] Spivak opens the possibility to consider planetarity as a mode of (im)possible translation, which dovetails with Derrida's task of translation as untenable yet obligatory. She identifies past attempts to broach the human and terrestrial life as making a similar gesture to metaphorically capture radical alterity that surpasses human thought yet crisscrosses subjectivity with a myriad of material ways. "If we imagine ourselves," Spivak concludes, "as planetary subjects rather than global agents, planetary creatures rather than global entities," we may be able to put ourselves "into the peculiar mindset of accepting the untranslatable."[792] In this light, translation can be seen as similar to mapping, which also reveals its own futility despite such efforts being paramount to develop a sense of earthly situatedness. For Spivak, translation involves "acceptance," which is notably her last word in the entry,

788 Katherine M. Hedeen, "Afterword: How to Create a Global Positioning System with the Highest Level of Errancy," in *Poetry's Geographies*, 191–192.

789 Jacques Derrida, "Des Tours de Babel," trans. Joseph F. Graham, in *Difference in Translation*, ed. Joseph F. Graham (Ithaca: Cornell University Press, 1985), 174–175.

790 Gayatri Chakravorty Spivak, "'Planetarity' (Box 4, WELT)," *Paragraph* 38.2 (2015), 290. After: Gayatri Chakravorty Spivak, "Planetarity," in *Dictionary of Untranslatables: A Philosophical Lexicon*, ed. Barbara Cassin, trans. Steven Rendall, Christian Hubert, Jeffrey Mehlman, Nathanael Stein, and Michael Syrotinski (Princeton: Princeton University Press, 2014).

791 Gayatri Chakravorty Spivak, "Planetarity," 290–291.

792 Gayatri Chakravorty Spivak, "Planetarity," 292.

because it connotes both welcoming the untranslatable planet as well as embracing the provisional character of all human efforts to grasp it. Finally, acceptance can have yet another meaning in this context, one that is deeply political and concerns resistance to those ways of thinking that diminish or eliminate alterity, which agrees with Malabou's dictum not to replicate the same world with our brains, and accordingly to inject difference wherever homogenizing forces inertly iron out vital issues of global concern. Refusing to accept a wounded world is both a political stance and an ethical premise that underscores alterity as irreducible yet inextricably entangled with the human experience of life. In this sense, translation as a practice of encountering alterity reveals the necessity to engage in those meetings without losing the broader horizon of untranslatability. "Planetary creatures" – as Spivak hails them[793] – can be thus regarded as translators who have undertaken to redefine their task in the face of the Anthropocene: to see translation as a mode of "worlding," or composing Earth through material work with language, and as a more-than-human life-process of differentiation revealed through cracks in the linguistic crust that covers the deeper interior of the planet, the locus of otherness, or the Earth's dark iron core. What emerges through these apertures are glimpses of geological deep time which cuts through all dimensions of human life. Fault lines in discursive tectonic plates also disclose issues connected with otherness, specifically its repression, both subjectively in the form of dualistic disconnectedness from the body or the senses, and in the form of systemic oppression. What speculative cartographies contribute here is the idea that mappings premised on alterity bring into focus places and concerns formerly suppressed in systems of representation based on colonial, imperial or otherwise extractivist forms of appropriative global politics.

Untranslating the Earth entails untranslating humanity, specifically the *anthropos* of the Anthropocene, as Philip John Usher has pointed out.[794] Simply put, we do not know yet who the subject of this epoch is. Unlike individualism-driven atomization, or subjective contraction, this idea of the human seeks expansion by going beyond traditional notions developed within broadly conceived humanism since the Renaissance, ultimately coming to encompass more-than-human lifeworlds as residually present within every person. Echoing Malabou's notion of the brain of the Anthropocene, Usher also offers vital ethical insight about othering, or untranslating: "we might think of the main task in the environmental humanities as being to bring that *anthropos* 'over to the dark side' so that we may communicate with him/her/it."[795] Timothy Morton's dark ecology invoked here involves weirding nature so as to savor the vastness beneath, whose dwarfing

793 Gayatri Chakravorty Spivak, "Planetarity," 292.
794 Philip John Usher, "Untranslating the Anthropocene," *diacritics* 44.3 (2016), 58.
795 Philip John Usher, "Untranslating the Anthropocene," 61.

effect is both blissful and fear-inducing. Such othering is necessary to develop new coordinates for gauging possible ideas of humanity, specifically ones mapped onto greater realms than the familiar ones inhabited by the *homō* of the classical humanities. "To talk of the Anthropocene," Usher concludes, "is to write ourselves out of the picture, to objectify the human culprit as Other, to define our times as *An Epoch in Search of a Subject.*"[796] This kind of shift marks the process of othering as making space for the untranslatable within the human, a gesture that acknowledges both the deeper connection with evolutionary and geological past, as well as the potential to change and transform. This means that, by opening individual history simultaneously forward and backward, a different genealogy and a different future can be glimpsed in the aperture "between translatability and untranslatability," as Usher puts it in another echo of Derrida.[797] In this light, traditional humanism appears fixated on a concept of a*nthropos* that has been set in advance, constituting a teleological model where agency is limited to the sphere of culture, arbitrarily carved out from a much larger conglomerate of material flows in the ecosystems that provide the foundation for human and non-human life. Such narrowing means that human agency cannot extend either into the natural world, which is similarly cast as an immobile backdrop or stage decoration, or into the future where different possibilities of cosmopolitics lie untapped. What the advent of the Anthropocene shows is that neither side of the humanist equation – the past and the future – is conceptually sustainable since anthropogenic climate change and rampant necro-capitalism demand that we face the complex history of the human alongside its possible futures, both of which need to be re-imagined and brought to the political table.

The work of translation involved here is thus not just about "undoing" the discourses of mastery and control that have kept humanity locked in conceptual shells, but also about "making," or more precisely "making with," as Yves Citton argues, a task that is essentially eco-poietic in character.[798] After all, translation is a process that does not operate in isolation but takes an object or system of objects to work with. In other words, its point is not to undo, or take apart, but to make: put together, or reweave, revealing a new horizon of possibilities in what is already there. This practice is aligned by Citton with one of the "modes of existence" described by Bruno Latour in *An Inquiry into Modes of Existence*, namely fiction, or "[FIC]."[799] In Latour's complex model, or ontological compass, the fifteen modes of existence are elucidated in order to emancipate them from

796 Philip John Usher, "Untranslating the Anthropocene," 65.
797 Philip John Usher, "Untranslating the Anthropocene," 70.
798 Yves Citton, "Fictional Attachments and Literary Weavings in the Anthropocene," *New Literary History* 47 (2016), 310.
799 Yves Citton, "Fictional Attachments…," 312.

the manacle of a single, economy-based ideology, and to develop a conceptual space that acknowledges a broader network of more-than-human beings which partake in a shared reservoir of planetary assets. From an anthropological angle, pluralization of the political field entails a different perspective on agency, which becomes multi-leveled and networked rather than individualistic and human-centric. Re-weaving the networks [NET] is a task that involves envisioning connections in such a way as to "help our orientation within our puzzling experience."[800] In this sense, fiction is a mode of establishing coordinates in a larger cartography of habitable worlds. Citton goes on to compare using [FIC] submodes such as the arts, laws or sciences to throwing a cast net over reality in order to "catch aspects […] previously escaping from our grasp."[801] Consequently, works of "fiction" can be defined as "expressive devices" (not only human-made) that transform into different modes of existence "by returning home loaded with different properties."[802] The haul can be various and may include aesthetic experience, political insight, and scientific discovery. The point is that the [FIC] mode of existence can act as a fishing net – or a graticule, shifting to the cartographic analogue – which can yield a variety of results depending on its "inner consistency" and "external resonance." These last two qualities are simultaneously two powerful criteria that may replace conventional measures of realism conceived in terms of mimesis, or ocular, descriptive resemblance. Instead, the expressive device – whether a literary essay, piece of music or drawing – can be argued to reveal something about the world insofar as its internal coherence creates an opportunity to "fish out" some kind of property in the world that may be transformed into a different mode of existence, be it political [POL], moral [MOR], organizational [ORG] or referential [REF]. As Citton concludes, it becomes possible to understand fiction – not to be identified purely with literature – in line with the tradition of writing as *écriture* associated with Roland Barthes and Jacques Derrida in the sense of composing and remaking: a *poiesis* found at the heart of creative work, social life and philosophical debate.

Latour's AIME project has been geared towards composing a common world – one where modernization can be redefined in such a way so as to properly understand how it has changed the face of the world yet avoid continuing along its destructive, anti-ecological trajectories, especially when it comes to short-sighted Eurocentric universalism premised on dualism.[803] Importantly, the last element produces a misunderstanding that crucially differentiates the Humans

800 Yves Citton, "Fictional Attachments…," 315.
801 Yves Citton, "Fictional Attachments…," 315.
802 Yves Citton, "Fictional Attachments…," 315.
803 Bruno Latour, *An Inquiry into Modes of Existence. An Anthropology of the Moderns*, trans. Catherine Porter (Cambridge, Mass.: Harvard University Press, 2013), http://modesofexistence.org.

(as Latour calls them) from the Earthbound, the former envisioning themselves as inhabiting environment, while the latter accepting that they are an inseparable part of it. This key takeaway involves a tremendous leap – not just shattering the illusion of existing somehow aside from nature but also dismantling the preconception that the world is already-made, furnished and ready for humans to move in at their earliest convenience. On the contrary, Latour argues, the world is not unified by any overarching concept of nature or society but needs to be painstakingly composed, bit by bit, in the effort to render its fundamentally pluralistic character. In this, Citton concurs, literature, or broadly conceived fiction is indispensable since it is "intrinsically compositionist (a.k.a. 'poetic')": "we Earthbound," he writes, "need it to weave our lives and values together, thanks to the back-and-forth movements of narration, explanation, explication, interpretation, redescription, rewriting, relinking, precisely because we don't trust either Nature, nor Society, nor God to unify them for us."[804] The presented catalogue of "movements" is a relentless flurry of activity meant to set in motion "expressive machines" that could become successful "agents of worlding": "narrative lines" that cut through lives, resonating with them and revealing trajectories of becoming. What this procedure of "worlding," or map-making promulgates, in Citton's view, is crucially a "literary form of attention" which brings a more well-adjusted focus that balances anthropocentric categories with "our milieu's weaker signals."[805] Citton quotes Latour's important contention from *Facing Gaia* that "Earthbound are not land-surveyors, cartographers or geologists looking *from above* at the flat surface of their well-delineated maps"; instead of the model premised on Apollo's eye, Latour proposes a form of mapping based on loops that proceed not from the mapping subject to the map but "*from* the landscape *back to them.*"[806] In this perspective, cartography becomes unmoored from the map and inserted back into the landscape, conceived as a continuum of the human, the geological and the social, as expounded for example by Catherine Malabou in her account of the brain of the Anthropocene, or by Félix Guattari in his ecosophical triad. Once again, in line with Malabou's dictum to refuse the mimetic replication of the presupposed image of reality, Citton argues that the Earthbound face the task to "control our habits of projecting our […] mental maps upon our surrounding landscape" and "learn to listen to the noise, in order to let the soundscape reshape our minds."[807] In the course of this cognitive reconfiguration, the Earth is subjected to an othering that casts it as "the ultimate Alien" to which we become attentive through loops of

804 Yves Citton, "Fictional Attachments…," 321.
805 Yves Citton, "Fictional Attachments…," 321.
806 Yves Citton, "Fictional Attachments…," 322, emphasis preserved.
807 Yves Citton, "Fictional Attachments…," 322.

"echoing responses" that build a different graticule than the one which forecloses Earth as an already-known and knowable world.

In the described perspective of the Earthbound, the Earth is not an object but medium; moreover, it is not unified but inscrutable. The first idea is the result of eliminating the subject-object division and establishing the human as part of a continuous environment – not as a subject over and apart from objects in the habitat but part of a long series of nested media. Secondly, since the Earth is the condition of possibility, a means of expression, and a resonating chamber, it can be regarded as medium. Seen in this light, McLuhan's oft-repeated contention that the medium is the message acquires a rather different, much deeper meaning in this context insofar as it comes to cover the entirety of the living planet. The question of mediation has also been importantly raised by McKenzie Wark in her criticism of speculative realism, as outlined earlier. This intersection marks an important turn toward the material mesh of relations which afford flows of matter in ways that create space for agency and sentience. As indicated by media theorist Jussi Parikka, the conventional media we have grown accustomed to examine within the humanities have deep, geological roots that cannot be removed from the picture when it comes to analyzing their affordances and parameters.[808] This theme is also strongly echoed in studies undertaken by Benjamin Bratton, who has taken media theory to the ontological level in his ambitious philosophical project centered around the concept of the Stack. The rise of media archaeology also clearly shows the tendency to consider the Earth in material terms as a medium unto itself, which – as Citton underlines – "folds time and space" so as to "structure our perceptual milieu […] and remediate the multifarious relations that constantly reweave our social meshwork."[809] Remediation – or the process of incorporating and transforming older media in the new – emerges as crucial in this context because recognizing and acknowledging long chains of material mediation facilitates showcasing the multiplicity of media, or hypermediacy, as Bolter and Grusin have termed it.[810] Hypermediacy makes it possible to foreground acts of encapsulating media in other media, shedding light on the vaster networks of remediation that extend from the brain to the geological dimension. In this sense, planetary-scale hypermediacy brings forth the idea of a vaster Earth composed of loopy, or nested mediations. Mapping these webs of relations, or mediating the meridians that compose the planet bit by bit, is the subject matter of speculative cartographies. As Latour suggested in *Facing Gaia*, cartography presumed on views-from-above yields in

808 Jussi Parikka, *A Geology of Media* (Minneapolis: University of Minnesota Press, 2015), 4.
809 Yves Citton, "Fictional Attachments…," 326.
810 See: Jay David Bolter and Richard Grusin, *Remediation: Understanding New Media* (Cambridge, Mass.: Massachusetts Institute of Technology Press, 1999).

this perspective before speculative modes of mapping that employ fictional modes of existence [FIC] in order to compose the world instead of revealing or capturing it as an object approached by an isolated cognizant subject. This kind of enquiry mobilizes – as Citton demonstrates – the potential of fiction to probe mediumistic webs of interrelations that cut across various scales and older lines of demarcation between the human and the non-human. These "fictional attachments," as he calls them (partly echoing the tendril-like, tentacular forms of knowledge theorized by Donna Haraway), "weave our inseparably mediatic and mediumic modes of existence into a reconstituted sustainable meshwork."[811] And since the mesh woven in this manner functions as a means of orienting oneself in the world and considering the various trajectories of becoming, they perform the function of maps, albeit not in mimetic or representational terms based on subject-object relations, but in the form of loopy knowledge obtained through fiction-driven resonances returned by the planet made alien or weird. Ultimately, this shift of focus delivers a powerful response to the crisis of the humanities, which can be aligned with the anthropocentric Humans (to draw on Latour's vocabulary), and are contrasted with the Earthbound, whose "bonds" or "ties" to Earth consist precisely in these mediating networks of connections that no one can shed. In this sense, it becomes apparent why, by siding with Latour, Citton advocates "remediating humanities" so as to embrace compositionist "medianities," as he has tentatively termed this area of research.[812]

Composition

Compositionism, as Latour defines it, is a key approach and task in the Anthropocene, though one that encounters numerous obstacles owing to how it reveals the work of dualism, which obfuscates the immanentist situation of humanity in the era of climate change. In a witty yet telling gesture, Latour argues that the "the specter of compositionism" is haunting "not only Europe but the world."[813] Importantly, however, he does not conceive it as a form of critique, in fact contrasting the two and arguing that insofar as critique can provide the tools necessary to conceptually dismantle ideological arguments by performing deconstruction, it fails to go beyond "poking holes in delusions."[814] Similarly to Malabou, Latour wishes to go beyond the poststructuralist impulse to deconstruct by taking a different approach, presented as a return to the sixteenth

811 Yves Citton, "Fictional Attachments…," 327.
812 Yves Citton, "Fictional Attachments…," 327.
813 Bruno Latour, "An Attempt at a 'Compositionist Manifesto'," *New Literary History* 41 (2010), 473.
814 Bruno Latour, "An Attempt at a 'Compositionist Manifesto'," 475.

century, when the foundations of modern dualism were laid, a moment that Latour calls the "Bifurcation." In this sense, he gestures toward the important early steps to conceptualize nature and the epistemological turnaround which he identifies as the separation of inanimate, passive matter from the domain of human agency. The animism of the pre-moderns, which has been later cast as laughable and childlike, may be in fact closer to what we actually have learned about the world from the perspective of ecology and other disciplines that consider systems and their unique dynamics instead of focusing on isolated events in sequences of cause-and-effect relations resembling a huge chain of domino blocks toppling in linear succession. Latour argues that if we foreground the work of long networks of mediators who facilitate action and agency, it appears that their "animated" activity is indeed what enables change and interaction. The stress in Latour's argument falls on the idea that the joint task of sciences, humanities and politics is to "compose the common world from disjointed pieces instead of taking for granted that the unity, continuity, agreement is already there, embedded in the idea that 'the same nature fits all'."[815] In effect, the task of finding "continuity" between all life and matter on Earth is political, although it calls for a more-than-human politics that takes into account not only people but also other beings in a shared world, along with the material basis for the continuation of life. For such politics to emerge, it needs to be ascertained that the world is not ready-made and preconfigured but requires painstaking composition, or assembly, remaining perpetually in the making. As the horizon of this approach, Latour places the "thirst for the Common World" which he admits is an impulse shared with the original ideas of communism, making the earlier specter-based comparison more poignant, albeit with one important reservation, namely that it can never be taken for granted but must be assembled.[816] In temporal terms, Latour designates the shift as a move from economy to ecology. Since both are built around the same root *oikos*, which means home, it becomes easier to capture this change as one going from calculating pre-given resources for gain to composing a sustainable world. Finally, the emphasis on composition and making-with brings Latourian compositionism close to ecopoetics understood as an enquiry into modes of home-making within a global and more-than-human *ecumene*.

The materialist and compositionist turn informed by more-than-human media theory is perhaps best exemplified by the concept of the Stack developed by Benjamin Bratton.[817] In this model, human systems of knowledge and power

815 Bruno Latour, "An Attempt at a 'Compositionist Manifesto'," 485.
816 Bruno Latour, "An Attempt at a 'Compositionist Manifesto'," 488.
817 Benjamin H. Bratton, *The Stack. On Software and Sovereignty* (Cambridge, Mass.: The MIT Press, 2015), eBook.

are primarily grounded, or defined in terms of their embeddedness in the planetary geological and biotic environment, and seen as modes of mediation in the creation of the Stack. The Stack is a multi-layered configuration of planetary forces mediated in such a way as to create an accessible and habitable environment. At its foundation is the geological Earth layer, followed by the terraformed milieus of City and the informational infrastructure of the Cloud. The Stack's mapping also comprises the layer of Address, where localizations and individuations are established – nodes that can be addressed by Users, human and non-human indiscriminately, through Interfaces that provide channels of access. In one of Bratton's metaphors, the Stack can be seen as a highly elaborate metabolic system of transforming and arranging planetary matter in ways that terraform the Earth, directing flows of energy and resources.[818] Importantly, in line with some of the earlier considerations, the Stack is not finished and ready to be used but rather constitutes the end goal of combined terraforming efforts, delineating a future horizon of a world-to-be-made. The Anthropocene in fact poses the necessity to build the Stack rather than reveals its completed state. In this sense, as Bratton emphasizes, his research has a design edge to it, and aims to name or articulate things that have so far eluded philosophical outlining efforts. As a mode of speculative design, this project is not necessarily critical in the traditional sense but sits closer to the genres of utopia and science-fiction, mobilizing spatial and cartographical imagination to embrace a variety of scales. As a vertical map, the Stack is an interesting example of planetary auto-cartography insofar as it is constructed out of material components but its composition as a totality remains abstract. In this sense, the Stack is a map that draws itself – a system that creates images of itself.[819] Bratton even goes on to say that due to the creation of a vast computational apparatus, humanity has become the medium for the planet thinking itself. As can be easily concluded from this, such a major shift in perspective also entails inevitable trans-subjectivization on a post-human trajectory that is certainly traumatic. On the other hand, this new outlook facilitates displaying crucial aspects of sovereignty and governance in the post-digital era, which are otherwise obfuscated by being pigeonholed within the boundaries of separated disciplines. This is possible, Michał Owczarek points out, because the Stack integrates three key dimensions that need to be considered together and not in a disjointed manner: the ontological, the epistemological and the political.[820] This conveniently dovetails with Guattari's model of three ecologies, where the French thinker underscores the interrelations between the environmental, the mental, and the social. Little wonder then that in this account social theory

818 Benjamin H. Bratton, *The Stack*, 340–342.
819 Michał Owczarek, "Planować w skali planetarnej," *Praktyka Teoretyczna* 41.3 (2021), 144.
820 Michał Owczarek, "Planować w skali planetarnej," 148.

and speculative fiction are in fact two sides of the same coin.[821] In other words, producing fictional or speculative abstraction creates a horizon rooted in the future, which casts today's problems in the kind of light that facilitates addressing them in their full complexity, without running the risk of anthropomyopic reductionism. What this reveals in the context of the Anthropocene is that the entirety of planetary infrastructure is mobilized in the production of power, knowledge and subjectivity. Consequently, any successful enquiry into these processes must first account for the global configurations that channel and mediate the material forces at stake. As Parikka suggests, the study of media geology shows how longer and shorter temporal structures overlap and may obfuscate one another, as is especially the case with colonial and economic history of the last five hundred years, where political oppression, inequality and predominant forms of humanism are enmeshed with long-drawn-out environmental concerns.[822] In this perspective, the crucial task at hand is to bring to awareness how they are filtered through politics, which mixes environmental aspects of the Anthropocene with colonial history, extractivist ideology and planetary management.

Bratton's non-anthropocentric theory-fiction is both map and plan, practice and theory, offering an image of totality that nevertheless looms as a utopian project to be realized, and not as a pre-formed image of the world meant to be imposed on others from a privileged vantage point. In cartographical terms, the Stack is the opposite of conventional maps as the main instrument of geopolitics because it does not offer a smooth and horizontal extension of space to be traversed by ships and goods.[823] Instead, it interrogates material compositions of forces that streamline flows of matter and energy while hampering others. Discovering these multi-layered spatiotemporalities within existing models of the world and challenging them has been made possible by the immense computational potential achieved by humanity in its pursuit of technological advancement. Quite ironically, as Bratton points out in the essay "On Anthropolysis," such knowledge has become accessible to humanity only at the moment when turning around its anthropogenic environmental impact has become extremely difficult. And still, as Bratton vividly put it, "just as early protozoa, wiggling their cilia in the bubbling primordial curry, mapped their surroundings to figure out friend, food and foe, so too do Anthropocenic species carry forth cosmic tasks"; and these are, specifically, "to form function into abstraction and back again, and

821 Michał Owczarek, "Planować w skali planetarnej," 148.
822 Jussi Parikka, "Deep Times of Planetary Trouble," *Cultural Politics* 12.3 (2013), 280.
823 Jakub Wolak, "Uziemienie. Filozoficzne marginalia do *The Stack* i *O antropolizie* Benjamina Brattona," *Praktyka Teoretyczna* 41.3 (2021), 173.

for matter to cohere into meta-cognition."[824] In the present perspective, it means developing ways of making so as to shape the way we live collectively. The main obstacle or quandary described by Bratton is centered around time. As human chronological scales have been identified to be miserably misaligned with those of planetary forces, the task of mapping current realities has become a daunting one. Still, by "redesigning" our subjectivity and imagination, we may be just able to produce abstractions, or mappings that could render the world operational in hitherto unthinkable terms, realigning our notions of time and space in such a way as to bring climatic and other globe-spanning issues to attention as vital aspects in the composition of a sustainable world. For that task to be feasible, however, Bratton contends, another shift in thought is necessary: one he calls anthropolysis, or the obverse of anthropogenesis. It concerns refocusing from myths of origin and beginning to future-oriented change that will indubitably arrive, whether we like it or not, the only difference being whether we become sufficiently ready for the transformation it shall bring. This is the ultimate cost of ecological thought, it might be argued. Instead of celebrating and mythologizing the imaginary moment of passage from insentient to sentient forms of life, or from animal to human, it perhaps becomes paramount to embrace the reverse: the opening of human life onto the vast biotic and geological dimensions, the inhuman at the heart of humanity's celebrated uniqueness. This diagnosis would undercut myths and stories of creation, instead granting special status to the current moment and its catalytic potential, once again echoing Malabou's idea of the brain of Anthropocene as a pivotal junction point in human development. From the perspective of planetary history, as current extractivist tendencies vividly confirm, it has been a particular instance of hubris to think that it would be possible to cling to economic practices that are far misaligned with the Earth's regenerative cycles. Thus, the gist of anthropolysis, according to Bratton, is to "make human economies operate according to the geologic scale we found hiding under the rocks," and not the other way round. The horror entailed by demystifying the illusion of sustainability in existing regimes of production and distribution is perhaps quite tellingly confirming how twenty-first-century humanism is obfuscating power relations that already have catastrophic impact on all aspects of planetary life. Finally, as Bratton's Stack shows, such new maps to reality reveal the transformative potential of fictions that mobilize the imagination across different domains, marking a transformation of subjectivity that goes hand in hand with renewed powers of seeing the world and acting within it.

The question addressed by Bratton had been already formulated by Fredric Jameson in terms of "cognitive mapping," which he elaborates in *Postmod-*

824 Benjamin H. Bratton, "On Anthropolysis," *e-flux*, January 2017, https://www.e-flux.com/architecture/superhumanity/68640/on-anthropolysis/.

ernism.[825] Jameson draws on Kevin Lynch's research on the mental imaging of cities, especially ones that have had an alienating effect on the subjectivity of citizens since the beginning of the nineteenth century. It is little wonder that the city is the pivotal example in this discussion. Since the Industrial Revolution, rapid urbanization has transformed humanity's lived environment in ways that have led to the emergence of a new culture – as vividly attested to by Charles Baudelaire, for example[826] – and new forms of identity, establishing a different kind of relationship between humanity and the environment, ultimately re-forging the experience of space. For Lynch, reclaiming the city requires reconstructing it mentally in ways that could display one's position in a network of nodes – both physical sites and meanings attached to them. The image of the modern city, as described for example by Walter Benjamin in *A Berlin Chronicle*, would comprise its "cognitive map" but importantly this kind of cartography is not strictly mimetic in the older, conventional sense.[827] It is not a mirror-like reflection of the grid of streets or a static veduta representing chains of urban structures. Rather, it is an "articulated ensemble," as Jameson put it, that "the individual subject can map and remap along the moments of mobile, alternative trajectories."[828] Such wording suggests that, along the lines of Deleuze and Guattari's concept of a "mobile map," Jameson emphasizes the networked character of cognitive mapping, which is not so much about placing objects in predefined space but about trajectories of becoming: the affordances of space, or the possibilities it opens ("lines of flight" as Deleuze and Guattari put it) as well as ones it forecloses. Such maps are therefore not exactly representational but rather a way of negotiating the relationship between subjectivity and space in a mental process that produces both self-representation and environmental awareness. Read in this way, cognitive mapping could be postulated to undermine the subject-object model that implicitly carries the nature-culture distinction. This is because cognitive mapping could be conceived not as a model where a subject produces a representation of space to be stored and used like a paper or digital city map to find a given street, but rather as a process in which the mental and the spatial coalesce, becoming indistinguishable and producing in one instance both a self-representation of subjectivity and the image of space as the larger environment one inhabits. This image is not mimetic because – insofar as Jameson extends the scope of Lynch's urban image – it gestures towards "that

825 Fredric Jameson, *Postmodernism, Or, The Cultural Logic Of Late Capitalism* (Durham: Duke University Press, 1991), 51ff.

826 Charles Baudelaire, "The Painter of Modern Life," in *The Painter of Modern Life and Other Essays*, trans. and ed. Jonathan Mayne (London: Phaidon Press, 1964).

827 Walter Benjamin, "A Berlin Chronicle," in *Reflections. Essays, Aphorism, Autobiographical Writings*, trans. Edmund Jephcott (New York: Schocken Books, 1986), 4–5.

828 Fredric Jameson, *Postmodernism*, 51.

vaster and properly unrepresentable totality which is the ensemble of society's structures as a whole."[829] As such, it indicates the existence of a larger reality without purporting to fully describe and exhaust it, instead providing tentative and plastic coordinates that render it navigable in terms made possible through current arrangements of social life as situated in a nature-cultural environment. In this perspective, Jameson observes, "cartography itself constitutes its key mediatory instance" since it foregrounds how map-making is a mediating operation premised on "the coordination of existential data (the empirical position of the subject) with unlived, abstract conceptions of the geographic totality."[830] As Jameson emphasizes, the basic aspect revealed by cognitive mapping is that all kinds of cartography are about transformations – or projections – whose mediating function has certain intrinsic values rooted in specific languages of representation or ideological points of view encoded in them. And since this is inevitable, he concludes that "there can be no true maps," although we are in fact forced to produce and refine them again and again in a process of "dialectical advance," a term he carefully deploys to avoid resorting to the concept of "scientific progress."[831] Ultimately, since cartographic mediations develop images of an increasingly complex world, they can be seen as constituting "an aesthetic of cognitive mapping," which Jameson defines as a "pedagogical political culture which seeks to endow the individual subject with some new heightened sense of its place in the global system."[832] However, he holds that so far it has been a difficult task to accomplish because the lived environment's "enormous complexity" calls for "radically new forms […] to do it justice."[833] The pivotal argument is that the form in question is not a conventionally representational image of the world produced as an object by a subject that stands apart from it. On the contrary, it is a map that creates, in equal measure, both the user and the space insofar as it concerns the agency one can achieve in the world. According to Jameson's definition, in the era when operational space is comprised by "the world space of multinational capital," a new mode of cognitive mapping would not only help to "grasp our positioning as individual and collective subjects" but also to "regain a capacity to act and struggle, which is at present neutralized by our spatial as well as our social confusion."[834] In that sense, cartographic imagination emerges as an antidote to the confusion of a world driven way out of scale through intense economic development, which has not gone hand in hand with

829 Fredric Jameson, *Postmodernism*, 51.
830 Fredric Jameson, *Postmodernism*, 52.
831 Fredric Jameson, *Postmodernism*, 52.
832 Fredric Jameson, *Postmodernism*, 54.
833 Fredric Jameson, *Postmodernism*, 54.
834 Fredric Jameson, *Postmodernism*, 54.

the elaboration of images that could render the totality of the environment navigable.

Jameson's argumentation has been recently updated not only by Toscano and Kinkle, whose work is discussed earlier, but also by Steven Shaviro, who has specifically emphasized the question of imagination, underscoring that today's nature-cultural systems are so complex in their operation and composition that, indeed, "imagination itself threatens to fail us."[835] Notably, Shaviro frames the question of representing the world's totality vis-à-vis the program of a leftist-accelerationist aesthetics premised on transgressive exploitation of forms in the effort to "explore the dangers of futurity, and to 'translate' these dangers by mapping them as thoroughly and intensively as possible."[836] This position aligns notions of weirding and translation in the defamiliarizing mode, prefiguring Shaviro's later concept of discognition as part of a sum of efforts whose goal is the "'constant revolutionizing' of our methods of critical reflection."[837] This echoes Alex Williams's and Nick Srnicek's inclination to embrace "navigational acceleration"[838] as the necessary prerequisite for achieving better orientation, primarily by means of reclaiming the means of representation to issue forth speculative images of totality, especially ones competing with widespread notions of a hastily globalized world, to develop a "'cognitive map' of our socioeconomic system: a mental picture of how individual and collective human action can be situated within the unimaginable vastness of the global economy."[839] Such maps, it transpires, are not instinctive but require to be made.

Shaviro echoes this and picks up the vital thread in Jameson's argumentation, namely that no intuitive insight into the system of global capital is possible. This means, he emphasizes, that although it cannot be represented in conventionally mimetic ways, it can be in fact known, albeit "in a non-representational and non-phenomenological way."[840] Working through Jameson's concept along these lines, Shaviro aligns himself with the tradition of rethinking mapping that originated with Deleuze and Guattari, and was continued by Brian Massumi. According to Shaviro, this perspective on mapping considers it to be nothing like an immobile image but rather like a mediating instrument for "negotiating and intervening in social space."[841] In that sense, maps are not passively represen-

835 Steven Shaviro, *Post-Cinematic Affect* (Winchester: Zero Books, 2010), 139.
836 Steven Shaviro, *Post-Cinematic Affect*, 139.
837 Steven Shaviro, *Post-Cinematic Affect*, 133.
838 Nick Srnicek and Alex Williams, "#ACCELERATE MANIFESTO for an Accelerationist Politics," *Critical Legal Thinking*, 14 May 2013, https://criticallegalthinking.com/2013/05/14/accelerate-manifesto-for-an-accelerationist-politics/.
839 Nick Srnicek and Alex Williams, *Inventing the Future. Postcapitalism and a World Without Work* (London: Verso, 2015), eBook, 38.
840 Steven Shaviro, *Post-Cinematic Affect*, 5.
841 Steven Shaviro, *Post-Cinematic Affect*, 6.

tational but actively performative, thus acquiring the potential to be critical and therefore negotiate possibilities that a given image of the world affords. Important for Shaviro is the ability, inherent in the aesthetic domain, to be prophetic, or proleptic, i. e. to make audible or visible "the new world" (a phrase he uses after Jacques Attali): to bring forth the "possibility space" within a given world-image by exploring its fringes, pushing its parameters to the limit, or probing its affective boundaries. As Shaviro puts it, the "project of cognitive and affective mapping seeks, at the very least, to explore the contours of the prison we find ourselves in."[842] The ominous use of the incarceration metaphor is a theme that stretches from Jameson to Mark Fisher, and concerns primarily what has become widely known as Margaret Thatcher's slogan "TINA": "there is no alternative." It has been since associated with the conviction that there is no other path than globalized capitalism, where financial flows become the sole means of representation, or the universal signifier that takes on the role of making visible the relations and interdependencies in the "world-interior of capital," as Peter Sloterdijk has called it.[843]

According to the Polish philosopher Andrzej Leder, "although global dependence and conflict (including exploitation and exclusion) remain faceless, they do find some expression in symbolic indices of anonymous capital flows represented and made legible in streams of numbers."[844] Such semiotic impoverishment is highly reductive insofar as it creates the situation in which otherness can be rendered visible only in numerical terms. One consequence of this is that wealthier parts of the world can have greater visibility and consequently more say in deciding matters that pertain to problems which have global scale and impact. Leder defines visibility as "the capacity to name real relations and entities in dominant languages, discourses, and narratives, in this way calling them into existence."[845] If some aspects of life prove difficult to monetize or incorporate into the system of financialization, such as climate change, they can be ignored and left unaddressed because they simply fail to come into the field of view as an urgent political issue. This reveals the fallacies inherent in cognitive mappings of the global world and the short-handed cartographical imagination that fails to capture various forms of otherness – geological, biotic and cultural – into a broader representational system that could weave them together with economic and military power relations favored by the conceptual graticule developed in Western cartographical tradition since the Age of Discovery.

842 Steven Shaviro, *Post-Cinematic Affect*, 137.
843 Peter Sloterdijk, *In the World Interior of Capital. For a Philosophical Theory of Globalization*, trans. Wieland Hoban (Cambridge: Polity, 2013), 12.
844 Andrzej Leder, "The Limits of Representation and What Lies Beneath," *Eidos* 6.1 (2022), 68.
845 Andrzej Leder, "The Limits of Representation," 74.

The advent of mimetic cartography premised on instrumental reason has primarily obfuscated the aspects that were left out of the picture, making hurried claims to transparency, which is still resonant in the twenty-first century, creating obstacles for making connections at cognitive scales necessitated by the Anthropocene. As William Rankin observes in *After the Map*, the primary object of cartographical critique is to note ways in which "changes in tools and methods of mapping provoke new ways of understanding and experiencing the world."[846] Drawing attention to the mediating character of maps, he develops the notion of "geographic subjectivity" which defines the parameters of "seeing and interacting with the earth," or what he calls "geo-epistemology."[847] In this way, emphasis is distributed so as to draw attention not just to the object of representation but also to the ways in which it is rendered visible, notably to what is left unseen in the wake of adopting a certain perspective or epistemological framework. In this context, Rankin crucially speaks of the multiplicity of plural maps as opposed to their transformation into a map in the singular. If the latter existed, he argues, it would cover "everything worthy of attention, and nothing more"; in result, however, when "[a]rmed with such a map, it is no longer even necessary to leave your desk: the world has come to you."[848] This observation can be taken both literally and metaphorically. In the first case, the world is spread out conveniently and made accessible in the ocular, correlationist sense as a total world-image, and haptically as space that can be plotted and arranged, gauged and managed, especially with computer mouse, touch screen, or any other controlling device. In the second case, it affects the geographical imagination by rendering it immobile, or premised on identity of self and representation, where little aperture is left for encountering otherness that is not made visible in this epistemological regime. It also marks a key transition in the history of cartography that Rankin identifies in his book, namely the move from representation to grid.

This shift is described in *After the Map* in terms of the transition from representational maps to systems of coordinates, best exemplified by GPS technology. This certainly aligns with the modernist questioning of all-exhaustive systems of meaning as well as the postmodern destabilization of the relationship between map and territory along the lines of the discrepancy between signifier and signified. Digital elaboration of space has freed it from the shackles of political control wielded by the nation state, a point also highlighted by Benjamin Bratton in *The Stack*. Rending territory from the grip of sovereignty has created a

846 William Rankin, *After the Map. Cartography, Navigation, and the Transformation of Territory in the Twentieth Century* (Chicago: The University of Chicago Press, 2016), 1.
847 William Rankin, *After the Map*, 2.
848 William Rankin, *After the Map*, 3.

new situation where power is both dispersed and refocused in the hands of big tech companies which now clash with the nation state in terms of claiming and distributing space. This creates new dangers but also opens possibilities of more direct engagement through the shift "toward the practicalities of aiming, measuring, and navigating in new ways."[849] What can be observed through this lens is the key cartographic and epistemological conflict of the twenty-first century: one between the nation state and "market fundamentalism." The latter is defined by Rankin as "a network of global megacities presiding over a nonterritorial flow of finance capital, supply chains, mobile labor, and the immateriality of cyberspace."[850] Although this formulation is largely accurate, it needs to be supplemented with the observation that the digital cloud is not immaterial since it bases on the extraction of rare earth materials, consumption of fossil fuels, and maintenance of server farms that require huge amounts of electricity and water for cooling, which makes it very much material. Along the lines of the observation that specific geo-epistemological regimes occlude certain aspects of their operation, the sustenance of the global capitalist system would be impossible without extraction of monetary value and simultaneous repression of its material foundation, which includes the biotic and geological layers as well as cultural otherness and income inequality, among others. In the end, the shift from the nation-state geo-epistemology to the "pointillist space of GPS" reveals, in Rankin's perspective, that mapping is an "ongoing process of territory"[851] rather than a transparent medium of establishing firm coordinates that would provide an absolute ontological ground for thought and practice. This view is based on the post-representational approach, where maps are seen not just as a biased tool that fosters certain paradigms, but more profoundly as the locus where the fundamental parameters of reality are negotiated and encoded.[852] Rankin has certain reservations about the prefix "post," which could indeed denote a break away from territory altogether. At the same time, he emphasizes that the move from national sovereignty to digital capitalism is equally simplistic. Instead, he argues, it would be more accurate to say that "the major shift of the twentieth century was thus not a transition from national to planetary, but from one worldwide political-geographical framework to another."[853] Specifically, he aims to demonstrate the emergence of the latter as the logic of the "grid" – "a new way of structuring knowledge" that connects with the centuries-old longitude and latitude but also covers other forms of "gridding space" that prevail at all scales in

849 William Rankin, *After the Map*, 5.
850 William Rankin, *After the Map*, 11.
851 William Rankin, *After the Map*, 15 and 13.
852 William Rankin, *After the Map*, 13.
853 William Rankin, *After the Map*, 14.

the organization of modern life.[854] Although Rankin uses IMW, UTM and GPS as his primary examples of gridding procedures, his insight can be viewed more broadly owing to his notable emphasis on the materiality of such instruments and their hybrid status that bridges theory and practice, or "the dryly *technical* and the supposedly richer categories of *cultural*, *political*, and *intellectual*."[855] Finally, as a step further from the previous mapping regime, the grid suggests that cartography does not end and continues to evolve, never coagulating in one fixed form.

Even though Rankin limits himself to a tightly-wound argument regarding global mapping projects based on the logic of grid (International Map of the World; Universal Transverse Mercator; Global Positioning System), his indication of the larger shift in the prevailing cartographical mode confirms that the organization of space in cognitive terms is historical and thus subject to change. His excitement about the generative possibilities entailed by the move away from the paradigm of truth to that of praxis seems overly optimistic given the user-tracking and surveillance technologies rife in today's digital world. Still, as he notes, new modes of geo-mapping are "also about shifts in geographic power relations more broadly, at all scales, nearly everywhere in the world."[856] Indeed, this reaffirms the view that territory keeps being negotiated, exhibiting major transformations in the way we perceive the world. Rankin passionately emphasizes that the arrival of "globalism" has not caused territory to disappear and dissolve in a non-spatial abstraction, but rather rearranged it into a network of nodes that can be now more freely connected. In this sense, globality is tied back to territory and cast as a spatial effect created by "specific techniques, specific political assumptions, and a specific historical time"; what becomes lost in the process, however, is the "awareness of a large contiguous area."[857] It would appear that the emergent logic of the grid, which involves precise mathematical parcellation of territory, displaced the notion of a larger frame as an unnecessary burden, favoring instead the practical ability to plot connections and navigate space in ever more efficient and precise manner. The parameters of the conceptual graticule developed in projects like IMW, UTM and GPS offer a different way of geometrizing space by yet again smoothing it out. And although these parameters work bottom-up, without basing on a preformulated concept of the world as a container or framework, they cannot produce different forms of representation than nodal coordination of points in space. Rankin asserts that this technique can become a toolbox for artistic and activist intervention, but I

854 William Rankin, *After the Map*, 17.
855 William Rankin, *After the Map*, 18, emphasis preserved.
856 William Rankin, *After the Map*, 296.
857 William Rankin, *After the Map*, 298.

hold that it simultaneously augments what Paul Virillo has called militaristic vision machines, which introduce a panoptic dimension to the organization and policing of space, a new "logistics of perception."[858] Moreover, in light of previous discussions, the digital revolution in cartography cannot be fully critical unless it addresses its own history as a medium nested in past attempts and thus inheriting some of their limitations. Certainly, there is no way that the digital transformation of space could transcend geography, which is altogether impossible, just like it is inviable to set oneself free from the mediating effect of cartography as a space-transforming machine that produces both forms of knowledge and experiences of habitation, ultimately shaping subjectivity and tying it with specific forms of territory. At the same time, however, what lurks in the background is a deep spacetime of "unexamined coordinations between vastly different scales."[859] Addressing them, or seeking to establish connections between global processes and their local effects, for example, remains an open project. If we are to chart climate changes and vastly distributed weather patterns onto a world of cultural and political insulation from nature, more such coordinations need to be made.

At the same time, the grid logic demonstrates that maps need not be world-like, just like brain maps are nothing like what we experience empirically. And although we often find this not much of a distraction as long we can make long-distance phone calls and share data instantly across the world, the underlying cartographies of these complex media remain conveniently occluded behind an image of the world where the material basis is eradicated from view. These cartographic media do not necessarily conform to territory mimetically, nor do they remain fixated since their indexical process is in flux, changing as it encounters intensities and readjusts its spatial models in response. In turn, an environmental imprint is left on the map-making process, transforming it and reshaping its sensorium. This circle from map to territory and back again ultimately dissolves into a single process in which the map-making subject and its environment are the same thing: after all, humans are the environment too. This marks a true ontological shift, as Edward Soja noted, where he aims to rebalance the historical, social and spatial trialectic, resolving the dualism of the empirical and the imaginary through the category of "thirdspace," or "lived space."[860] It is there that the real and the metaphorical can be one: a continuum "concretely grounded in spatial practices yet also represented in literary or aesthetic im-

858 Paul Virillo, *The Vision Machine*, trans. Julie Rose (Bloomington: Indiana University Press, 1994), 6–7.

859 William Rankin, *After the Map*, 299.

860 Edward Soja, "Thirdspace: Expanding the Scope of the Geographical Imagination," in *Human Geography Today*, eds. Doreen Massey, John Allen, and Philip Sarre (Cambridge: Blackwell, 1999), 276.

agery."[861] Ultimately, metaphor can actually augment the material, which is "made more 'real' by being simultaneously 'imagined'."[862] This creates a kind of a hybrid site where vital cross-scalar knowledge is developed: "mapped but never captured in conventional cartographies," Soja argues, "it can be creatively imagined but obtains meaning only when practised and fully lived."[863] Pushing Soja's argument, it can be said that metaphor achieves full efficacy when it begins to have an actual impact on lived experience. Nigel Thrift observes that insofar as non-representational theory focuses on practice, it could be simply referred to as "poetics," which can be in turn tied with *poiesis* in the ecopoetic sense.[864] Thrift quotes Game and Metcalf, who argue that successful metaphors are "vivid" and "lively" because they actually help us to live the world that has been "enlivened" by them. To this observation we could add the already classic insight from Lakoff and Johnson, who speak of metaphors we "live by" in the sense of living "through" them or indeed "in" or "with" them.[865] This perspective on *poiesis* extends, as Thrift shows, from Aristotle to Benjamin and into twenty-first-century ecopoetics, which also advocates what he calls the art of "forming new figurations, new subjective positions"[866] or "the ecology of space" seen as "*spectral gathering*, an articulation of presence."[867] This kind of *séance* can help summon forces usually encountered as hauntings – natural disasters, extreme weather phenomena, geological shifts – and display them as intertwined with human life at all scalar levels. Climate is certainly a spectral entity par excellence because it haunts locally but exists globally as a hyper-object, folding itself into our existence in myriads of ways, often surprising in their intimacy.

Glimpsing the entire web of relations involved in the operation of hyper-objects is beyond human reach, but examining their spectral existence can proceed insofar as we consider the "world," as Manuel De Landa does, to be "a topological (non-metric) space containing all the constraints which organize the physical, chemical, biological and social processes which produce the actual systems (planets, molecules, species, institutions)."[868] Just like Soja, DeLanda offers a redistribution of accents premised on the idea that humanity is part of

861 Edward Soja, "Thirdspace," 272.
862 Edward Soja, "Thirdspace," 276.
863 Edward Soja, "Thirdspace," 276.
864 Nigel Thrift, "Steps to an Ecology of Place," in *Human Geography Today*, eds. Doreen Massey, John Allen, and Philip Sarre (Cambridge: Blackwell, 1999), 304.
865 George Lakoff and Mark Johnson, *Metaphors We Live By* (Chicago: The University of Chicago Press, 2003).
866 Nigel Thrift, "Steps to an Ecology of Place," 308.
867 Nigel Thrift, "Steps to an Ecology of Place," 316.
868 Manuel DeLanda, "Space: Extensive and Intensive, Actual and Virtual," in *Deleuze and Space*, eds. Ian Buchanan and Gregg Lambert (Edinburgh: Edinburgh University Press, 2005), 86.

the environment, while our mental categories have not been tailored so as to reveal the world as it really is. Although they have been shaped in the process of evolution, defining the environmental conditions of life, our scalar capabilities are not necessarily adjusted to a fuller reality that we have empirically encountered only through distributed and mediated ways: temperature readings and other elements of the technological sensorium. To begin considering reality, it transpires, one must begin from "othering," or seeing oneself as embedded in a vast world of material-semiotic currents and processes. Equally so for cartography. It shared part of its history with art but was divorced from it with the advent of rationalism and instrumental reason, or the solidification of extractive approaches. Art has been haunting cartography, however, now emerging within this field as the primary source of metaphor – a means to achieve weirding, defamiliarization, othering – in order to make cross-scalar jumps necessary to enliven the knowledge otherwise factually present as data yet invisible in conventional, mimetic representations of the world. According to Denis Cosgrove, "[t]he most challenging mappings today are found in the creative and imaginative work of artists, architects and designers, neither seeking absolute empirical warranty for their maps nor claiming for them any metaphysical revelation."[869] Therein lies the fundamental power of maps: not to represent and circumscribe the territory as a given object, closing the map-territory gap, but primarily to inhabit such apertures and use them as sites for reflection on the deep temporality and geology of the human subject, for critical intervention in the epistemological structures imposed by the regime of global capitalism, and – last but not least – for fabulation about possible world-images constructed along the lines of environmental awareness. As James Corner put it, the true power of mapping consists in its ability to "emancipate potentials, enrich experiences and diversify worlds," consequently "uncovering realities previously unseen or unimagined."[870] His thinking dovetails with Latour's approach of examining the long lines of actants in wide networks that span vast spatiotemporal scales, revealing the "complex and dynamic imbroglio of social and natural processes" and "visualizing these interrelationships and interactions."[871] Certainly, in this perspective, no total picture can be grasped instantly and can be gleaned only speculatively as the receding horizon of earth-bound knowledge. What this framework offers instead is an image that facilitates "staging the conditions for the emergence of new realities."[872] In this sense, maps can suggest possible

869 Denis Cosgrove, "Introduction: Mapping Meaning," in *Mappings*, ed. Denis Cosgrove (London: Reaktion Books, 1999), 19.

870 James Corner, "The Agency of Mapping: Speculation, Critique and Invention," in *Mappings*, ed. Denis Cosgrove (London: Reaktion Books, 1999), 213.

871 James Corner, "The Agency of Mapping," 214.

872 James Corner, "The Agency of Mapping," 216.

cartographies that can be assembled, for example basing on more-than-human ontologies. Maps, as Corner holds, are creative because they are an activity: the very process of map-reading is one of world-building. Therefore, "speculative techniques of mapping may generate new practices of creativity"[873], which constitutes the staple of ecopoetics as a future-oriented way of making alongside the paths of material planetary unfolding in the Anthropocene. Corner makes the caveat that this does not necessarily involve new forms per se but may rely solely on the reconfiguration of existing elements. While this is a good point, as evidenced by the critical hotbed of remix culture, the restriction may be too stringent since the proliferation of cartographical questions in art, literature, philosophy and music has often pushed the boundaries of form as well, testing the limits of creative expression and probing how this can challenge prevailing epistemological regimes. Still, as Corner aptly formulates it, maps are "essentially fictitious," which is no shortcoming but an asset that fosters "construing and constructing worlds."[874] At the same time, he goes on to emphasize that there is vital work to be done within the ecosystem of mapping as well. The wealth of global imaginings and especially the big data holding grids, coordinates and vectors, have paradoxically made the Earth "excessively mapped" and obfuscated.[875] What Corner suggests is an orientation towards otherness, returning "mystery and desire" into the picture to counteract the sense of closure and the lethargy ensuing from it. From the angle of this study, the mystery would concern the inexhaustible globe as a hyper-object that humans are uncannily a part of. The impenetrable core of deep history buried under layers of space-time constitutes the geological unconscious, its traumatic vectors crisscrossing through the human subject, accessible only indirectly, through symptomatic ruptures that open vistas of Negaresteni'a cosmic woundedness. The work done in maps is therefore one of "excavation" and "extension" undertaken in order to "expose, reveal and construct latent possibilities within a greater *milieu*."[876] It is in this sense that Corner can hold that mapping aims "not to depict but to enable," entailing reconsideration of cartography as a domain that invites art in order to expand its potential to express relations on the living planet.[877] Indeed, at its heart, "mapping innovates; it derives neither from logical possibility (projection) nor necessity (utility) but from logical *force*."[878] It could even be argued that the last aspect is interpretable as evolutionary in depth. In light of Malabou's and Negarestani's grounding of the human in the geological unconscious of cosmic

873 James Corner, "The Agency of Mapping," 217.
874 James Corner, "The Agency of Mapping," 218.
875 James Corner, "The Agency of Mapping," 220.
876 James Corner, "The Agency of Mapping," 225.
877 James Corner, "The Agency of Mapping," 225.
878 James Corner, "The Agency of Mapping," 251, emphasis preserved.

history, as well as given the extensive foundations for mapping within brain structure, it becomes possible to argue that maps are thoroughly natural and human subjectivity arises through maps that are both inherited, remade and invented. Cartography emerges in this light as having its own deep history that ultimately frees it from the hold of *homo sapiens.* More-than-human ontologies of speculative realism and new materialism demonstrate, for example, that map-making is inherent to all life insofar as it concerns the creation of life-worlds, as Jakob von Uexküll has shown, laying the foundations for biosemiotics.[879] Already at early stages of life's development, cellular membranes define fundamental spatial relations and bring forth what we call a living organism. At the level of metaphysics, thinkers like Harman and Latour have used cartographical categories to describe the fundamental parameters of relations formed in the universe. For this reason, it could be said that speculative cartographies is not a new idea but in fact a very old one. Luckily, this is no flaw but rather an aspect that offers the opportunity to mobilize cartographical imagination on the back of millions of years during which the planet was formed and life emerged. As Nigel Thrift succinctly put it, "maps have always been engines rather than cameras."[880] This statement works well in the context of the machinic ontology outlined in *Capitalism and Schizophrenia* by Deleuze and Guattari. Within its parameters, mapping is a process in which the subject-object binary dissolves since the mapping's performative aspect of territorialization and deterritorialization does not impose dualities but sets up membranes and "constructs the unconscious."[881] Its tracing is material and speaks not only to human agency but also to its embeddedness in the environment it co-creates. Ian Davidson interprets the rhizomatic theory of mapping developed by Deleuze and Guattari as enabling to "'plug the tracings into the map' in order to bring together both structure and experience."[882] It would be a performative move akin to Malabou's formula of plastic reading: map-readers are changing as they journey through the world. The speculative component in this practice is that of opening lines of flight: "lines to worlds in the making" or "pathways of becoming and existing."[883] These offer a host of new coordinates for constructing a different version of the globe than the ones based on purely metrical visions of the Earth. After all, "[t]he lines of

879 Jesper Hoffmeyer, *Biosemiotics: An Examination into the Signs of Life and the Life of Signs*, trans. Jesper Hoffmeyer and Donald Favareau (Scranton: University of Scranton Press, 2008), 171.

880 After: Joe Gerlach, "Lines, Contours and Legends: Coordinates for Vernacular Mapping," *Progress in Human Geography* 38.1 (2014), 24.

881 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*, trans. Brian Massumi (Minneapolis: University of Minessota Press, 2008), eBook, 72.

882 Ian Davidson, *Ideas of Space in Contemporary Poetry* (New York: Palgrave Macmillan, 2007), 65.

883 Joe Gerlach, "Lines, Contours and Legends," 26 and 28.

cartography are found not just in the etchings of a map, but also in the gestural enactments and negotiations of mapping practices."[884] Emphasis on the situatedness and performative dimension of mapping practices embeds them within planetary conditions of life, "plugging" humanity back into the global membrane of intensities, not using one projection but many, the diagrammatic lines necessarily abstract in order to circumvent the globe. This practice, Gerlach contends, constitutes "a cartography of speculative pathways," which follows in the footsteps of Brian Massumi's elaboration of Deleuze and Guattari's concepts of the virtual and the real.[885] In this perspective, speculative cartography is primarily experimental as it explores the possibilities of how cartographic elements like lines, contours and legends can be deployed to build hybrid accounts of a globe in the making, charting macro-scalar intensities and tracing micropolitical lines of flight.

The above considerations of cartography's history and becomings could be summed up using Peter Sloterdijk's argument that the history of humankind is the history of globalization: "mankind" exists only after the emergence of an "anthropological horizon as a virtual plenum of peoples and cultures."[886] However, it would have to be supplemented with one caveat: this history has always been more-than-human, both in the sense that the non-human precedes humanity evolutionarily and in the sense that it permeates what we refer to as the human, urging us to reconsider our worldly situatedness. It is true, however, that in the Anthropocene humanity finds itself challenged to "provide an adequate response to the globalized world in which we live today and, if not, what other form(s) our inhabitation of the globalized world might take."[887] This is a fair takeaway from Sloterdijk's *Spheres* project devoted to the study of how spheres are created as sites of habitation, or "dwelling" in Heidegger's poietic sense[888]: the material metaphor of an environment-made-world. Spheres are made poetically, following Aristotle's meaning of *poiesis* as the art of making, or creating new forms. As such, they are not like the environment itself but more permeable and malleable, their categories of inside and outside fluctuating and reconfiguring. And yet Sloterdijk emphasizes that "being-in-the-world is only possible as being-in-a-sphere."[889] This would mean that the experience of the environment as

884 Joe Gerlach, "Lines, Contours and Legends," 28.
885 Joe Gerlach, "Lines, Contours and Legends," 34.
886 Peter Sloterdijk, *Spheres. Volume 2: Globes, Macrospherology*, trans. Wieland Hoban (South Pasadena: Semiotext(e), 2014), 940–941.
887 Marie-Eve Morin, "The Coming-to-the-World of the Human Animal," in *Sloterdijk Now*, ed. Stuart Elden (Cambridge: Polity Press, 2012), 79.
888 Martin Heidegger, "…Poetically Man Dwells…," in *Poetry, Language, Thought*, trans. Albert Hofstadter (New York: Harper and Row, 1971), 214.
889 Marie-Eve Morin, "The Coming-to-the-World of the Human Animal," 88.

"worlding," "world-building" and "world-making" establishes lines and coordinates in the process of subjectivization. Spheres are not fixed but rather operate as "intermediary worlds or intermediary openness."[890] This dovetails with some aspects of Negarestani's argument, where cosmic traumata cut through radical openness, creating wounds: sites of difference, intensity and what Morin describes as the "onto-kinetic" momentum which "displays its own gathering force by building series, networks, proximities, passages, routes."[891] This rhizomatic extension, or probing of the world contains the element of othering because it is within "other spaces," or "other spheres" – not the totalizing ones – that humanity finds its "proper abode for […] co-existence."[892] Sloterdijk's extensive studies of spheres – which he calls "spherology" – has led him to conclude that "the earth and the globe form the paradigm of modern semiotics."[893] Indeed, negotiating visions of the global equally belongs with the history of globalization. In this "geodicy," however, Sloterdijk identifies two "monstrous" aspects: first, the production of the "shallow monster" of the Earth as empty space inviting rampant extractivism, and second, the deep monstrosity of the "geological monad"[894]: an unfathomable, abyssal Earth that "serves as the foundation for all life, thought and invention."[895] The latter monstrosity is revealed by the Anthropocene, when irruptions of the planet's deeper operations occur in human scales and a vaster entity is shown lurking behind the familiar flat world covered with patches of color-coded nation states. This variant of the monstrous is also echoed in the enigmatic question "What does the Earth think it is?" posed by Deleuze and Guattari in *What is Philosophy?*[896]

The tantalizing question concerns fundamentally the recognition of the Earth as an entity that goes beyond the human yet constitutes the foundation of human experience of the world, including the very framing of this question. This finds echo in the suggested question about who humans think they are. The shift from one to the other entails fundamental realignment of the graticule used to capture the planet as the thing-in-itself and abyssal ground of life. Such a veering toward a planet-centric perspective marks the effort to speculatively probe the possible worlds that may arise from our figurations of reality. This is also where the potential of speculative cartographies is best revealed since they rise up to the

890 Marie-Eve Morin, "The Coming-to-the-World of the Human Animal," 84.
891 Marie-Eve Morin, "The Coming-to-the-World of the Human Animal," 87.
892 Efraín Kristal, "Literature in Sloterdijk's Philosophy," in *Sloterdijk Now*, 155.
893 Efraín Kristal, "Literature in Sloterdijk's Philosophy," 168.
894 Efraín Kristal, "Literature in Sloterdijk's Philosophy," 170.
895 Peter Sloterdijk, *In the World Interior of Capital. For a Philosophical Theory of Globalization*, trans. Wieland Hoban (Cambridge: Polity, 2013), 6.
896 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus*, trans. Brian Massumi (Minneapolis: University of Minessota Press, 2008), eBook, 154.

monstrous, bridging life, its geological foundations, and the environmental peril we have found ourselves in owing to climate change and other ecological crises. These other cartographies are today explored in a wealth of theoretical and artistic works, confirming that the map remains the pivotal category in discussion of the most urgent themes in the humanities and beyond: who do we think we are when the Earth is already telling us out loud what it itself can be. Speculative cartographies offer maps to these new subjectivities and lifeworlds on a planet suddenly made cosmic again.

One paradoxical dimension of the term Anthropocene is that it denotes a shift in the term *anthropos*, setting the concept of humanity in motion and turning it into one of today's key "wandering concepts" as Mieke Bal calls them, ones moving across disciplines.[897] No longer ontologically stable, humanity is propelled along a trajectory that redefines the humanities and their task. Still, the prime mover who determines the course of this development is revealed not to consist in humanity itself as self-established and self-sufficient, but in the dense mesh of its interrelations with the non-human world. Against the backdrop of what would be traditionally called "nature," the world of "culture" emerges as inscribed in an environment that it is merely a part of and not its overseeing instance. If we agree with Timothy Morton on the point that it was the agrarian revolution and the "agirologisitics" it introduced that inaugurated a dualistic relationship with the habitat, the important, anti-dualistic reversal implied by the Anthropocene seems to undercut millennia of extractivist practices.[898] In this sense, it expectedly poses a challenge to thought, which has become deeply entrenched in the model of subject and object, which – when taken to an extreme – detaches humanity from the foundation that serves as its condition of possibility, or the ecosystem whose specific parameters have enabled the flourishing of *homo sapiens*. Such a recalibration necessitates thinking the broader habitat whenever we engage human life. In this sense, the Anthropocene is a cartographic epoch insofar as its *anthropos* sets out on a journey across the globe in search of itself and its place. The nomadic, wandering thought is dislodged from the shell of anthropocentrism and becomes a revolutionary subject in the sense implied by Negarestani when he argues that the Copernican Revolution can be complete only when both the subject and the Earth are set in motion. The double meaning of revolution seems apt in this context since the shift in the relationship with the living planet is simultaneously personal and political, local and global. Metaphorically speaking, the revolution snatches the Earth from

897 Mieke Bal, *Travelling Concepts in the Humanities. A Rough Guide* (Toronto: University of Toronto Press, 2002), 4.

898 Timothy Morton, *Dark Ecology* (New York: Columbia University Press, 2016), eBook, 100–101.

under humanity's feet and forces it to either drift aimlessly or chart a new course on the basis of different coordinates, ones that are still in the making, a task that involves reimagining the place of the human subject within and as part of a world that has its own agency, revealed in processes occurring at scales vastly dissimilar to ones graspable in human cognitive terms. If we assume that the non-anthropocentric perspective involves a different projection than the disembodied Apollonian gaze from above, the interruptions of the Earth that manifest in climate changes, for example, invite a scalar revolution, one that requires thinking human and geological scales at the same time. Finally, the legend in this tripartite formation, which comprises one of the nuclei in cartography, ceases to convey the appropriation of space by naming it and opens up a metaphorical field for the development of new terms that could pierce through ossified language structures in order to find novel means of expression and forge alliances with the vaster non-human world.

The dynamic, or revolutionary character of Anthropocenic cartography dovetails with its processual and non-representational aspects as discussed in much of recent work on the subject in human geography and critical cartography. The "emergent cartography" of Rob Kitchin and Martin Dodge[899] unshackles this discipline from the grips of colonial power relations and invests it with a practical dimension that "proceeds from action" and is therefore able "to transform a battlefield into a cooperative interdisciplinary laboratory."[900] Conventional uses of cartography that dominated since its modern inception in the global North meant to ensure smooth navigation and successful rendition of distant property through scientific abstraction. However, in broader anthropological terms cartography has always played the important function of framing the world in categories that afford not just extraction of value but primarily creative cohabitation. This, however, has been increasingly difficult in times of tremendous acceleration of changes affecting entire societies at an unprecedented pace, fueled by the digital revolution and expanding systems of global connection. What these transformations have caused is a hindering of cognitive mapping, or "everyday production of 'practical knowledges' that are partial, mobile and open."[901] Jameson's concept of cognitive mapping offers a different mode of totalization that these later elaborations tap into: one that does not proceed from a "privileged bird-eye view" but ventures to "relate and connect; to situate and interpret […] in relation to the wider relations and forces."[902] The Latourian dimension of this perspective is clear: an actor functioning in a net-

899 After: Tania Rossetto, "Theorizing Maps with Literature," *Progress in Human Geography* 38.4 (2014), 515.
900 Tania Rossetto, "Theorizing Maps with Literature," 514–516.
901 Tania Rossetto, "Theorizing Maps with Literature," 520.
902 Tania Rossetto, "Theorizing Maps with Literature," 520.

worked reality augments their creative powers by forming alliances with other actors, human or not, becoming environmental, or geological. The tentacular agent – as Donna Haraway would have imagined them – is preoccupied with extending its feelers and precariously reaching out into the larger world.[903] It is a process of discovery but not appropriation since it involves self-othering and embracing the fact that much of what is traditionally conceived as human is actually far less fixed, in fact resembling an ever-changing map that connects various elements in order to garner the agency required to act in the world. Seen in this perspective, the human subject also becomes cartographic. No longer a solitary point in space, or the iconic big red dot that says "you are here," the non-anthropocentric subjectivity finds itself afloat in the Anthropocene, drifting on uncharted seas, where it must find its bearings in the process of "becoming earth" as Rosi Braidotti has called it.[904] The accent on the processual character foregrounds the temporal dimension, animating the map so that it can become able to "reproduce the rhythmic collisions between human and the non-human, trace the borders between the rhythms of the material world and of the imagination, and articulate the rhythmic repetitions that give rise to variation, alteration, and transformation."[905] In this lens, "you are here" can be reformulated as "you are going there" and turned into a serious question about the direction humanity is taking, along with its navigational competence, which crucially enables movement between vastly different scales and projections in the effort to chart a sustainable path for the future.

The Copernican Revolution, often invoked in relation to paradigm shifts regarding the perception of the Earth and space within speculative realism and new materialism, reveals a globe moving at its own planetary pace beneath humanity, making it finally earthly. This turn of phrase has been elaborated by Bruno Latour, whose term "Earthlings" exhibits the change in consciousness entailed by recognition of profound entanglement between human and non-human realms. His anecdotal image describing newspaper pages welded together with moisture retains poignancy[906]: as different topics in press articles coalesce, they form a blurred yet palimpsestic writing that spans a variety of dimensions, revealing the multi-layered character of today's key matters of concern. Coalescing under the pressure of the Anthropocene, this amalgam of questions – social, psychological, environmental – forms the triquetra theorized by Guattari, where the fields of

903 Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016), 71–72.

904 Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013), 81ff.

905 Adam Barrows, *Time, Literature, and Cartography after the Spatial Turn* (Cham: Palgrave Macmillan, 2016), 155–6.

906 Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, Mass.: Harvard University Press, 1993), 1–3.

ecology, politics and individual sensibility cannot be thought separately. In the present perspective, this knot ties together subjectivity, matter and the media used to negotiate the relationships between them. At the crux stands the brain-as-cartographer, the embodied mind that charts the cognitive maps we rely on while encountering the world, discovering it anew, and weaving a story that helps to situate oneself as well as plot a future course.

The fundamental aspect of the cartographical brain lies in the fact that it encounters otherness both within and outside of itself. Through its rootedness in deep time, it remains connected to the geological dimension of human life, setting it in the context of evolutionary and other processes occurring at vastly different scales, from microbial life to changing weather patterns. Simultaneously, the current human environment – predominantly urban, digital-driven and subjected to intense anthropopressure – cannot be fathomed using traditional conceptual frameworks, challenging our ability to critically assess the global social system. Both kinds of otherness come to the fore upon the discovery of dark ecology, one that is profoundly uncanny and carries no consolation apart from the blissful thought of partaking in an eons-old process of reconfiguring matter, which has led to the creation of terrestrial life. In this context, Morton writes about loops, or the kind of knowledge that is all about knowing in the loop, or weird knowing: the key to ecological awareness.[907] Planetary thinking is loop-based because it takes a detour in order to produce its meaning. It is a knowledge that enables one to ascertain their subjectivity and simultaneously recognize themselves as a "geophysical force on a planetary scale."[908] Weird loops cause the familiar to be suddenly pierced through with an alien dimension, creating the uncanny effect best epitomized by the classic twist in noir fiction: the detective is the criminal, an idea also embraced by Philip John Usher.[909] As Andrzej Leder demonstrated, the modern world has prioritized only one form of looping: money. Monetary economy creates a dense weave of loops that hold the earth like a ball in a net, conveniently offering ready-made representations of distant elements through economic value alone. What therefore emerges as the crucial task in speculative cartographies is to fashion other loops in a poetic mode of self-weirding that thinks the world in order to think oneself.

907 Timothy Morton, *Dark Ecology*, 30.
908 Timothy Morton, *Dark Ecology*, 37.
909 Timothy Morton, *Dark Ecology*, 36.

Meridian

In the light of planetary weird looping, Paul Celan's Meridian speech can be read in ecopoetic terms, revealing an environmental dimension besides its foremost contexts of aesthetics and trauma, particularly Shoah.[910] As both Holocaust survivor and poet writing in German, Celan's position was unique and indeed "extreme"[911] insofar as he oscillated between silence and poetic speech in the face of a catastrophe that has challenged the powers to comprehend and communicate.[912] Embracing muteness as a form of address, Celan chose the path of the uncanny to "break free of representation"[913] and seek ways of reinventing language in the face of trauma. Crucially, he developed a poetics that mobilizes ellipsis and gap-opening rather than direct predication because he saw no other way forward other than to break down speech in order to shake off the shortcuts and simplifications that have taken discursive root, creating the illusion that Shoah, and the world more generally, can be effortlessly accessed. Celan's quest to find means of expression appropriate for his experience of survivor and poet is thus rooted in the Jewish ordeal but has since come to express and catalyze the shock of modernity as a system of perpetuating violence that can be glimpsed in language only when the latter is subjected to self-othering. Certainly, it does not make sense to directly compare Shoah with the climate crisis. Still, the seismic tensions in mechanisms of representation revealed by the former are so important – precisely because of its particular context and remembrance – that Celan's insight remains indispensable when addressing questions of the world's legibility and literal room for breathing. For him, there was indeed no going back, which in turn posed a challenge for art to become more deeply attuned with otherness and its central place within any ethically self-aware reflection.

Celan was preoccupied with the figure of meridian as a mode of encompassing the world and – by virtue of its perilous global voyage – rupturing, or undermining the rhetorical field.[914] Insofar as the meridian connotes venturing into the unknown of uncanny distance, it aligns itself with what we have established to be central to Morton's terrestrial loop-folding. At the heart of Celan's account lies the idea which could be summarized as a becoming-other that leads to the

910 Paul Celan, "The Meridian," in *Collected Prose*, trans. Rosemarie Waldrop (New York: Routledge, 2003).

911 Esther Cameron, *Western Art and Jewish Presence in the Work of Paul Celan. Roots and Ramifications of the "Meridian" Speech* (Lanham: Lexington Books, 2014), 107.

912 Paweł Piszczatowski, "Poza kratą mowy. Poetologiczne funkcje milczenia w wierszach Paula Celana z tomu 'Sprachgitter'," *Teksty Drugie* 142.4 (2013), 258.

913 Eric Kligerman, *Sites of the Uncanny. Paul Celan, Specularity and the Visual Arts* (Berlin: Walter de Gruyter, 2007), 104.

914 Kristina Mendicino, "An Other Rhetoric: Paul Celan's *Meridian*," *Modern Language Notes* 126.3 (2011), 643.

discovery of the otherness within. Marrying the thought of Celan and Morton creates a loopy homecoming, which brings the other of nature back to the heart of the subject who supposedly freed themselves from matter. This pairing is also justified by the fact that Celan was preoccupied with geology and crystallography, taking a keen interest in how they can be articulated in poetry, thus bringing concepts of deep-time to the table of *poiesis*, where metaphors are forged in a "volcanic" creative process.[915] These aspects make Celan especially predisposed to address the subject at hand, and to guide further discussion of the crossroads between cartography and creative world-making of the "self-conscious Anthropocene"[916]: the body of works that display the urge to experiment with form in order to render visible the things forced into the position of passive audience to the achievements of humanity.

In the Meridian Speech, Celan addresses the discussed shift in thinking as "*Atemwende*" – "a turning of our breath," which is also the title of his 1967 collection of poetry.[917] "The poem," Celan writes, "holds its ground on its own margin."[918] The turn described in the speech involves locating the power of the poem in its ability to inhabit its own fringes and push beyond the limits of its form toward other dimensions, for example ones of geological scale as is the case with his crystallographic works. The fundamental mechanism, according to Celan, consists in the fact that the poem is "en route" – on its way toward the "mystery of the encounter." In fact, the poem not only "intends" but practically "needs" alterity, orienting itself necessarily to the other, setting its path by way of "projecting ourselves into the search of ourselves" and achieving a "homecoming" when the meridian is closed to form a full circle.[919] In ecopoetic terms, Celan demonstrates how the poem is always in the process of discovering its rootedness in material nature as its ground of possibility. As a "connective which […] leads to encounters," the meridian is "immaterial as language, yet earthly, terrestrial, in the shape of a circle which, via both poles, rejoins itself and on the way serenely crosses even the tropics."[920] The adjective "serenely" echoes the dark ecstasy of ecognosis described by Morton: the uncanny sense of expanse and connection accompanied by dissolution and remaking of individual identity. Most importantly, however, it emerges as the major figure of understanding and sense-making, postulated by Celan to consist in the radical gesture of self-othering, or

915 James K. Lyon, "Paul Celan's Language Of Stone: The Geology Of The Poetic Landscape," *Colloquia Germanica* 8 (1974), 307.
916 Lynn Keller, *Recomposing Ecopoetics. North American Poetry of the Self-Conscious Anthropocene* (Charlottesville: University Of Virginia Press, 2017), eBook, 21.
917 Paul Celan, "The Meridian," 47.
918 Paul Celan, "The Meridian," 49.
919 Paul Celan, "The Meridian," 49 and 53.
920 Paul Celan, "The Meridian," 54–55.

terrestrialization, bringing along knowledge that is weird-looped and made global before becoming individual. The meridian connects but this occurs by encountering difference and making the effort of passage, not through effortless gliding or abstract plotting on a networked grid. As Philippe Lacoue-Labarthe observes, in Celan's perspective, poetry is invariably an interruption of language or art[921], sending it along tropes and metaphors on a voyage to circumnavigate the world: to traverse it along a particular line of flight that leads back to oneself, forming an uncanny loop.

"For the poem," writes Celan, "everything and everybody is a figure of this other toward which it is heading."[922] Today, the primary otherness is terrestrial, requiring to render visible the Earth as a larger whole to which one must submit before encountering oneself. Thinking oneself becomes possible only after noting the ground beneath one's feet, as it were, however strange it may appear, because, as American poet George Oppen put it, "The self is no mystery, the mystery is / That there is something for us to stand on."[923] Elsewhere, as Lacoue-Labarthe notes, art is indeed the other for Celan: "strange" (*fremd*) or in fact, in itself, "the distant and the elsewhere."[924] This leads the French philosopher to argue that art can be equated with the uncanny (*das Unheimliche*) and as much as poetry can wish to set itself free from art, it may never do so because it is indeed rooted in materiality despite invariably trying to inhabit its own margin in an outward *ekstasis* toward otherness. Crucially, the uncanny destabilizes the human and estranges it. Lacoue-Labarthe argues that in Celan there is in fact no "other domain" but an outside that is oriented toward the human: existence "made strange" and "out of place."[925] However, it is not just art, or aestheticization that facilitate losing oneself and set up the tension between the singular and the general. In the perspective of dark ecology, nature does the same: in fact, climate change ushered in an ecological era when "nearness does not mean obviousness."[926] The familiar place suddenly emerges as crisscrossed with a variety of time-scales and a radically other, "monstrous" dimension.[927] Morton's argument is that so far space has served the "colonization protocol"[928] by making things present, whereas the discovery of ecological depth undercuts the safe spatial regime that previously rendered objects in the world as ready for ap-

921 Philippe Lacoue-Labarthe, *Poetry as Experience*, trans. Andrea Tarnowski (Stanford: Stanford University Press, 1999), 44.
922 Paul Celan, "The Meridian," 49.
923 George Oppen, *New Selected Poems* (New York: New Directions, 2022), 159.
924 Philippe Lacoue-Labarthe, *Poetry as Experience*, 44.
925 Philippe Lacoue-Labarthe, *Poetry as Experience*, 48.
926 Timothy Morton, *Dark Ecology*, 43.
927 Timothy Morton, *Dark Ecology*, 40.
928 Timothy Morton, *Dark Ecology*, 41.

propriation and extraction. Dark ecology therefore twists the meridian so as to turn it into a weird loop which reveals not only what was unknown before but also what shall be never known, gesturing both toward the Earth's core as the dark center of planetary formation and the outer space as the continuum of space-time where the traumatic cut of terrestrial birth was made billions of years ago. In this way, it is possible to claim, expanding on the argument made by Lacoue-Labarth, that poetry expresses not just the existence of the human vis-à-vis "the abyss – the bottomlessness – of the heavens," but also indicates the latter as the uncanny ground from which life sprang: the intimate "heart of the *Unheimliche*."[929] For Lacoue-Labarthe, the abyss of art or language is the proper abode of poetry. However, in a dark ecological perspective, the space of language cannot be thought anymore in strictly anthropocentric terms as it emerges to be a more-than-human tangle of expression that includes human communication but is certainly not limited to it, which is also suggested by biosemiotics. This angle recasts the meaning of utopia – discussed by Celan towards the end of the speech – not as a place but a "spacing," "which places (do not) sup-pose and which upholds them, with no hold."[930] This paradoxical formulation indicates a larger whole that cannot be made visible through representation in the conventional sense and resists any mimetic efforts. Lacoue-Labarthe slowly inches in this way toward the argument that aligns this deeper layer with the "pure language" of Walter Benjamin, albeit insofar as it is reinterpreted in ecological terms.[931] This is possible if we follow Celan's own dictum to "enlarge art" by taking it along the narrow path, or uncanny loop that casts poetry as one language among many forms of expression in the Earth's biotic and geological life, which affords the rise of meaning for humans and other terrestrial beings. This could also elucidate the important tension between Celan's silence, or muteness, and the word as the singular voiced enunciation that is subject to form and style. In ecological light, the silence of nature is something that can be reversed through listening – or becoming-attention, as could be said in the context of Celan and Benjamin – when the poem ceases to talk endlessly, preoccupied with itself, and begins to listen, turning to the other, as it is wont to do according to American poet Forrest Gander.[932] As Julia Fiedorczuk comments on Gander's own poetry, his book *Twice Alive. An Ecology of Intimacies* offers a vivid example of the exuberant plurality of more than human voices that communicate within and across the pages of this volume: scientists, lichens, tectonic plates – all of them converging in an "unclaimed" story about identity and humanity, which are

929 Philippe Lacoue-Labarthe, *Poetry as Experience*, 51–52.
930 Paul Celan, "The Meridian," 54.
931 Walter Benjamin, "The Task Of The Translator," trans. Harry Zohn, in *The Translation Studies Reader*, ed. Lawrence Venuti (London: Routledge, 2004), 21.
932 Forrest Gander, *As a Friend* (New York: New Directions, 2008), 68.

never cast as singular but invariably multiple.[933] It is then that the word of the poem can be properly situated within the symphony of voices that remain incompatible with human forms of expression yet can be gleaned through the apertures that the poem produces. In a way, Lacoue-Labarthe supports this when arguing that the situation of exchange is "reversible," meaning that it has in fact "no determined direction"[934], casting the planet as an echo chamber, or a sound-amplifying form of bio-geological architecture. Consequently, addressing the Earth using the meridian is a way of allowing oneself to be addressed by planetary forces in turn. As Morton puts it, the weird knowledge of the Anthropocene is largely about "letting [oneself] be known"[935] rather than aspiring to Enlightenment-style objective, dissociated knowledge, which is preoccupied with letting otherness be known and then assimilated as extracted value, whether financial or semiotic. Finally, for the Frenchman this amounts to saying, via Martin Heidegger, that the self "reaches itself within itself only 'outside'," where estrangement facilitates encounter.[936] The double appropriation that is pivotal to his discussion can be reframed, using Morton's terms, as co-existing: becoming accustomed to a strangeness that can never become less strange, which he calls ecognosis, or a "knowing that knows itself."[937] Such knowing is once again loopy and weird. Similarly, as we read further in Lacoue-Labarth, poetry is certainly not about representing for it cannot possibly capture what Heidegger calls Being and what could be called nature here along the lines of dark ecology. Poetry is more akin to perceiving, or listening and as such comprises an "interruption of mimesis" rather than its streamlining.[938] Accordingly, despite the overwhelming focus on poetry's means of commemoration and its capability to pin the here and now, it arrives – as Morton has it – "from the future": "Art is thought from the future," he declares, "[t]hought we cannot explicitly think at present. Thought we may not think or speak at all."[939] It is invariably as-yet unthinkable and must veer or twist the globe to form a meridian before it can arrive as meaning – it has to cross the tropics before it can speak of any singularity.

As Kristina Mendicino notes, Celan's Meridian Speech does unfold a "dark, 'other' rhetoric," one that not only frees poetry from the confines of what is conventionally poetic (or lyrical), but also even "turns public speech into poetic

933 Julia Fiedorczuk, "Nieuznany rozdział naszej autobiografii," in Forrest Gander, *Podwojone życie*, trans. Julia Fiedorczuk (Wrocław: Ossolineum, 2023), 79 and 88.
934 Philippe Lacoue-Labarthe, *Poetry as Experience*, 59.
935 Timothy Morton, *Dark Ecology*, 27.
936 Philippe Lacoue-Labarthe, *Poetry as Experience*, 59–60.
937 Timothy Morton, *Dark Ecology*, 27.
938 Philippe Lacoue-Labarthe, *Poetry as Experience*, 67.
939 Timothy Morton, *Dark Ecology*, 20.

speech."[940] This reasserts how poetry can contribute to the understanding of the world and human existence as well as articulate them in hope of achieving greater social resonance and contributing to change. Indeed, if one of Celan's preoccupations in the Meridian is – according to Mendicino – the question of "unheard-of couplings" such as Robespierre and Danton becoming "intimately" enmeshed in their language[941], then the primary subject for an ecological reading of the Meridian can be reasserted as the "unheard-of coupling" between humanity and the Earth via deep time, which cannot be communicated otherwise than by terrestrializing thought and leading it through the global. Just like Mendicino postulates, the phrase "you will remember" (*Sie erinnern sich*) from the beginning of the speech acquires in this sense a much grander dimension, gesturing toward the memory of language as evolutionary and planetary before being even remotely human. In this sense, the almost groundless "datedness" of the poem – its paradoxical weaving of the singular and the general – can gesture as far back as the Earth's inception, at the same time indicating a future to be made in light of this new-found abyssal grounding.

These remarks can be measured against some of the more recent developments in ecopoetics as an area where the poem is considered in an enlarged perspective opened by the assertion, rooted in ecology and the Earth's history, that humanity is indeed not "within the world but of the World."[942] The poem, according to Tom Bristow, "mediates between concrete reality and abstract ideas," inaugurating the thinking of selfhood as a mode of "Worldliness," the poem acting as a "dialogic site of speaking and listening."[943] In this sense, poetic geography as a tool for thinking human-as-other becomes possible to align with geography as "earth-scripting," where different spatiotemporal scales and perspectives can be gleaned from the paths taken by tropes and metaphors that round-off the globe. "Ecopoetics," Bristow argues, "implicitly calls for a moment to reflect on how we imagine spaces and formations beyond the purview of the sense horizon, at pace enough to notice and acknowledge discrete entities and the emergence of our earth others."[944] The result, according to the scholar, is cartographical insofar as it renders visible a "mosaic" or "palimpsest" of timelines and material dimensions within the familiar place, thus contributing to a sense of situatedness.[945] Bristow examines the ways in which readings of contemporary poetry can renegotiate the place occupied by humanity within its micro- and

940 Kristina Mendicino, "An Other Rhetoric," 647 and 638.
941 Kristina Mendicino, "An Other Rhetoric," 649.
942 Tom Bristow, *The Anthropocene Lyric: An Affective Geography of Poetry, Person, Place* (New York: Palgrave Macmillan, 2015), 2.
943 Tom Bristow, *The Anthropocene Lyric*, 6 and 8.
944 Tom Bristow, *The Anthropocene Lyric*, 9.
945 Tom Bristow, *The Anthropocene Lyric*, 10.

macro-scalar contexts which amalgamate in complex formations that cannot be simply defined as human or non-human. He argues that, ethically speaking and echoing a key phrase of Celan's, "planetary problems might 'come home' to us if our sense of the household was larger than the dwelling place at which we reside."[946] Notably, as it transpires from this observation, framing the *oikos* (household) necessitates *poiesis*, or ways of making that rely on self-othering in order to grasp the larger ramifications of earthly existence. In line with Celan's attention to form and the poem's thriving on the margin, Bristow notes that the "Anthropocene lyric" neither reaffirms any pre-given conservative stance nor delivers a "lyrical song of the earth in a political vacuum."[947] It is in this sense that the kind of poetry in question, or artistic creativity more generally speaking performs the longitudinal work of encompassing the Earth by tracing specific matters of concern from their locality across the world and back to the starting point, where loopy, weird knowledge emerges, contributing to speculative cartographies of the Earth as a planet that is both overly familiar and fabulously strange.

One vivid example of weird looping employed in the service of global compositionism is the ongoing *Worldproccessor* project by conceptual artist Ingo Günther, which began in 1988 and continues to add to already more than three hundred visualizations of global processes which offer a meta-modeling of material phenomena along issue-based Latourian loops, or meridians traced across the Earth. Günther examines individual aspect of globalization and its ramifications, "trying to tell the lie of abstraction and visualization that tells the truth."[948] Ranging from "DNA traces" (no. 231) to "Submarine Fiberoptic Network" (no. 319), these globes suggest the possibility of endless loopings that twist the planet and gradually compose the world, inching towards a globalization informed by science and artistic elaboration, poeitically rendering the global more visible and weaving indiscriminately between political and environmental concerns. The project includes a permanent installation titled "Exosphere and the Field of Globes" in Wolfsburg (Germany), where ninety globes are on display, overlooked by a humongous "exosphere," twelve meters in diameter and composed of graticule lines.[949] The porous form of the exosphere along with its more-than-human size vitally ascertain that the planet is not a pre-given form but demands painstaking assembly through never-ending loopings that project a vision of the world not just along national borders or shipping routes but also issues such as water access, refugee flows, linguistic differentiation, maritime

946 Tom Bristow, *The Anthropocene Lyric*, 12.
947 Tom Bristow, *The Anthropocene Lyric*, 15.
948 Katherine Harmon, *The Map as Art. Contemporary Artists Explore Cartography* (New York: Princeton Architectural Press, 2009), 57. See: https://ingogunther.com/worldprocessor.
949 See: https://ingogunther.com/exosphere.

plastic, drug flows, ocean acidification, and bird migration. A much different image of the Earth arises when it is assembled in this manner, where the artist uses "the globe as a communication medium" yet leaves the project perpetually incomplete, embracing the "incomprehensibility of the world's totality."[950]

According to Ian Davidson, who has studied conceptualizations of space in poetry, thanks to their engagement with grids or graticules, maps "can suggest and reveal connections and links which are otherwise concealed."[951] However, cartographical production of space in modernity has revealed itself to be a dangerous colonizing machine, or a tool for appropriation of land. Still, as Davidson argues after Michel de Certeau, there is an itinerary buried deep at the heart of the map, or a connection with the more fundamental impulse to trace embodied experience over a larger territory. This dovetails with Celan's dedication to the negotiations of singular datedness over swathes of time, which concerns reconnecting the individual with the general backdrop of their existential conditions of possibility. Recasting this problem in Deleuzo-Guattarian terms, Davidson reasserts, following the authors of *A Thousand Plateaus*, that the map "constructs the unconscious," which means that the fundamental relationship between humanity and space, or the Earthlings and the Earth, is both cartographic in character and impossible to explore differently than through particular lines of flight, or movement "over the tracings," which involves "an embodied and situated process in a specific time and place."[952] This "journey," as Davidson calls it, is therefore a negotiation of the movement of life and simultaneously the map of affordances in a specific spatiotemporal context. Ultimately, Davidson concludes, such movement "can be metaphorically linked to the process of reading: a situated and embodied performance of the text that is simultaneously located in both the structures of literary forms and the structures of language."[953] As was the case with Celan, writing, or the creative act, as well as artistic experience, are premised on listening and attentiveness: reading actually affords the journey because setting out involves actualizing a line of flight that is inherently possible in a given work. Reading as plotting a course is thus a means of navigating, or way-finding. This position was already expounded on the basis of analyses by Tim Ingold and his claim that the world inhabited by people "consists, in the first place, not of things but of lines"[954], specifically lines that

950 After: https://world-processor.com/wpp.

951 Ian Davidson, *Ideas of Space in Contemporary Poetry* (New York: Palgrave Macmillan, 2007), 61.

952 Ian Davidson, *Ideas of Space in Contemporary Poetry*, 65.

953 Ian Davidson, *Ideas of Space in Contemporary Poetry*, 65.

954 Tim Ingold, *The Perception of the Environment. Essays on Livelihood, Dwelling and Skill* (London: Routledge, 2002), 5.

"proliferate yet more lines [….] lines to worlds in the making."[955] Reading as following lines is an accurate formulation because it captures both the ekstatic or hermeneutic nature of sense-making as pushing forward toward the unknown in a text, and the aim to encounter "uncommon forces, which we do not quite yet grasp."[956] In short, as Gerlach succinctly puts it, "map expresses and journeys at the same time, simultaneously animating and generating its pathways, its territories, its worlds."[957] Additionally, the element of the unforeseen and virtual, or potentiality within the process of reading has to do with "something yet to come […] a cartography of speculative pathways"[958] or a cartography of becomings and future lines of development, which boils down to the actualization of possibilities stirring in the unconscious maps of the Earth.

Paul Celan's concept of the meridian as a trope of poiesis that pursues a line of flight to afford coordinating and situating the self also resonates with the onto-anthropological project of spherology developed by Peter Sloterdijk. In his view, humanity is marked by a "radical openness" that submits it to the larger environment which it is a part of.[959] However, at the earthly cut in the universal continuum, as Negarestani put it, the life of the human subject is "predicated upon an act of insulation, the building of protective spaces, called greenhouses, incubators or spheres."[960] These serve as coordinates of boundary environmental conditions that enable life to thrive, seen primarily as an ecosystem, or a composition of species and non-biotic layers of the earth. Like Celan, Sloterdijk is preoccupied with the dialogic relationship between remoteness and locality, a process that Marie-Eve Morin argues to underpin the understanding of "the history of humankind as history of globalization, that is, the history of different ways in which humans have understood the 'space' and 'sphere' they inhabit."[961] The fact that the relationship between humanity and its habitat is historical facilitates discussion of its trajectories of development and possible future politics of coexistence. This is because of its indebtedness to fiction as another way of building conceptual graticules and reflecting on "other form(s) our inhabitation of the globalized world might take."[962] Spheres, in Sloterdijk's account, are much like fiction for they act as intermediaries between the subject and "the pure terror of being-held into the indefinite"[963], which echoes the abyssal terrestriality

955 Joe Gerlach, "Lines, Contours and Legends," 25.
956 Joe Gerlach, "Lines, Contours and Legends," 28.
957 Joe Gerlach, "Lines, Contours and Legends," 29.
958 Joe Gerlach, "Lines, Contours and Legends," 34.
959 Marie-Eve Morin, "The Coming-to-the-World of the Human Animal," 78.
960 Marie-Eve Morin, "The Coming-to-the-World of the Human Animal," 78.
961 Marie-Eve Morin, "The Coming-to-the-World of the Human Animal," 79.
962 Marie-Eve Morin, "The Coming-to-the-World of the Human Animal," 79.
963 Marie-Eve Morin, "The Coming-to-the-World of the Human Animal," 83.

elaborated in speculative realism. Like metaphors, fiction is a vehicle of the imagination that transports one across scales, developing visions of larger totalities, or bigger spheres. Such meridians enable voyages necessary to render visible the boundary conditions of life-sustaining habitats. Sloterdijk uses the term "between-worlds" to describe spheres as imaginative extensions into the open, acting like porous membranes: "The transition from the environment to the world shows itself in the spheres as between-worlds."[964] In a sense, spheres are media, while the sum effect of their operation performs what the German philosopher calls globalization: the progress toward fuller understanding of Earth as a planet. In his account, the first stage was "metaphysical" insofar as it envisaged a monotheistic One-All Sphere, with humanity at its center, surveying the skies. The second proceeds laterally, casting the Earth as a cartographical flatland that requires charting, marking and regulating. What could the third be? One might be tempted to argue that it could embrace both vertical and horizontal movement, an "onto-kinetics" that would imaginatively tie humanity to its geological roots in deep time and simultaneously revolutionize it by creating more meridians: lines of connection that bring forth a vision of the global as a dynamic hyper-object, or planetary ecosystem. Proliferation of spheres is laudable in this context because any totalizing project would merely create a myopic illusion that fails to address the complexity of many-layered temporalities sedimented in geological strata. This is also because spheres function as intermediaries, or translators who facilitate contact, opening places of exchange premised on encountering otherness. In this light, spheres could be seen as the conceptual and material system of synapses which relay parameters of life and its expressions through their diversity. All in all, the spherology sketched above offers a vital contribution to the concept of ecopoetics by reasserting humanity as being of this world, striving to understand its situatedness, and inhabiting imaginatively or poietically. Although the Heideggerian tradition has not been the original theoretical ground for ecopoetics, its recent reworking by thinkers like Peter Sloterdijk or Graham Harman demonstrate a fascinating kinship in cartographical terms as expressed in the meridian's complex enacting of embeddedness and distancing, which forms one of the weird loops in Anthropocenic knowledge.

Central to ecopoetics is the relationship between making (*poiesis*) and the home (*oikos*). In the context of the Anthropocene, if the latter term is expanded to cover geological origins and environmental dependencies, the former necessarily becomes a form of creative globalization understood as a kind of making that takes into account the terrestrial parameters of its process. This ties ecopoetic practices with the expansion of cartographical imagination. Celan's concept of the meridian captures these themes well by foregrounding terrestri-

964 Marie-Eve Morin, "The Coming-to-the-World of the Human Animal," 83–84.

ality as a weird loop. Essentially then, at its broadest, ecopoetics is a world-making, or the framing of the Earth in terms that account for its deep temporality. However, it would not proceed from a generalized image of totality, which exists yet remains outside the grasp of human cognition as an ever-receding Harmanian object. Instead, it follows what Latour calls matters of concern: burning social and environmental issues that show the existing image of the world as insufficient to properly display key problems in their complex contexts and interdependencies. To achieve this goal, it is necessary to proliferate meridians and compose the kind of system of longitude and latitude that would be less about appropriation and control and more about enablement and co-operation. In this area, the aims of ecopoetics as a critical lens that brings these issues to the foreground, and the aims of creative cartographies that experiment with lines which take these issues on voyages across the globe, come together, forming the nucleus of the concept of speculative cartographies.

Celan's focus on language and its terrestrialization needs to be also regarded from the angle of multiple forms of otherness encapsulated in geological formations and terrestrial life, the kind that do not fully submit themselves to appropriation and internalization despite uncanny, intimate connections with human thought. This dimension is revealed in the sphere of translation understood as the unceasing struggle to make sense of difference and utilize its potential to work with obstacles that facilitate reflection on ethical co-existence. The shift of perception within translation studies from product to process lays special emphasis on encounters and connections that are premised on attention and painstaking hermeneutical work. As Michael Cronin argues in the study *Eco-Translation*, the Anthropocene has necessitated to include in this sphere of connectivity the relationship with the natural environment as the ultimate yet uncanny encounter with otherness.[965] He points out that translation in its performative dimension does not have to be limited exclusively to human language. Such a radical expansion of scope raises questions about the possible means of "communicating across difference" in situations where interpretation works on the border "between the organic and the inorganic," or between the human and the non-human.[966] Translation offers an ethical model of thinking difference without subsuming it under identity, steering clear of the risks entailed by extractivist forms of engagement which reduce alterity to sameness, thus failing to expand the terrestrial semiotic horizon. And just as translation reveals the development of culture to be premised on diversity, so biodiversity is the condition for the thriving of ecosystems. Cronin argues that ecological awareness – or

965 Michael Cronin, *Eco-Translation. Translation and Ecology in the Age of the Anthropocene* (London: Routledge, 2017).

966 Michael Cronin, *Eco-Translation*, 5.

ecosophy after Guattari – foregrounds the "sheer diversity of the living and the non-living," which is the basis for the "disclosure of the world."[967] This offers a much different paradigm than that of conventional equivalence models. In this perspective, the world would not be naturally given over to humanity for surveying and extracting but remains other, perpetually estranged, an object receding from view over the horizon of human gaze. Instead of mapping it in colonial manner through tracing or contouring, the Anthropocene demands assembling it in ways that account for different timescales and lifescales, thus indicating a cartography built on meridians that cross through the dense mesh of alterity. It is in this sense that Cronin announces the Anthropocene to be the Age of Translation, whose ultimate horizon is the encounter with the uncanny geological other, which is captured in the simultaneously literal and metaphorical relationship with the Earth's core. Accordingly, intersemiotic translation embraces not only cultural difference but also, crucially, the "relatedness to the non-human."[968] Since deep history is weirdly present within every human being yet cannot be made fully present, forming the geological unconscious, it requires repeated attentive efforts from multiple angles to bring it to visibility in cartographies that gradually reveal what Cronin has termed "tradosphere": "the sum of all translation systems on the planet, all the ways in which information circulates between living and non-living organisms and is translated into a language or code that can be processed or understood by the receiving entity."[969] The concept of the tradosphere captures, from a different angle, the postulate at the heart of biosemiotics, namely that the Earth is never mute but semiotically active: a semiosphere alive with communication at all levels of life, which negotiate their cellular and organic boundaries, creating and interpreting meaning using a variety of media, only some of which are accessible to human-scale sensory attention.

The tradosphere is the sum of global, more-than-human communication processes and as such embodies "radical difference" and gestures toward "different domains of ecosemiotics that make up what we consider to be an intelligible world."[970] In short, the question of assembling a vision of the global necessitates taking into account a plethora of voices that would form an assembly fit to provide representation, or win visibility in decision-making whenever it carries implications for the environment seen in social, mental and ecological terms. Such labor of translation is situated by Cronin in the context of Walter Benjamin and Alexander Bogdanov, both of whom indicate that the category of labor is

967 Michael Cronin, *Eco-Translation*, 7.
968 Michael Cronin, *Eco-Translation*, 19.
969 Michael Cronin, *Eco-Translation*, 71.
970 Michael Cronin, *Eco-Translation*, 71–72.

involved in the revelation of difference because of obstacles and impediments inherent in forms of inter-species attentiveness. Drawing on Benjamin's ideas about translation, Bogdanov directly defines nature as "the endlessly unfolding field of […] labor-experience," as McKenzie Wark put it.[971] This kind of labor comprises, in Cronin's elaboration, the sum of attentive efforts to "translate the different elements of the Great Story into 'our language'"[972], which can be restated by saying it is about encountering deep time and geological scales of being in human sensibility. A sister concept to Quentin Meillassoux's Great Outdoors, the Great Story arises from semiotic weaving of innumerable threads in earthly history, both biotic and inanimate. Importantly, however, it is a narrative that undermines "clear distinction between biography and geography," situating all life in the same, terrestrial context.[973] Humancentric notions of narrative or story are enlarged here, posing the crucial challenge to reconsider human agency in fictional world-building. On this subject, Cronin follows Latour, quoting his key notion of "the politics of assembling a character which is pushed to the center but which simultaneously loses its boundary, consistence and definition."[974] However, for Latour this was not just a question of resituating humanity against a familiar backdrop, but of recomposing the entire assembly in a way that could ensure fair representation when it comes to issues that affect entire ecosystems, opposing monoglottism in favor of precarious and tentative connectedness across ineliminable differences, seeking within them the ground for eco-semiotic "regeneration."[975]

Recently, the concept of the Great Story has been exemplified by German writer Raul Schrott, whose 2016 epic work *Erste Erde* (*First Earth*)[976] arose out of the idea that humanity has never enjoyed such broad access to knowledge about the genesis of life and the universe, and yet it paradoxically appears that "the larger the heap of data becomes, the less we understand," failing to put together an "other story to explain how we and the world came about."[977] This process has been described by Schrott's translator Iain Galbraith as a kind of labor that aims to create another story; he goes on to argue that *Erste Erde* "translates the origin of the Earth and life on our planet into legible figures: an imaginable reality."[978]

971 After: Michael Cronin, *Eco-Translation*, 71.
972 Michael Cronin, *Eco-Translation*, 72.
973 Michael Cronin, *Eco-Translation*, 90.
974 After: Michael Cronin, *Eco-Translation*, 92.
975 Michael Cronin, *Eco-Translation*, 153.
976 Raoul Schrott, *Erste Erde* (München: Carl Hanser Verlag, 2016).
977 "Raoul Schrott: The First Earth," *Kulturstiftung Des Bundes*, https://www.kulturstiftung-des-bundes.de/en/programmes_projects/word_and_knowledge/detail/raoul_schrott_the_first_earth.html.
978 "From Raoul Schrott: Selected Poems," trans. Iain Galbraith, *Pen America*, 28 August 2017, https://pen.org/raoul-schrott-selected-poems/.

Panoramic and cosmic in terms of form and design, the book testifies to the need to synthesize knowledge along lines that can be made meaningful only by way of fiction and translation, or poeitic elaboration – the kind that mobilizes both scientific findings and artistic sensibility through rekindled cartographic imagination that goes back to early myths and continues today in speculative forms.

The work of assembling broached by Cronin can be interestingly situated in the context of the concept of pure language developed by Walter Benjamin, whose reflection on translation, its task and import, have been already indicated in the context of Celan's meridian. After all, it was Lacoue-Labarthe's final argument that the meridian, as a mode of representation based on encounter with alterity, is capable of offering glimpses of a pure language that makes all meaning possible. What can be attempted, however, is to update this concept in the light of Anthropocenic eco-translation as outlined by Cronin and elaborated here in the context of speculative philosophies that explore non-anthropocentric perspectives on ecology as a mode of thinking planetary entities, which, much like the flat and democratic object-oriented ontology, collapses distinctions between life and non-life, or subject and object.[979] It is in this vein that the task of the translator in the Anthropocene can be formulated, without limiting discussion anymore to human discourse, as consisting in the effort to transform subjectivity by inscribing it into the history of the Earth, offering a glimpse of the wider tradosphere as a communicative and "tektological" framework of all life and semiotics.

The concept of "tektology" was developed by Alexander Bogdanov to open the horizon of a knowledge that could bring together the humanities and natural sciences; nevertheless, although "[t]ektology diagrams organizational forms and situations," there can be "no prior unity or ultimate synthesis, no permanent harmony that they subtend or intend."[980] The labor of translation consists in persistent reconstruction of broader categories framing human life in order to reveal a planetary language or horizon of meaning-making. Translation's inescapable departure from the local sends it on a meridian-like trajectory of terrestrial othering yet no single transposition or dialogic meeting can serve as the foundation of a universal model. According to Polish poet and translator Jerzy Jarniewicz, translation teaches us how to acknowledge its partial, perpetually incomplete status, never claiming the right to be the only possible version, which he registers as a significant shift in epistemology and axiology.[981] In this way, the asymptotic character of translation offers an alternative model for

979 Michael Cronin, *Eco-Translation*, 90.

980 McKenzie Wark, *Molecular Red. Theory for the Anthropocene* (London: Verso, 2015), eBook, 127.

981 Jerzy Jarniewicz, *Przekład między innymi. Szkice o przekładach, językach i literaturze* (Wrocław: Ossolineum, 2018), 146.

Anthropocenic knowledge. Since humanity is not unique in its efforts of world-making, other translations of reality into livable environment, or life-worlds need to be taken into account while weaving together human and non-human threads in the Great Story. The world, in this light, no longer appears to be ready-made for any particular form of subjectivity, while its totality of human and non-human discourses is certainly irreducible to geopolitical categories, constituting a dense weave of nature-cultures understood in materialist, non-dualistic and relational terms. Although this totality certainly exists materially, rendering it operational for human thought is challenging as it requires weaving the social and the environmental, basing on a non-anthropocentric social contract or constitution.

The concept of a new constitution was developed by Bruno Latour in a much broader meaning than is traditionally attributed to the term in legal theory and practice, elevating the concept to the level of metaphysics. This is because Latour imagines constitution to provide representation for humans and non-humans alike, reflecting the broader context of planetary life that embraces more than what filters through dualistic metaphysics that perform purification of objects so as to assign them to the twin categories of nature and culture. However, as Latour vividly demonstrates in *We Have Never Been Modern*, purification is invariably accompanied by hybridization that proliferates surreptitiously under the dualistic image of the world. Hybrid objects tie together different spatiotemporal scales, bringing together human and non-human in ways which no longer fit the worldview that opposes society and the environment. Hybrids populate a vast network of connections where ties are forged in the process of translation, which Latour defines as the mediating labor of actants whose work is to establish connections that enable to bring delegates to the parliament of collective existence on the Earth. Processes such as climate change can no longer be purified and emerge as hybrid monsters whose tentacles clutch indiscriminately across the divide of the human and the non-human. And just like it is usually the case with monsters, Latour argues, regulating their proliferation depends on fashioning adequate representations that acknowledge their existence and spatiotemporal reach. After all, a monster is etymologically speaking a warning or portent, which means monsters are tamed when acknowledged and understood.

In an interesting turn of phrase, Latour uses the term "articulation" to speak of the discursive power to compose the "cosmos," understood after Isabelle Stengers as a thriving, shared world, along with its material processes of articulation, full of hiccups and stumbling.[982] Difficulties with articulation are the staple of translation work, which constantly squares up to the task of finding the right

982 Bruno Latour, *Politics of Nature. How to Bring the Sciences into Democracy*, trans. Catherine Porter (Cambridge, Mass.: Harvard University Press, 2004), 86 and 239.

word, of transposing meaning through trial and error. This account of *logos* in Latour is nowhere near a universal principle that makes order out of chaos. On the contrary, it never speaks with a pure voice, remaining plagued by hesitation and loss for words.[983] The quality of purity is important here as it runs counter to the idea of "pure" language as expounded by Walter Benjamin, which fits here only as an impossible horizon. Impure articulation is material and necessarily both falsifying and inventive, proceeding through experimentation. Such articulation is fraught with differences that cannot be overcome but require bringing issues to attention. Just like translation makes us aware of linguistic and cultural difference, so translation as articulation of collectives implies the existence of a highly differentiated pluriverse of actants who remain irreducible to one another.[984] In this way, the labor of translation is conducive to the emergence of a collective that would be capable of proclaiming a republic in the full meaning of a democratic assembly comprised by humans and non-humans alike, who are all entangled in hybrid networks of connection.

The tektological and speculative-realist implication of a much bigger whole of networks, or the tradosphere have a clearly redemptive character in both Cronin and Latour insofar as they are oriented towards ethically driven recomposition and regeneration. The mixed political and messianic character of this whole can be fruitfully connected with the theory of language and translation developed by Walter Benjamin. In his view, translation reveals unsurpassable differences that function like cracks of a broken vessel.[985] This Kabbalistic metaphor makes individual languages mere fragments of a larger whole that can be imagined only through the labor of fitting them together and recognizing the outline of a totality they may form. It is the mystical task of Kabbalists to elevate these pieces back to the place where they belong – the more perfect totality of pure language, or the divine domain of proper names. Still, this metaphor can be read along the lines of Cronin's eco-translation using a metaphor more fitting for the Anthropocene: that of geological-scale movement and evolution. If we assume that the fragmentary languages of the Earth's biotic and non-biotic life fit together to make a larger whole, they can be imagined as continents drifting apart or even tectonic plates moving at their own pace and colliding, which causes geological events such as the formation of deep ruptures or volcanoes. Much of what has been ascertained within geology is based on the study of these collisions and seismological events, or deep-time encounters. These material differences are meaningful insofar as they offer insight into the workings of the deeper layers buried deep under the crust, out of empirical reach and thus inaccessible to direct

983 Bruno Latour, *Politics of Nature*, 183.
984 Bruno Latour, *Politics of Nature*, 60.
985 Walter Benjamin, "The Task Of The Translator," 21.

study. Combining these observations with Benjamin's theory of translation facilitates identifying the core of pure language with the Earth's core, understood as the deep-time trauma enveloped in multiple strata. For the German philosopher, the task of translation consists in reclaiming pure language, which no longer represents anything but constitutes itself the linguistic element or force at the purest. Accordingly, reclaiming deep-time into human history, symbolically imaginable as a reconnection with the Earth's core in the effort to terrestrialize thought, is rooted in translation that reveals the ultimate ground of meaning to be the living planet. Benjamin imagines releasing the power encapsulated in a given work by travestying and distorting it so as to redeem it in one's language, in one's own understanding. In turn, travestying Benjamin, we could say that in the Anthropocene the stakes of salvation are environmental and connected with the question of the Earth's future habitability. Recognizing this involves acknowledging that vast networks of hybrid interdependencies cannot be expressed in any isolated language but require their multiplicity. This part of the argument dovetails with Jacques Derrida's interpretation of the myth of the Tower of Babel is *Des Tours de Babel*, where his deconstructive reading leads to the conclusion that multilingualism actually precedes any monolingualism.[986] Consequently, describing the Earth is not a task that can be achieved in one language but must take into account their variety, following the cracks on the crust of the tradosphere. Adam Lipszyc holds that Benjamin's messianic logic is encapsulated in the movement between two metaphors: one organic and the other inorganic. The former is connected with the progress of languages towards a future defined by a messianic horizon, while the latter concerns expulsion from heaven as heralded by the cracked vessel of language, which indicates a lost past.[987] In the light of an updated task of translators (in the plural), the organic metaphor could be aligned with pure language as differentiation, following Derrida or the concept of biodiversity, while the inorganic – with the quasi-transcendental recognition of the inanimate, geological roots of humanity, which inscribes it in deep time. In this sense, the Fall can be reinterpreted as the agrilogistic ground of purification in the Latourian sense, entailing separation of reality into the human and the non-human. Paradoxically then, the trajectory of the Fall could be reversed as Anthropocenic denizens fall down from the heaven of the Apollo's eye and become redeemable only through imaginative reconnection with the terrestrial parameters of life, occurring in languages that are twisted and bent like Celan's meridian. Consequently, reclaiming shards of pure language would be akin to the slow revelation of the Earth as a whole expressible only in many languages coming together to form the Great Story of deep time.

986 Jacques Derrida, "Des Tours de Babel," 201.
987 Adam Lipszyc, "O nieprzekładalności przekładu," *Literatura na Świecie* 5–6 (2011), 86–87.

According to Brenda Hillman and Jonathan Bate, any transfer of meaning is invariably a distortion and hence a translation; and yet, the overall trajectory of these falsifications is part of "ecological work"[988] which takes places primarily in language, where we mold and adapt metaphors, or semantic domains so as to make sense of the world and situate ourselves in it. Humans are certainly not unique in this manner. Thanks to biosemiotic studies by Thomas Sebeok, Jakob von Uexküll and Jesper Hoffmeyer we can understand translation in yet more broader context of worlding processes in which a given environment or *Umwelt* is transformed into a species-specific life-world or *Merkwelt.*[989] In biosemiotics, which preoccupies itself with the study of meaning and its circulation in the world of living organisms, coevolution and coexistence are the primary dimensions of the semiosphere, understood as part of the biosphere and its expressive layer. The emergence of this field opens the possibility to think translation as a negotiation between identity and difference that occurs already at the level of microbial life and testifies to the creativity of evolution. Wendy Wheeler strongly emphasizes this point by indicating that, already at the micro-scale, translation occurs as part of semiosymbiogenesis, or coevolution in the semiosphere, because life never reduces difference to identity but premises its agency on intersubjective action.[990] In this extended context, translation occurs whenever life shapes its relationship with the environment, and can be seen as the calling card of life and evolution[991], while openness to encounters and engagement in them form the prerequisite of what Hoffmeyer calls "semiotic freedom"[992], or the recognition of life's processual and metabolic character and its right to pursue self-realization and happiness. This model certainly remains at odds with individualistic thinking about self-expression that has permeated social life in the epoch of mass consumerism, social media and financialization of natural resources. It is also for this reason that Kobus Marais concludes his discussion of ecology and translation with the contention that such crossroads is a vantage point from which it appears clear how individualistic thinking insulates the human subject from the fact that everyone is part of the environment and not an ontologically privileged visitor who can always recede into seclusion.[993] On the contrary, there are no visitors in this world, just entities that can offer one

988 After: Julia Fiedorczuk and Gerardo Beltrán, *Ecopoetics. An Ecological "Defence of Poetry"* (Warszawa: Muzeum Historii Polskiego Ruchu Ludowego, 2020), 217.

989 Jakob von Uexküll, *A Foray into the Worlds of Animals and Humans. With a Theory of Meaning*, trans. Joseph D. O'Neil (Minneapolis: University of Minnesota Press, 2010), 42.

990 Wendy Wheeler, *The Whole Creature. Complexity, Biosemiotics and the Evolution of Culture* (London: Lawrence & Wishart, 2006), 134.

991 Wendy Wheeler, *The Whole Creature*, 133.

992 Wendy Wheeler, *The Whole Creature*, 98.

993 Kobus Marais, *A (Bio)Semiotic Theory of Translation. The Emergence of Social-Cultural Reality* (London: Routledge, 2019), 185–186.

another hospitality by creating spaces of co-existence through translations based on ethical encounters with otherness. In the Anthropocene, it becomes important to make room within the human language for different kinds of language without melting them in the pot of sameness. This, however, takes much effort because shaping and adapting language is a process, one that involves gradual increase of the resolution of our language and ways of accommodating alterity within its parameters. For this purpose, language and expression have to be bent in order to follow the terrestrial Earth in search of forms that could not only make language more precise and accurate but also forge different metaphors and stories serving as vehicles for negotiating the relationship between humanity and the environment. In an essay on translation titled "Hermes's Labor," Polish writer Olga Tokarczuk argues that in fact translators "shall save the world."[994] She likens their work to the operation of the nervous system, or a neural network where information is transmitted and processed. She goes on to argue that just like works by ancient writers were saved by translators, today's task of bringing about ecologically-minded change rests on their shoulders as they are tasked with refreshing and updating the language we use to describe reality. Without this specific labor, languages wither and ossify into self-enclosed systems such as the capitalist realism described by Mark Fisher. In this account, translation as Celan's interruption of language restores and reinvigorates creative powers to change the story, or contribute to the unfolding Great Story that can be only put together as an atlas of maps assembled with a revamped cartographical imagination.

Atlas

The title of the first chapter in Georges Didi-Huberman's study *Atlas, or the Anxious Gay Science* is "Reading What Was Never Written"; it contains remarks crucial for the present discussion concerning "knowledge through imagination."[995] The book discusses the *Atlas* by Aby Warburg, an assortment of historical images and objects whose many connections render visible aspects that would otherwise remain hidden from view, were we to scrutinize these works in isolation. A testimony to the modernist assemblage poetics of fragmentation, it nevertheless invokes something else too – the inexhaustible field of meaningful

994 Olga Tokarczuk, "Prace Hermesa, czyli jak tłumacze codziennie ratują świat," in *Czuły narrator* (Kraków: Wydawnictwo Literackie, 2020), eBook. Originally published in *Gazeta Wyborcza*, 25 June 2019, https://wyborcza.pl/7,75517,24929511,olga-tokarczuk-powiem-wam-kto-uratuje-swiat-esej.html.

995 Georges Didi-Huberman, *Atlas, or the Anxious Gay Science*, trans. Shane Lillis (Chicago: The University of Chicago Press, 2018), 3.

encounters among humans and non-humans, the latter including an ecology of images in circulation since the beginnings of human history. The idea behind Warburg's atlas becomes for Didi-Huberman a model of modern knowledge, which is equally premised on knowledge of specific objects and their relational functioning, or their modes of being and expression in the larger environment. At the same time, the atlas goes "against all epistemic purity" since it is characterized by "the incomplete character of each image" and "the multiple, the diverse, the hybridity of any montage."[996] Just like translation, the montage or juxtaposition of maps in an atlas is never complete. Only gradually can a fuller picture be glimpsed when connections are made and remade, facilitating better insight. The value of the atlas is precisely in the fact that it "bursts the frames."[997] This is because in a given epistemological regime, or *dispositif* (to use Foucault's term), it may be possible to create meaningful ruptures by drawing links and elaborating relations. The labor of the atlas consists in the fact that it "invents […] interstitial zones of exploration, heuristic intervals," foregrounding difference as the driving force behind creativity.[998] Interstitial zones, Didi-Huberman argues, can be seen as sites where otherness, or other possibilities are revealed, which makes them function like the cracks of Benjamin's vessel. At the same time, the "exuberance" of the atlas undermines all purity in the name of "the inexhaustible opening to possibilities that are not yet given," siding with imagination to foster montage-based "knowledge that cuts across" over and against "obviated resemblances."[999] The logic of the atlas, therefore, is to endlessly produce previously unrecognized relations. In a wonderful turn of phrase, Didi-Huberman contends that images – the primary object for Warburg – are unruly like children insofar as they never "read in order to grasp the meaning of a specific thing, but rather to link this thing with many other things, imaginatively."[1000] In reference to the title of this chapter, Didi-Huberman raises the question of different kinds of reading: one focused on the message, and another on montage. Referencing Benjamin, he ties this issue with the "readability of the world," arguing that "to read the world is also to link up the things of the world."[1001] For this reason, the atlas comprises "an apparatus for reading before anything else": a model of tying things together with the aim of imaginative world-building: "reading what was never written," or, after Benjamin, "reading prior to all languages."[1002] Didi-Huberman rightly points out that Warburg's idea

996 Georges Didi-Huberman, *Atlas, or the Anxious Gay Science*, 4.
997 Georges Didi-Huberman, *Atlas, or the Anxious Gay Science*, 5.
998 Georges Didi-Huberman, *Atlas, or the Anxious Gay Science*, 5.
999 Georges Didi-Huberman, *Atlas, or the Anxious Gay Science*, 5.
1000 Georges Didi-Huberman, *Atlas, or the Anxious Gay Science*, 6.
1001 Georges Didi-Huberman, *Atlas, or the Anxious Gay Science*, 7.
1002 Georges Didi-Huberman, *Atlas, or the Anxious Gay Science*, 7.

emerged in the context of other flourishing forms of "knowledge through imagination" instigated by Georg Simmel, Marcel Mauss and Sigmund Freud. Still, it is certainly not limited to this historical moment. After all, the twenty-first century shows that montage has indeed become one of key techniques, both for rendering things obscure and shedding light on them. This is also a reason why the atlas-competence of child-like reading, which turns imagination into world-building, is crucial as a mode of opening up the uncanny loops that permeate our lives. According to Didi-Huberman, in this sense, as a form of "reading after all" (as opposed to reading in advance, i. e. with a thesis or inflexible, presupposed notions in mind), the atlas offers a model of reading "after the human," or in the Anthropocene, when the idea of a planet without humanity is looming over our world like a specter.

In light of the above, Didi-Huberman's elaboration of the concept of atlas reveals its cartographic dimension: not merely as an assembly of maps, but as a method of composing and juxtaposing them so as to reveal the contours of something much greater yet contained in relations between objects rather than specifically within things. In this manner, the atlas is about producing meridians meant to reveal, in the process of global othering, the properly terrestrial dimensions of more-than-human existence. Further, remarks on the relational and lateral logic of the atlas display affinity with Celan's premonition of a larger reality, glimpsed through "something as immaterial as language, yet earthly"[1003] and with Benjamin's theory of pure language as its non-representational and elemental form, as well as environment.[1004] All three gesture towards a larger sense of connectivity and affinity, albeit one that is weird or uncanny, foregrounding the incompleteness of either poetic line, atlas or translation, as well as pointing to their inherent self-othering, be it the earthly conditions of possibility or the abundant potentiality that each form cradles within. What they reveal are different conceptual graticules for measuring distance, or creating intervals that point to the totality of the Earth, or approximate its cycles. Therefore, by combining speculative methods and pursuing broader mapping goals, these orientations in the humanities confirm that a speculative approach to the cartographical tradition and categories underpins much of recent work done within ecologically-aware areas, especially where interdisciplinary approaches can bring together literature, the arts and natural sciences. The form of the atlas certainly can combine such diverse aspects, and the twenty-first century has already seen many experimental artistic projects in various media, which con-

1003 Paul Celan, "The Meridian," 55.

1004 Antoine Berman, Isabelle Berman, and Valentina Sommella, *A Commentary on Walter Benjamin's 'The Task of the Translator'*, trans. Chantal Wright (London: Routledge, 2018), 30.

tribute to Anthropocenic knowledge through updating and expanding the cartographical imagination. In this light, the labor of speculative cartographies is essentially about developing atlases that can boost the navigational skills necessitated by the Anthropocene.

The atlas form has been exemplarily embraced in critical theory by Anna Lowenhaupt Tsing, Jennifer Deger, Alder Keleman Saxena and Feifei Zhou in the twin mapping project comprised by the book *Field Guide to the Patchy Anthropocene* and the online "Feral Atlas."[1005] The "patchy" method deployed by the editorial and curatorial team consists in following local phenomena that create global effects through human infrastructure yet remain beyond any control. To illustrate this, authors draw on the example of the turpentine beetle, *Dendroctonus valens*, which has entered symbiotic relationship with the fungus *Leptographium procerum* after traveling overseas and wreaking havoc on trees, killing them on a mass scale.[1006] What this puts on display is the kind of nature that the *Atlas* calls "feral," or beyond domestication and appropriation into traditional notions of nature. By concerning ourselves with such local patches and corridors of connection that make them global, we may begin to work toward a "new attention to the particular in the planetary – and the planetary in the particular."[1007] Accordingly, a new kind of cartography emerges, one that relinquishes unification tendencies in favor of mapping modes aiming not to "simply show the world as it is" but focusing on patchy territories and "ways of moving through the world" against the tradition of "maps of empire and capital," which "have worked to contain, domesticate, distort, and erase territories on a global scale."[1008] This kind of engagement expands notions of mapping in line with indigenous and critical cartographies in order to probe, examine, and reflect on the Anthropocene – an epoch that calls for speculative cartographies to render its nodes visible and operational for human thought in search of navigational competences required to adapt home-making for the twenty-first century.

1005 *Field Guide to the Patchy Anthropocene. The New Nature*, eds. Anna Lowenhaupt Tsing, Jennifer Deger, Alder Keleman Saxena, and Feifei Zhou (Stanford: Stanford University Press, 2024); *Feral Atlas. The More-Than-Human Anthropocene*, eds. Anna Lowenhaupt Tsing, Jennifer Deger, Alder Keleman Saxena, and Feifei Zhou, https://feralatlas.org.

1006 *Field Guide to the Patchy Anthropocene*, 1–2.

1007 *Field Guide to the Patchy Anthropocene*, 5.

1008 *Field Guide to the Patchy Anthropocene*, 47.

Conclusion: No Maps for These Territories

In the 1509 translation of Sebastian Brandt's *Das Narrenschiff*, British monk Alexander Barclay rendered in vivid English the political satire published originally in 1494. The poem contains a philosophical twist around the question of "discovering" the world. Already its title "The Shyp of Folys of the Worlde"[1009] brings together madness and globalization by foregrounding the tie between the formation of subjectivity and the emergence of world-images. Commenting on the Europeans' efforts to chart the globe, the poem's fifth part, "Of the foolish description and inquisition of diverse countries and regions," offers a criticism of Cartesian ideas, specifically that the world is reducible to mathematical measurements. It is thus not so much the desire to cross the seas and explore that comes under the spotlight here, but the belief that the world can be rendered fully visible in geometrical terms. In this section, the folly is identified with claims to know exhaustively without recognizing the limitations of one's own mindset. The "fool," we learn, desires to "have the whole world within his body brought, / Measuring the coasts of every realm and land / And climate." Such reductionism has indeed proven disastrous, especially for those who stood in the way of imperial onslaughts from Europe in both symbolic and violently real political terms throughout the era of colonization. The mechanism of reducing otherness to sameness while laying claim to universality is still encountered today in many forms of political doctrinairism, including ones that diminish and marginalize more-than-human forms of otherness encountered through geology and climate studies. Nowadays, despite these findings being facilitated by natural sciences, the major form of reductivism consists in quantification, or more precisely its redeployment in the domain of values, as can be experienced in the reduction of

1009 Sebastian Brandt, *The Ship of Fools*, volume 1, trans. Alexander Barclay (Project Gutenberg, 2006). Online: https://www.gutenberg.org/files/20179/20179-h/20179-h.htm. Modernized English passages by Professor John Wall at the North Carolina State University; after: *American Beginnings. The European Presence in North America 1492–1690*, National Humanities Center (2007). Online: https://nationalhumanitiescenter.org/pds/amerbegin/contact/text2/shipoffools.pdf.

human relations and bonds to monetary value, with money explaining ever greater areas of life. Barclay's rejoinder to this is that "vain geometry" remains "unsure" because indeed "none can know all the world perfectly." Instead, the monk-translator admonishes, true knowledge requires to "know first your self" because it remains "a shame […] to know the compass of all the world wide / Not knowing himself, / nor how he should him guide."

The maxim "know thyself," famously inscribed on the Greek Temple of Apollo in Delphi, acquires a special quality in the Anthropocene, when it necessitates positioning oneself within the world through assembling different conceptual graticules than universalist geometrization. This certainly does not mean rejecting quantitative sciences, but rather acknowledging their place alongside philosophy and the arts for the purpose of home-making on planet Earth. Today, to "know your self" crucially entails to a lesser degree knowing one's place in the form of GPS coordinates but predominantly hinges on recognizing humanity's entanglement in the ecosystem. Brandt invites readers to consider space not as a Cartesian grid, where any vision can be painted on top of nature's silent canvas, but rather as a lively field of activity, which may be rendered visible by speaking from a self-aware position and engaging in artful cartographies. The self and its unfolding of the world thus emerge as processes that no geometrician can prefigure. For this reason, the poem's last word "guide," which elegantly rhymes with "world wide," underscores the fact that although more than five centuries passed, globalization remains little understood, chiefly because the myriad encounters with otherness have been densely overwritten with frenzied geometrical possessiveness. Colonization has set the pattern for encounters with both the human and the more-than-human world, promoting extractive and imperial attitudes to resource management under the guise of universality, which was then aligned with Christian faith but today takes other forms. The shock of finding peoples who Europeans did not know to exist serves as the key argument in the poem against knowing "all the world perfectly."

Importantly, however, the discovery of the fact that there can be many visions of the world helps to release the imaginative potential to think about the parameters of one's own image of reality. Apparently, Barclay did not have to board a ship in order to start thinking globally because he understood that questions opened up in encounters with radical otherness cannot be explained away by "measure and compass." As Michael Cronin has recently argued from the position of translation studies, where irreducible differences emerge as highly valuable, "degrees of impenetrability are not only inevitable but desirable insofar as they both acknowledge and safeguard the freedom of human subjects to grow

in self-knowledge and change through time."[1010] Difference provides better soil for thought and action by enabling wonder and reconnecting us with the deeper potential for envisioning reality through cartographies that are in equal part spatial, ethical and poetic. As the world expands and becomes ever more dense, it becomes futile to chase it with a ruler, trying to make irrefutable measurements either in centimeter or dollar. Cronin draws attention to the fact that the rapid expansion of the world in modernity has not been accompanied by corresponding development in envisioning a globalized, more-than-human planet which had previously served as the setting of history but with the arrival of the Anthropocene emerges as an active agent in its own right.

According to Cronin, globalization has been slipping out of our grasp because "the heady acceleration of development, where the geographical past is forgotten and the terrestrial future ignored, becomes more and more difficult to sustain as the sky pilots of post-modernity are increasingly grounded by the entropic restrictions of a depleted planet."[1011] This observation aptly captures the dangerous situation described in this book, namely that globalization and technological progress have outpaced the sociopolitical imagination necessary to produce operational accounts of the Earth, ones that would respond to the exigencies of biodiversity, climate, migration and inequality crises in ways that do not isolate them but address as interdependent and fundamentally entangled, or nested. This forgetfulness, Cronin emphasizes, runs in both directions, rendering the Earth's material or geological history as mute on the one hand, and incapacitating future-oriented thinking on the other. When considered side by side, these two temporal trajectories emerge as interlocked, while their recognition becomes crucial for navigating the dangerous waters of the Anthropocene. Echoing the ship-of-state parable discussed in the introduction, Cronin's metaphor of "sky pilots of post-modernity" is ripe with meanings that go beyond the literal sense of the clergy; indeed, they are perhaps priests not of traditional religions but of the faith in unlimited economic growth and universal quantification. This belief is practiced at the altar of business-as-usual in a world that has been revealed by natural sciences to have concrete, material borders which ground the conditions of possible futures in terms of depletion, otherwise referred to in various disciplines as "overshoot," "living planet index" or "planetary boundaries." Setting eyes on the sky could be read in this context as a gesture guilty of dematerialization, where the real conditions of terrestrial life become disregarded and pushed to a limit that might prove disastrous for humanity as a species.

1010 Michael Cronin, *The Expanding World. Towards a Politics of Microspection* (Winchester: Zero Books, 2012), eBook, 184–185.

1011 Michael Cronin, *The Expanding World*, 179–180.

To draw on the words of science fiction writer William Gibson, which provided the title for a film-length interview with him, despite the planet no longer boasting unexplored, white spaces, paradoxically, "there are no maps for these territories"[1012] – specifically, the emergent worlds he examined in fiction, where technology is depicted as transforming humanity in ways that cannot be predicted or managed. These non-existent maps bring to our attention the need to continue exploratory cartographical work against the unidimensional geographies of conquest and control. Because they orient us toward the future, these possible maps-to-come may be understood as planetary "operating instructions," to draw on a phrase coined by another pioneering writer Ursula K. Le Guin. She describes them as the protocol of imagination, through which it becomes possible to "invent our lives, make them up, imagine them"; in her account, this faculty is ignited by reading, which leads her to conclude that "literature is the operating instructions": a "manual" or "guide to the country we're visiting, life."[1013] The point made by Brandt and Barclay, elaborated more recently by Gibson and Le Guin, is that human-made images of reality do not arise out of thin air but are broadly mediated by technology, as the former emphasizes, and require imaginative elaboration in order to become a useful map for understanding both the past and the future, according to the latter. Unfortunately, today's predominant modes of the "cartographical gaze," as Cronin underscores, have been tourism and real estate, both of which are reductive in terms of conceiving lived space and exemplify the detached form of map-making as represented for example by Google Maps and criticized already by Brandt.[1014] "The planet from this cartographic perspective," Cronin concludes, "becomes a set of juxtaposed images on offer to the viewers or corporations who have the financial wherewithal to make choices."[1015] Taking the world into literal possession has been facilitated by casting it as fully representable in categories derived from early modern colonial expansion, which paved the way for an anthropomorphic and extractive world-image at whose heart we find a deep-seated dualism that sets *Homo sapiens* above planetary conditions for life. Gibson described this vividly in a poetic coda to the aforementioned documentary interview: "And if our weakness has been to confuse the bright and bloody colors of our calendars with the true weather of days, and the parchment's territory of our maps with the land spread out before us… never mind. We've always been on our

1012 William Gibson, *No Maps for These Territories*, dir. Mark Neale (United Kingdom: Docurama, 2000).

1013 Ursula K. Le Guin, "The Operating Instructions," in *The Wave in the Mind. Talks and Essays on the Writer, the Reader, and the Imagination* (Boston: Shambhala, 2004), eBook, 396–400.

1014 Michael Cronin, *The Expanding World*, 58.

1015 Michael Cronin, *The Expanding World*, 59.

way to this new place, that is no place, really, but is real."[1016] At the core of this passage we find the notion that, as representing animals, we cannot escape the fact that the parameters of reality need to be constantly renegotiated in order to produce better accounts that do not just situate us in the here and now but primarily enrich our ideas of the past and engender experiments with possible futures. The slightly off-hand "never mind" hints at the acceptance of the fact that cartographical transformations or deforming projections cannot be ever bracketed out; instead, they need to be embraced as windows of possibility for creatively refreshing and updating visions of the world in accordance with scientific findings, aesthetic sensibility and social justice. In a more obscure turn of phrase, perhaps, the "new place" we have found ourselves in is not anymore an isolated island tied to localism, speciesism, or any other narrowing horizon, but rather an entire system of places, or spatiotemporal relations that cut through the human sensorium yet cannot be reduced to it. Although not a place, it is real – this riddling interpretive gesture reiterates the key argument made within speculative realism. A notion of reality beyond human cognitive capabilities must be upheld, Gibson suggests, for a true-to-the-universe philosophy (to use Reza Negarestani's terms) to be capable of addressing the world without tailoring it to any short-lived and short-sighted agendas that purport to exhaust it. Such recognition alone leads to the diagnosis that despite the unprecedented proliferation of digital mapping technologies, it still remains difficult to gauge the bigger picture and conjecture "what is the shape of that, if we could see it, see it from without" in spite of the fact that "we can't because we are… we are it."[1017] Gibson's stuttering again gestures toward the impossible yet necessary translation of the world. He and Le Guin rely in their arguments on simple-sounding yet challenging and timely notions of basic curiosity and home-making. These two dovetail with the need for continuous re-enchantment of the world through wonder, basing on the impulse to find one's place within a larger community, both human and environmental. Notably, wonder pushes the mind beyond the comfort of an echo-chamber, while eco-poetics, or home-making in the larger sense mobilize the imagination in order to assemble past and future lines of becoming: to meta-model the world and thus navigate toward more sustainable modes of inhabitance.

Ultimately, Brandt's final comment about self-knowledge remains pertinent, although it needs to be read from the perspective of late modernity, which has exacerbated colonialism and transformed it into an abstract machine of technology and capital. Taking cue from the already mentioned study by Michael Cronin as well as Félix Guattari's research on the production of subjectivity, it

1016 William Gibson, *No Maps for These Territories*, at 1:23:35–1:24:02.
1017 William Gibson, *No Maps for These Territories*, at 1:21:25–35.

may be argued that a reconfiguring of spatiotemporal categories in relation to planetary-scale geological and economic forces can produce a different account of the Earth – one that foregrounds the entanglement of subjectivity in vaster, more-than-human processes which shape pathways of becoming. As Cronin underscores, the local cannot be thought aside from the transnational and ultimately cosmic dimension.[1018] In this sense, the former is inscribed in a system of relations we may only begin to glimpse after engaging in cartographies that tie the social, the economic and the environmental into a representational system where distance and relevance are reconsidered in view of global processes. As the Irish scholar emphasizes in this context, his idea of "microspection" is about reconnecting the individual with the larger domains of geography, culture and history in the effort to place one's life within a multiple-level system of flows that crisscross, split and converge across the ontological spectrum, with human existence forming a product of their intertwined unfolding rather than a true prime mover of its own. The global, or terrestrial production of subjectivity constitutes the backbone of Cronin's politics of microspection, providing "a vision of a planet that is infinitely expansive in its richness and difference" and helping "the denizens of the planet to plot a course which does not result in the ultimate shrinkage of self-annihilation."[1019] From this perspective, he reasserts that re-enchanting the world amounts to "recovering" it alongside the potential to reclaim the future and endow it with values such as "sustainability, justice and freedom."[1020]

Questions of subjectivity, existential territories and cartographies are finally brought together under an ethico-aesthetic banner by Félix Guattari in his last book *Chaosmosis* (1992), where the French philosopher and psychotherapist sketched a paradigm for the humanities rooted in what he called "ecosophy." Just like this book, his study responds to the need for a framework enabling to think the environment and subjectivity together at a time when they come clashing: the Anthropocene, or the era of rampant globalization, huge technological leaps, and ecological degradation. Key to Guattari's ecosophy is the notion of cartography, which he defines in much broader terms than is usually done, even in human geography, specifically arguing that every cartography is a "system of modelising subjectivity."[1021] These map-based systems of meaning-making form around nodes that are simultaneously cognitive, social and environmental. No cartography of this type, however, can be truly conclusive and final: they need to be continually reevaluated and weighed against the shifting context comprised by

1018 Michael Cronin, *The Expanding World*, 101.
1019 Michael Cronin, *The Expanding World*, 157.
1020 Michael Cronin, *The Expanding World*, 158.
1021 Félix Guattari, *Chaosmosis. An Ethico-Aesthetic Paradigm*, trans. Paul Bains and Julian Pefanis (Bloomington: Indiana University Press, 1995), 11.

the above three ecologies and their interconnected tectonic movements. This fallibility is nevertheless their asset insofar as science, philosophy and art intervene with conceptual grids, revealing dangerous trajectories of planetary becoming as well as opening lines of flight towards sustainable forms of planetary co-inhabiting. Cartography, for Guattari, constitutes a kind of meta-modeling that sheds light on both past and present, in addition to serving as an instrument for re-tuning systems of knowledge and subjectivation. To achieve this goal, cartographies rely on their poetic function, whose main goal, as he idiosyncratically puts it, "is to recompose artificially rarefied, resingularised Universes of subjectivation."[1022] When existential maps of reality become outdated and parceled – as is happening today due to rapid acceleration in all spheres of life and their falling out of synch with former cognitive parameters – new cartographies, especially speculative ones like the "schizoanalytic" variant championed by Guattari, emerge crucial in the effort to think the world differently and foster other modes of subjectivation through cognitive estrangement. In this context, the French thinker notably draws on the Polish author Stanisław Ignacy Witkiewicz who noted that wonder at the "strangeness of being" sadly feels increasingly difficult to find in modernity and demands labor of the imagination.[1023] What speculative philosophies and experimental poetics bring to the table are precisely means of retaining a healthy reserve of strangeness or virtuality, and utilizing it as a "catalyst" in the development of "existential operators capable of acquiring consistence and persistence."[1024] In other words, a margin of un-knowledge or self-othering becomes necessary to identify the intensities that may serve as vital points of reference for updated visions of a more-than-human world that faces unprecedented destabilization. This is all the more urgent because, in the Anthropocene, humanity seems to have lost its former bearings expressed in traditional morality, economics and politics, falling under the sway of unchecked capitalism; for this reason, the cartographical imperative today becomes to "recast the axes of values, the fundamental finalities of human relations and productive activity."[1025] This constitutes the proper goal of ecosophy, or "a science of ecosystems" undertaken towards "political regeneration" as well as "ethical, aesthetic and analytic engagement."[1026] In this light, the navigational crisis observable in the twenty-first century can be interpreted as the crisis of imaginative mapmaking, which hinders the creative impulse to experiment and seek solutions.

1022 Félix Guattari, *Chaosmosis*, 19.
1023 Félix Guattari, *Chaosmosis*, 19.
1024 Félix Guattari, *Chaosmosis*, 19.
1025 Félix Guattari, *Chaosmosis*, 91.
1026 Félix Guattari, *Chaosmosis*, 92.

For Guattari, the path forward in addressing this predicament does not lead through all-encompassing theories or images fashioned from a faux-divine perspective. Instead, he focuses on flows of "collective assemblages of enunciation" that engender identities constituted "out of fragmentary ventures […]; different ways of seeing and of making the world."[1027] In a similar fashion, this book offers a glimpse of the many progressive cartographies mobilized around virtual universes of values[1028] opened up through scientific and philosophical pursuits as well as artistic practices – places where wonder can gain foothold and thrive. By quoting extensively from discussed authors, I have attempted to strategically gather various languages – philosophical, artistic, literary and musical – which creatively elaborate daring new cartographies of existential intensities. This is rooted not only in the philological method, which presumes scrupulous labor in language, but also in a broadly cartographical approach, which consists in establishing relations between a variety of nodes where refrains of tri-ecological calamity can be discerned. If Guattari is right, the cartographical activities in works of philosophy or fiction are not entirely communication-oriented but also meant to "produce assemblages of enunciation capable of capturing points of singularity of a situation."[1029] This is fleshed out in the context of phenomena like climate change, which still needs to be properly recognized and rendered conceptually graspable in functional networks of meanings. For us to actually see and begin to think such forces, it indeed becomes necessary to "cross the threshold of intensity of speculative imagination."[1030] I understand this primarily as systematic experimentation with the limits of language and thought, as has been appreciated by thinkers in areas such as speculative realism and ecopoetics. In fact, this is not really new, according to Guattari, who argues that "artistic cartographies have always been an essential element of the framework of every society."[1031] It is simply the case that, more recently, this capacity has been increasingly often outsourced to technological instruments, paradoxically contributing to the sense of loss in the ocean of liquid modernity. To counteract this malady, it becomes crucial to assemble visions of reality that facilitate ushering in "other existential Territories"[1032]: other styles of living and modes of subjectivation than the ones favored by global capitalism for the sake of quantitative growth as a goal in itself. Guattari showed that processes of singularization are also cartographical endeavors to create particular visions of the world and to inscribe the relationship between humanity and the environment that has shaped

1027 Félix Guattari, *Chaosmosis*, 120.
1028 Félix Guattari, *Chaosmosis*, 125.
1029 Félix Guattari, *Chaosmosis*, 128.
1030 Félix Guattari, *Chaosmosis*, 127.
1031 Félix Guattari, *Chaosmosis*, 130.
1032 Félix Guattari, *Chaosmosis*, 134.

it for millions of years. This book, in turn, attempts to demonstrate, by drawing on examples from philosophy and the arts, that becoming a mapmaker in the age of the Anthropocene amounts to creative elaboration of this relation through distortion, weirdness, or defamiliarization, in the effort to render the world visible in ways that help to glimpse deep time, refracted present and possible futures.

The speculative cartographies discussed in previous chapters reveal the treacherous illusion of a world fully mappable and mapped from an abstracted point of view. Anamorphic perspectives elaborated in areas of philosophy, literature and art, on the other hand, counteract reductive tendencies that lurk behind claims to universalism, which obfuscate the exploitation of both people and the environment. These advances show that, in the age of the Anthropocene, it becomes indispensable to develop new graticules that open gaps and perforate totalizing visions of the global. These apertures, however, do not purport to reveal more complete accounts that would supplant others, but rather put on display the meshwork of interrelations that bind geology, biology and culture. Addressing the current sociopolitical impasse, which has all the hallmarks of being profoundly lost, requires venturing into the unknown and turning this encounter into a possibility for imaginative growth, which is necessary to think transversally, or in different scales at the same time, and to take one's bearings against them. Readjusting the vision of the global, however, cannot rely on any past world-images, but must proceed along the trajectory of traumatic cosmicism: away from anthropocentric notions of stable and unchanging domesticated planet, and towards a more precarious sense of the Earth as a foreign place that cannot be easily bound and immobilized. For this purpose, the unceasing work of speculative cartographies consists in unfastening and perforating obsolete maps in order to fashion new terrestrial representations. Accordingly, this book argues that the primary mode of eco-poetics – broadly understood as imaginative homemaking – is defamiliarization, or continual estrangement of the relation between humanity and planet. Only by encountering the Earth as a perpetual other does it become possible to mobilize the plasticity that facilitates reforging the relationship between humanity and the environment, effectually remaking the self by embracing its thorough planetary situatedness.

Owing to the predominantly philological focus of material and method in this study, poetry emerges as a guide, or model area where subjectivity, language and the world converge, tying the Guattarian triquetra of the self, forms of expression, and terrestrial imagination. As Julia Fiedorczuk exemplarily argues in the significantly titled poem "The Way Out" from her 2012 collection *Close as Close* [tuż-tuż], "We the infected must constantly resume the challenge. / Otherwise we

will disappear."[1033] Repeated efforts to make meaning are half-blind and painful yet necessary in order to "see the world," while this struggle crucially involves embracing the "twilight" that invariably shrouds the other, as well as allowing it to "bloom in me." In a gesture that perfectly captures the driving force of speculative cartographies, Fiedorczuk underscores the necessity to trust in a world that exists over and above whatever we may conclusively claim from the position of human finitude. Here, to know means to submerge in unknowing; as the subject of the poem calls out from their position of material feeling around, they sing a refrain of "pass me your body of tongue" and "pass me your body of night." They ask the other to lend their language and body in order to find where they are now and where they might be headed. "Whoever you are," the poem concludes, "I take you with me. / Here is the road. // And look, there is no map."[1034] Ultimately, then, for a map to be really useful at a time when a former sense of belonging crumbles, it has to keep its one foot firmly planted in the domain of potentiality, trying to remain in the making, experimental and leaning towards possible futures rather than desperately clinging to petrified accounts that fail to hold the world together anymore. Echoing this dangerous yet necessary leap into the unknown, Emily Hasler's poem "Cartography for Beginners" – which dwells on the artfulness of map-making described as suspended between "the twin and warring gods of Precision and Wild Abandon" – notably ends with the invitation to experiment and take one's self on a walk out into the world: "Come on, / get your coat, I'll show you. You won't need your shoes."[1035]

1033 Julia Fiedorczuk, *Oxygen*, trans. Bill Johnston (Brookline: Zephyr Press, 2017), 81.
1034 Julia Fiedorczuk, *Oxygen*, 83.
1035 Emily Hasler, *The Built Environment* (Liverpool: Liverpool University Press, 2018), 22.

Bibliography

Akerman, James R., "Introduction," in *Decolonizing the Map*, ed. James R. Akerman (Chicago: University of Chicago Press, 2017), 1–9.

Ambroży, Paulina, "'Our Eyes Adjust to the Dark': The Cosmic Sublime in Tracy K. Smith's *Life on Mars*," *Text Matters* 10 (2020): 364–391.

Apter, Emily, "Planetary Dysphoria," *Third Text* 27.1 (2013): 131–140.

Armstrong McKay, David I. et al., "Exceeding 1.5 °C Global Warming Could Trigger Multiple Climate Tipping Points," *Science* 377 (2022).

Art Museum of the Hainaut Province, "Bps22 Musée D'art Dossier Pédagogique Les Expositions *Metamorphic Earth*," https://v3.bps22.be/volumes/files/DOSSIER-PEDA-PANO-META-UBD.pdf.

Badiou, Alain, *Plato's Republic. A Dialogue in Sixteen Chapters, with a Prologue and an Epilogue*, trans. Susan Spitzer (Cambridge: Polity Press, 2012).

Bal, Mieke, *Travelling Concepts in the Humanities. A Rough Guide* (Toronto: University of Toronto Press, 2002).

Barad, Karen, *Meeting the Universe Half-Way. Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007).

Barrows, Adam, *Time, Literature, and Cartography after the Spatial Turn* (Cham: Palgrave Macmillan, 2016).

Baudelaire, Charles, "The Painter of Modern Life," in *The Painter of Modern Life and Other Essays*, trans. and ed. Jonathan Mayne (London: Phaidon Press, 1964), 1–40.

Bauman, Zygmunt, *Wasted Lives: Modernity and Its Outcasts* (Cambridge: Polity, 2004).

Beaumont, Matthew, "The Anamorphic Estrangements of Science Fiction," in *Red Planets: Marxism and Science Fiction*, eds. Mark Bould and China Miéville (Middletown, CT: Wesleyan University Press, 2009), 29–46.

Benjamin, Walter, "A Berlin Chronicle," in *Reflections. Essays, Aphorism, Autobiographical Writings*, trans. Edmund Jephcott (New York: Schocken Books, 1986), 3–60.

Benjamin, Walter, *The Arcades Project*, trans. Howard Eiland and Kevin McLaughlin (Cambridge, Mass.: The Belknap Press of Harvard University Press, 1999).

Benjamin, Walter, "The Task Of The Translator," trans. Harry Zohn, in *The Translation Studies Reader*, ed. Lawrence Venuti (London: Routledge, 2004), 15–23.

Bergvall, Caroline, *Drift* (New York: Nightboat Books, 2014).

Berman, Antoine, Isabelle Berman, and Valentina Sommella, *A Commentary on Walter Benjamin's 'The Task of the Translator'*, trans. Chantal Wright (London: Routledge, 2018).

Białoszewski, Miron, "School of Unhabituation," trans. Clare Cavanagh and Michał Rusinek, *Poetry Foundation*, 2024, https://www.poetryfoundation.org/poetrymagazine/poems/160853/school-of-unhabituation.

Białoszewski, Miron, *Sprawdzone sobą. Wiersze wybrane* (Warszawa: Państwowy Instytut Wydawniczy, 2008).

Bogost, Ian, *Alien Phenomenology, or What It's Like to Be a Thing* (Minneapolis: University of Minnesota Press, 2012).

Bolter, Jay David and Richard Grusin, *Remediation: Understanding New* Media (Cambridge, Mass.: Massachusetts Institute of Technology Press, 1999).

Bosteels, Bruno, "From Text to Territory. Félix Guattari's Cartographies of the Unconscious," in *Deleuze & Guattari: New Mappings in Politics, Philosophy, and Culture*, eds. Eleanor Kaufman and Kevin Jon Heller (Minneapolis: University of Minnessota Press, 1998), 145–174.

Bould, Mark, *The Anthropocene Unconscious. Climate Catastrophe Culture* (London: Verso, 2021).

Bouschet, Gast and Nadine Hilbert, "Metamorphic Earth," *e-flux*, 9 December 2016, https://www.e-flux.com/announcements/77936/gast-bouschet-nadine-hilbertmetamorphic-earth/.

Braidotti, Rosi, *The Posthuman* (Cambridge: Polity Press, 2013).

Brandt, Sebastian, *The Ship of Fools*, Volume 1, trans. Alexander Barclay (Project Gutenberg, 2006), https://www.gutenberg.org/files/20179/20179-h/20179-h.htm. Modernized English passages by Professor John Wall at the North Carolina State University; after: *American Beginnings. The European Presence in North America 1492–1690*, National Humanities Center (2007), https://nationalhumanitiescenter.org/pds/amerbegin/contact/text2/shipoffools.pdf.

Bratton, Benjamin H., *The Stack: On Software and Sovereignty* (Cambridge, Mass.: Massachusetts Institute of Technology, 2015).

Bratton, Benjamin H., "On Anthropolysis," *e-flux*, January 2017, https://www.e-flux.com/architecture/superhumanity/68640/on-anthropolysis/.

Bridger, Barbara and J.R. Carpenter, "Call and Response: Towards a Digital Dramaturgy," 2013, https://luckysoap.com/pdf/CallAndResponse_BridgerCarpenter.pdf.

Bridger, Barbara, "Dramaturgy and the Digital," *Exeunt Magazine*, 1 February 2013, https://exeuntmagazine.com/features/dramaturgy-and-the-digital/.

Bristow, Tom, *The Anthropocene Lyric: An Affective Geography of Poetry, Person, Place* (New York: Palgrave Macmillan, 2015).

Brock, Roger, *Greek Political Imagery from Homer to Aristotle* (London: Bloomsbury, 2013).

Bryant, Levi R., "Potentiality and Virtuality," *Larval Subjects*, 27 May 2007, https://larvalsubjects.wordpress.com/2007/05/27/potentiality-and-virtuality/.

Bryant, Levi R., "Terraism," *Larval Subjects*, 4 October 2011, https://larvalsubjects.wordpress.com/2011/10/04/terraism/.

Bryant, Levi R., *The Democracy of Objects* (Ann Arbor: University of Michigan's Open Humanities Press, 2011).

Bryant, Levi R., *Onto-Cartography. An Ontology of Machines and Media* (Edinburgh: Edinburgh University Press, 2014).

Bryant, Levi, Nick Srnicek and Graham Harman, "Towards a Speculative Philosophy," in *The Speculative Turn.* Continental Materialism and Realism, eds. Levi Bryant, Nick Srnicek and Graham Harman (Melbourne: re.press, 2011), 1–18.

Buckminster Fuller, Richard, *Operating Manual for Spaceship Earth* (Zürich: Lars Müller, 2008).

Buell, Lawrence, *The Environmental Imagination: Thoreau, Nature Writing, and the Formation of American Culture* (Cambridge, Mass.: Harvard University Press, 1995).

Cameron, Esther, *Western Art and Jewish Presence in the Work of Paul Celan. Roots and Ramifications of the "Meridian" Speech* (Lanham: Lexington Books, 2014).

Canavan, Gerry and Andrew Hageman, "Introduction: 'Global Weirding'," *Paradoxa* 28 (2016): 7–13.

Carpenter, J. R., "TRANS.MISSION [A.DIALOGUE]: Locating Narrative Resonance in Transatlantic Communications Networks," paper presented at the "Network Archaeology" conference at Miami University in Oxford, Ohio, USA, 19–21 April 2011, https://luckysoap.com/pdf/JRCarp_TRANSNetArch.pdf.

Carpenter, J. R., "TRANS.MISSION [A.DIALOGUE]" (2011), *Lucky Soap*, https://luckysoap.com/generations/transmission.html.

Carpenter, J. R., "Ten Short Talks About Islands… and by Islands I Mean Paragraphs," *Lucky Soap*, 2013, https://luckysoap.com/statements/andbyislands.html.

Carpenter, J. R., "Notes Very Necessary," *Lucky Soap*, 2015, https://luckysoap.com/notesverynecessary/notes.html.

Carpenter, J. R., "This Is a Picture of Wind," *Lucky Soap*, 2018, https://luckysoap.com/apictureofwind/about.html.

Carpenter, J. R., "'I'm trying to think about migration… as a condition of being in between places'. J.R. Carpenter on poetry and translating the digital. Interview by Elle Eccles," *Penned in the Margins*, 8 July 2018, https://www.pennedinthemargins.co.uk/index.php/2018/07/im-trying-to-think-about-migration-as-a-condition-of-being-in-between-places-j-r-carpenter-on-poetry-and-translating-the-digital/.

Carpenter, J. R., "Writing on the Cusp of Becoming Something Else," in *Whose Book is it Anyway? A View from Elsewhere on Publishing, Copyright and Creativity*, eds. Janis Jefferies and Sarah Kember (Cambridge: Open Book Publishers, 2019), 243–266.

Carpenter, J. R., "Grappling With the Actual: Writing on the Periphery of the Real," *Electronic Book Review*, 3 May 2020, https://electronicbookreview.com/essay/grappling-with-the-actual-writing-on-the-periphery-of-the-real/.

Carroll, Siobhan, "The Terror and the Terroir," *Paradoxa* 28 (2016): 67–89.

Celan, Paul, "The Meridian," in *Collected Prose*, trans. Rosemarie Waldrop (New York: Routledge, 2003), 37–55.

Christensen, Inger, *Alphabet*, trans. Susanna Nied (New York: New Directions, 2001).

Citton, Yves, "Fictional Attachments and Literary Weavings in the Anthropocene," *New Literary History* 47 (2016): 309–329.

Clark, Timothy, *Ecocriticism on the Edge. The Anthropocene as a Threshold Concept* (London: Bloomsbury, 2015).

Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, eds. H. Lee

and J. Romero (Geneva: IPCC, 2023), https://www.ipcc.ch/report/ar6/syr/downloads/report/IPCC_AR6_SYR_LongerReport.pdf.

Corbett, John, "Experimental Oriental: New Music and Other Others," in *Western Music and Its Others. Difference, Representation, and Appropriation in Music*, eds. Georgina Born and David Hesmondhalgh (Berkeley: University of California Press, 2000), 163–186.

Corner, James, "The Agency of Mapping: Speculation, Critique and Invention," in *Mappings*, ed. Denis Cosgrove (London: Reaktion Books, 1999), 213–252.

Cosgrove, Denis, "Introduction: Mapping Meaning," in *Mappings*, ed. Denis Cosgrove (London: Reaktion Books, 1999), 1–23.

Cosgrove, Denis, *Apollo's Eye. A Cartographic Genealogy of the Earth in the Western Imagination* (Baltimore: The Johns Hopkins University Press, 2001).

Cronin, Michael, *The Expanding World. Towards a Politics of Microspection* (Winchester: Zero Books, 2012).

Cronin, Michael, *Eco-Translation. Translation and Ecology in the Age of the Anthropocene* (London: Routledge, 2017).

Czemiel, Grzegorz, "Weirding Earth: Reimagining the Global Through Speculative Cartographies in Literature, Art, and Music," in *Other Globes. Past and Peripheral Imaginations of Globalization*, eds. Simon Ferdinand, Irene Villaescusa-Illán, and Esther Peeren (Cham: Palgrave, 2019), 213–230.

Czemiel, Grzegorz, *Fourth World Musics*, 2022, https://soundcloud.com/szkolaekopoetyki/muzyki-czwartego-swiata.

Dartnell, Lewis, *Origins. How Earth's History Shaped Human History* (New York: Basic Books, 2019).

Davidson, Ian, *Ideas of Space in Contemporary Poetry* (New York: Palgrave Macmillan, 2007).

Davis, Agnes, "The Use of the Gap in Alice Oswald's Poetry," MA dissertation, *Academia.edu*, 2014, https://www.academia.edu/10060030/The_Use_of_the_Gap_in_Alice_Oswalds_Poetry.

Day, Gail, "Allan Sekula's Transitive Poetics: Metonymy and Metaphor in *Lottery of the Sea*, *Ship of Fools* and *The Dockers' Museum*," in Allan Sekula, *Ship of Fools / The Dockers' Museum*, ed. Hilde Van Gelder (Leuven: Leuven University Press, 2015), 57–72.

DeLanda, Manuel, "Space: Extensive and Intensive, Actual and Virtual," in *Deleuze and Space*, eds. Ian Buchanan and Gregg Lambert (Edinburgh: Edinburgh University Press, 2005), 80–88.

Deleuze, Gilles and Félix Guattari, *What Is Philosophy?*, trans. Hugh Tomlinson and Graham Burchell (New York: Columbia University Press, 1994).

Deleuze, Gilles, *L'Abécédaire de Gilles Deleuze*, film produced by Pierre-André Boutang, interviews by Claire Parnet, *Arte*, France 1995.

Deleuze, Gilles, *Francis Bacon: The Logic of Sensation*, trans. Daniel W. Smith (London: Continuum, 2003).

Deleuze, Gilles and Félix Guattari, *A Thousand Plateaus*, trans. Brian Massumi (Minneapolis: University of Minessota Press, 2008).

Dennen, David, "From the Jungle to the City: Ecomimesis and Imagining Emplacement in the Music of Jon Hassell" (2013), https://www.academia.edu/19736138/From_the_Jun

gle_to_the_City_Ecomimesis_and_Imagining_Emplacement_in_the_Music_of_Jon_Hassell.

Derrida, Jacques, "Des Tours de Babel," trans. Joseph F. Graham, in *Difference in Translation*, ed. Joseph F. Graham (Ithaca: Cornell University Press, 1985), 165–205.

Didi-Huberman, Georges, *Atlas, or the Anxious Gay Science*, trans. Shane Lillis (Chicago: The University of Chicago Press, 2018).

Dolphijn, Rick, "Undercurrents and the Desert(ed): Negarestani, Tournier and Deleuze Map the Polytics of a 'New Earth'," in *Postcolonial Literatures and Deleuze. Colonial Pasts, Differential Futures*, eds. Lorna Burns and Birgit M. Kaiser (London: Palgrave Macmillan, 2012), 199–216.

Drucker, Johanna, "Dynamic Poetics: J. R. Carpenter's *This is a Picture of Wind*," in J. R. Carpenter, *This is a Picture of Wind* (Sheffield: Longbarrow Press, 2020), 9–24.

Feld, Steve, "The Poetics and Politics of Pygmy Pop," in *Western Music and Its Others. Difference, Representation, and Appropriation in Music*, eds. Georgina Born and David Hesmondhalgh (Berkeley: University of California Press, 2000), 254–279.

Ferdinand, Simon, "Being in the Globe: Hieronymus Bosch's *The Garden of Earthly Delights* at the Fringes of Modern Globalism," in *Other Globes. Past and Peripheral Imaginations of Globalization*, eds. Simon Ferdinand, Irene Villaescusa-Illán, and Esther Peeren (Cham: Palgrave Macmillan, 2019), 63–84.

Ferdinand, Simon, "Seeing the Self in the World: Attending to Banal Globalism in Urban Visual Cultures," *Journal of Urban Cultural Studies* 5.2 (2018): 249–254.

Fiedorczuk, Julia and Gerardo Beltran, *Ekopoetyka / Ecopoética / Ecopoetics* (Warszawa: Muzeum Historii Ruchu Ludowego, 2015/2020).

Fiedorczuk, Julia, *Oxygen*, trans. Bill Johnston (Brookline: Zephyr Press, 2017).

Fiedorczuk, Julia, "Nieuznany rozdział naszej autobiografii," in Forrest Gander, *Podwojone życie*, trans. Julia Fiedorczuk (Wrocław: Ossolineum, 2023).

Fisher, Mark, "Clearing the Air," *Frieze*, 20 February 2008, https://www.frieze.com/article/clearing-air.

Fisher, Mark, *Capitalist Realism. Is There No Alternative?* (Winchester: Zero Books, 2009).

Fisher, Mark, *The Weird And The Eerie* (London: Repeater Books, 2016).

Fitch, Andy, "A Home in My Ears: Talking to Divya Victor," *Los Angeles Review of Books Blog*, 15 February 2019, https://blog.lareviewofbooks.org/interviews/home-ears-talking-divya-victor/.

Foucault, Michel, "Of Other Spaces," trans. Jay Miskowiec, *Diacritics* 16.1 (1986): 22–27.

Foucault, Michel, "Stultifera Navis," in *Madness and Civilization. A History of Insanity in the Age of Reason*, trans. Richard Howard (London: Routledge, 2005), 1–34.

Gander, Forrest, "Carboniferous and Ecopoetics," in *Redstart: An Ecological Poetics*, eds. Forrest Gander and John Kinsella (Iowa City: University of Iowa Press, 2012), 5–17.

Gander, Forrest, "Nymph Stick Insect: Observations on Poetry, Science and Creation," *The Literary Life*, (March-April, 2001), https://forrestgander.com/essays-reviews/poetry-science/poetry-science.html.

Gander, Forrest, *As a Friend* (New York: New Directions, 2008).

Gao, Jay, "*Curb* by Divya Victor," *Poetry Foundation*, 2021, https://www.poetryfoundation.org/harriet-books/reviews/155751/curb.

Garrard, Greg, *Ecocriticism* (London: Routledge, 2004).

Gelder, Hilde van, "Introduction," in Allan Sekula, *Ship of Fools / The Dockers' Museum*, ed. Hilde Van Gelder (Leuven: Leuven University Press, 2015), 23–30.
George, Henry, *Progress and Poverty* (1879), https://www.henrygeorge.org/pcontents.htm.
Gerlach, Joe, "Lines, Contours and Legends: Coordinates for Vernacular Mapping," *Progress in Human Geography* 38.1 (2014): 22–39.
Neale, Mark (dir.), *William Gibson. No Maps for These Territories* (Docurama, UK: 2000).
Gratton, Peter, *Speculative Realism. Problems and Prospects* (London: Bloomsbury, 2014).
Gray, Peter "Cocytus Defrosted" (undated), https://www.bouschet-hilbert.org/now/cocytus-defrosted/.
Grosz, Elizabeth, *Chaos, Territory, Art: Deleuze and the Framing of the Earth* (New York: Columbia University Press, 2008).
Grosz, Elizabeth, "Deleuze, Ruyer and Becoming-Brain: The Music of Life's Temporality," *Parrhesia* 15 (2012): 1–13.
Groves, Jason, *The Geological Unconscious. German Literature and the Mineral Imaginary* (New York: Fordham University Press, 2020).
Guattari, Félix, *Chaosmosis. An Ethico-Aesthetic Paradigm*, trans. Paul Bains and Julian Pefanis (Bloomington: Indiana University Press, 1995).
Guattari, Félix, *The Three Ecologies*, trans. Ian Pindar And Paul Sutton (London: Athlone Press, 2000).
Gunia, Wojciech, interview in "Weird fiction. Co to za literatura?," *Albo poczytam*, podcast by Anna Karczewska, *Radio Kampus*, September 2023.
Günther, Ingo, "The Worldprocessor Project," https://world-processor.com/wpp.
Günther, Ingo, *Exosphere and the Field of Globes*, https://ingogunther.com/exosphere.
Günther, Ingo, *World Processor 1988-*, https://ingogunther.com/worldprocessor and https://world-processor.com.
Hamilton, Edmond, "The Earth-Brain," in *Acolytes of Cthulhu*, ed. Robert M. Price (London: Titan Books, 2014).
Haraway, Donna, "The Promises of Monsters: A Regenerative Politics for Inappropriate/d Others," *Cultural Studies*, eds. Lawrence Grossberg, Cary Nelson, Paula A. Treichler (New York: Routledge, 1992), 295–337.
Haraway, Donna, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham: Duke University Press, 2016).
Hardt, Michael and Antonio Negri, *Empire* (Cambridge, Mass.: Harvard University Press, 2000).
Harley, J. B. and David Woodward (eds.), *The History Of Cartography, Volume One. Cartography in Prehistoric, Ancient, and Medieval Europe and the Mediterranean* (Chicago: The University Of Chicago Press, 1987).
Harman, Graham, "On the Undermining of Objects: Grant, Bruno, and Radical Philosophy," in *The Speculative Turn: Continental Materialism and Realism*, eds. Levi Bryant, Nick Srnicek, and Graham Harman (Melbourne: re.press, 2011), 21–40.
Harman, Graham, "The Road to Objects," *continent.* 3.1 (2011): 171–179.
Harman, Graham, *Quentin Meillassoux. Philosophy in the Making* (Edinburgh: Edinburgh University Press, 2011).
Harman, Graham, *The Quadruple Object* (Winchester: Zero Books, 2011).
Harman, Graham, *Tool Being. Heidegger and the Metaphysics of Objects* (Chicago: Open Court, 2011).

Harman, Graham, *Weird Realism: Lovecraft and Philosophy* (Winchester: Zero Books, 2012).

Harmon, Katherine, *The Map as Art. Contemporary Artists Explore Cartography* (New York: Princeton Architectural Press, 2009).

Hartland, Dan, "Review of *Annihilation*," *Strange Horizons*, 3 February 2014, http://strangehorizons.com/non-fiction/reviews/annihilation-by-jeff-vandermeer/.

Hasler, Emily, *The Built Environment* (Liverpool: Liverpool University Press, 2018).

Hassell, Jon and Brian Eno, *Fourth World Vol. 1: Possible Musics* (Beverungen: Glitterbeat Records, 2014).

Hassell, Jon, *Atmospherics* (Los Angeles: Ndeya, 2023).

Hecker, Florian, Quentin Meillassoux and Robin Mackay, "Speculative Solution: Quentin Meillassoux and Florian Hecker Talk Hyperchaos," in *Urbanomic Document*, UFD001, 5, https://www.urbanomic.com/document/speculative-solution-meillassoux-hecker/.

Hedeen, Katherine M., "Afterword: How to Create a Global Positioning System with the Highest Level of Errancy," in *Poetry's Geographies. A Transatlantic Anthology of Translations*, eds. Katherine M. Hedeen and Zoë Skoulding (Swindon: Shearsman Books, 2022), 191–192.

Heidegger, Martin, "…Poetically Man Dwells…," in *Poetry, Language, Thought*, trans. Albert Hofstadter (New York: Harper and Row, 1971), 213–229.

Heise, Ursula K., *Sense of Place and Sense of Planet. The Environmental Imagination of the Global* (Oxford: Oxford Univeersity Press, 2008).

Heydel, Magda, "Co mówi, kiedy nikt nie mówi. Praktyka poetycka Alice Oswald jako przekład," *Poznańskie Studia Polonistyczne* 33 (2018): 309–326.

Hoepker, Karin, *No Maps for These Territories. Cities, Spaces, and Archaeologies of the Future in William Gibson* (Amsterdam: Rodopi, 2011).

Hoffmeyer, Jesper, *Biosemiotics: An Examination into the Signs of Life and the Life of Signs*, trans. Jesper Hoffmeyer and Donald Favareau (Scranton: University of Scranton Press, 2008).

Hugel, William J., "Developing Weirdness through Cartographic Destabilization in Jeff VanderMeer's *Annihilation*," *Inquiries* 7.5 (2015), http://www.inquiriesjournal.com/articles/1032/developing-weirdness-through-cartographic-destabilization-in-jeff-vandermeers-annihilation.

Humble, Catherine, "Exposed to the Other. Responding to the Refugee in Caroline Bergvall's *Drift*," in *Wild Analysis. From the Couch to Cultural and Political Life*, eds. Shaul Bar-Haim, Elizabeth Sarah Coles, and Helen Tyson (London: Routledge, 2022), 105–124.

Husserl, Edmund, *The Crisis of European Sciences and Transcendental Phenomenology*, trans. David Carr (Evanston: Northwestern University Press, 1970).

Ingold, Tim, *The Perception of the Environment. Essays on Livelihood, Dwelling and Skill* (London: Routledge, 2002).

Jackson, Rosemary, *Fantasy: The Literature of Subversion* (London: Routledge, 2009).

Jagodzinski, Jan, "Introduction," in *Interrogating the Anthropocene. Ecology, Aesthetics, Pedagogy, and the Future in Question*, ed. jan jagodzinski (Cham: Palgrave Macmillan, 2018), 1–71.

Jamaican Patwah, sv. "I-man," https://jamaicanpatwah.com/term/i-man/1009.

Jameson, Fredric, *Postmodernism, Or, The Cultural Logic Of Late Capitalism* (Durham: Duke University Press, 1991).
Jarniewicz, Jerzy, *Przekład między innymi. Szkice o przekładach, językach i literaturze* (Wrocław: Ossolineum, 2018).
Jemisin, N. K., *The Obelisk Gate* (New York: Hachette, 2016).
Jemisin, N. K., *The Stone Sky* (New York: Hachette, 2017).
Jemisin, N. K., "N.K. Jemisin's 2018 Hugo Award Best Novel acceptance speech," *YouTube*, 20 August 2018, https://www.youtube.com/watch?v=8lFybhRxoVM.
Johnson, Christopher D., *Memory, Metaphor, and Aby Warburg's Atlas of Images* (Ithaca: Cornell University Press, 2012).
Johnston, Adrian and Catherine Malabou, *Self and Emotional Life: Philosophy, Psychoanalysis, and Neuroscience* (New York: Columbia University Press, 2013).
Joshi, S. T., *A Dreamer and a Visionary. H. P. Lovecraft in his Time* (Liverpool: Liverpool University Press, 2001).
Kania, Ireneusz, *Czy możliwa jest uniwersalna filozofia muzyki?* (Warszawa: Austeria, 2023).
Keller, Lynn, *Recomposing Ecopoetics. North American Poetry of the Self-Conscious Anthropocene* (Charlottesville: University Of Virginia Press, 2017).
Kligerman, Eric, *Sites of the Uncanny. Paul Celan, Specularity and the Visual Arts* (Berlin: Walter de Gruyter, 2007).
Kollektiv Orangotango+ (ed.), *This Is Not An Atlas. A Global Collection Of Counter-Cartographies* (Bielefeld: transcript Verlag, 2018).
Krause, Bernie, *The Great Animal Orchestra* (London: Profile Books, 2012).
Kristal, Efraín, "Literature in Sloterdijk's Philosophy," in *Sloterdijk Now*, ed. Stuart Elden (Cambridge: Polity Press, 2012), 147–164.
Kulturstiftung Des Bundes, "Raoul Schrott: The First Earth," https://www.kulturstiftung-des-bundes.de/en/programmes_projects/word_and_knowledge/detail/raoul_schrott_the_first_earth.html.
Lacoue-Labarthe, Philippe, *Poetry as Experience*, trans. Andrea Tarnowski (Stanford: Stanford University Press, 1999).
Lakoff, George and Mark Johnson, *Metaphors We Live By* (Chicago: The University of Chicago Press, 2003).
Land, Nick, "Barker Speaks. The CCRU Interview with Professor D.C. Barker," in *Fanged Noumena. Collected Writings 1987–2007*, eds. Maya Kronic and Ray Brassier (New York: Sequence Press / Urbanomic, 2011), 493–506.
Latour, Bruno, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, Mass.: Harvard University Press, 1993).
Latour, Bruno, *Politics of Nature. How to Bring the Sciences into Democracy*, trans. Catherine Porter (Cambridge, Mass.: Harvard University Press, 2004).
Latour, Bruno, *Spheres and Networks: Two Ways to Reinterpret Globalization*, lecture at Harvard University Graduate School of Design, 17 February 2009, *Harvard Design Magazine* 30 (2009): 138–144.
Latour, Bruno, "An Attempt at a 'Compositionist Manifesto'," *New Literary History* 41 (2010): 471–490.
Latour, Bruno, *An Inquiry into Modes of Existence. An Anthropology of the Moderns*, trans. Catherine Porter (Cambridge, Mass.: Harvard University Press, 2013).

Latour, Bruno, *Facing Gaia. Eight Lectures on the the New Climatic Regime*, trans. Catherine Porter (Cambridge: Polity, 2017).
Le Guin, Ursula K., "From Elfland to Poughkeepsie," in *The Language of the Night: Essays on Fantasy and Science Fiction* (New York: HarperCollins, 1992), 78–92.
Le Guin, Ursula K., "Paradises Lost," in *The Birthday of the World and Other Stories* (New York: HarperCollins, 2002), 249–362.
Le Guin, Ursula K., "Telling is Listening," in *The Wave in the Mind: Talks and Essays on the Writer, the Reader, and the Imagination* (Boston: Shambhala, 2004), 185–205.
Le Guin, Ursula K., "The Operating Instructions," in *The Wave in the Mind. Talks and Essays on the Writer, the Reader, and the Imagination* (Boston: Shambhala, 2004), 206–210.
Le Guin, Ursula K., "Speech in Acceptance of the National Book Foundation Medal for Distinguished Contribution to American Letters," 19 November 2014, https://www.ursulakleguin.com/nbf-medal.
Leder, Andrzej, "The Limits of Representation and What Lies Beneath," *Eidos* 6.1 (2022): 65–79.
Lewis Hood, Kate, "Clouding Knowledge in the Anthropocene: Lisa Robertson's *The Weather* and Caroline Bergvall's *Drift*," *Green Letters* 22.2 (2018): 181–196.
Lindquist, Greg, "In Conversation with Timothy Morton," *Brooklyn Rail*, November 2011, https://brooklynrail.org/2013/11/art_books/timothy-morton-with-greg-lindquist.
Lipszyc, Adam, "O nieprzekładalności przekładu," *Literatura na Świecie* 5–6 (2011): 69–90.
López, Francisco, "Profound Listening and Environmental Sound Matter," in *Audio Culture, Revised Edition: Readings in Modern Music*, eds. Christoph Cox and Daniel Warner (New York: Bloomsbury, 2017), 103–108.
Lubiak, Jarosław, "Plastic Planetarism: The Art of Staying with The Trouble," in *Plasticity of the Planet. On Environmental Challenge for Art and Its Institutions*, ed. Magdalena Ziółkowska (Milan: Mousse Publishing, 2019), 89–128.
Luckhurst, Roger, "The weird: a dis/orientation," *Textual Practice* 31.6 (2017): 1041–1061.
Lyon, James K., "Paul Celan's Language Of Stone: The Geology Of The Poetic Landscape," *Colloquia Germanica* 8 (1974): 298–331.
Mackay, Robin, "A Brief History Of Geotrauma," in *Leper Creativity. Cyclonopedia Symposium*, eds. Ed Keller, Nicola Masciandaro, and Eugene Thacker (New York: Punctum Books, 2012), 1–38.
Malabou, Catherine, *What Should We Do with Our Brain?*, trans. Sebastian Rand (New York: Fordham University Press, 2008).
Malabou, Catherine, *Plasticity at the Dusk of Writing. Dialectic, Destruction, Deconstruction*, trans. Carolyn Shread (New York: Columbia University Press, 2010).
Malabou, Catherine, *The New Wounded. From Neurosis to Brain Damage*, trans. Steven Miller (New York: Fordham University Press, 2012).
Malabou, Catherine, *Ontology of the Accident. An Essay on Destructive Plasticity*, trans. Carolyn Shread (Cambridge: Polity Press, 2012).
Malabou, Catherine, "Whither Materialism? Althusser/Darwin," in *Plastic Materialities. Politics, Legality, and Metamorphosis in the Work of Catherine Malabou*, eds. Brenna Bhandar and Jonathan Goldberg-Hiller (Durham: Duke University Press, 2015), 47–60.
Malabou, Catherine, "What is Neuro-Literature?," *SubStance* 45.2 (2016): 78–87.

Malabou, Catherine, "The Brain of History, or, The Mentality of the Anthropocene," *The South Atlantic Quarterly* 116.1 (2017): 39–53.

Marais, Kobus, *A (Bio)Semiotic Theory of Translation. The Emergence of Social-Cultural Reality* (London: Routledge, 2019).

Masciandaro, Nicola, "Becoming Spice: Commentary as Geophilosophy," *Collapse VI* (2010): 21–55.

Mattern, Shannon, "Mapping's Intelligent Agents," *Places Journal*, September 2017, https://placesjournal.org/article/mappings-intelligent-agents/.

Matts, Tim and Aidan Tynan, "Geotrauma and the Eco-clinic: Nature, Violence, and Ideology," *symploke* 20.1–2 (2012): 154–171.

Mbembe, Achille, *Necropolitics*, trans. Steven Corcoran (Durham: Duke University Press, 2019).

McMurtry, Áine, "Sea Journeys to Fortress Europe: Lyric Deterritorializations in Texts by Caroline Bergvall and José F.A. Oliver," *Modern Language Review* 113.4 (2018): 812–846.

Meillassoux, Quentin, *After Finitude. An Essay on the Necessity of Contingency*, trans. Ray Brassier (London: Continuum, 2009).

Mendicino, Kristina, "An Other Rhetoric: Paul Celan's *Meridian*," *Modern Language Notes* 126.3 (2011): 630–650.

Miéville, China, "Weird Fiction," in *The Routledge Companion to Science-Fiction*, eds. Mark Bould, Andrew M. Butler, Adam Roberts, and Sherryl Vint (London: Routledge, 2009), 510–515.

Miller, Kei, *The Cartographer Tries to Map a Way to Zion* (Manchester: Carcanet, 2014).

Mitchell, Peta, *Cartographic Strategies of Postmodernity. The Figure of the Map in Theory and Fiction* (New York: Routledge, 2007).

Morelle, Louis, "Speculative Realism. After finitude, and beyond? A vade mecum," trans. Leah Orth, *Speculations III* (New York: Punctum Books, 2012), 241–272.

Morin, Marie-Eve, "The Coming-to-the-World of the Human Animal," in *Sloterdijk Now*, ed. Stuart Elden (Cambridge: Polity Press, 2012), 77–95.

Morris, Adalaide, "Forensic Listening: NourbeSe Philip's *Zong!*, Caroline Bergvall's *Drift*, and the Contemporary Long Poem," *Dibur Literary Journal* 4 (Spring 2017): 77–87.

Morrissey, Sinéad, *There Was Fire in Vancouver* (Manchester: Carcanet, 1996).

Morton, Timothy, *Hyperobjects. Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013).

Morton, Timothy, *Dark Ecology. For a Logic of Future Coexistence* (New York: Columbia, 2016).

Munday, Jeremy, *Introducing Translation Studies* (London: Routledge, 2001).

Myk, Małgorzata, "Duration of the Archive: Soundscapes of Extreme Witnessing in Divya Victor's *Curb*," *Text Matters* 13 (2023): 36–57.

Negarestani, Reza, "Globe of Revolution. An Afterthought on Geophilosophical Realism," *Identities* 8.2 (2011): 25–54.

Negarestani, Reza, "Trauma and the Outside: 1000 Forms of Cut," *Urbanomic*, 17 May 2010, https://www.urbanomic.com/trauma-and-the-outside-1000-forms-of-cut/.

Negarestani, Reza, "On the Revolutionary Earth. A Dialectic in Territopic Materialism," presentation at the "Dark Materialism" conference, Kingston University London, 12 January 2011.

Newns, Lucinda, "Necropolitical Ecologies: Creative Articulations of Nature's Death-Work in the Borderzone," *Interventions. International Journal of Postcolonial Studies* 26.1 (2023): 36–51.

Oliveros, Pauline, *Deep Listening. A Composers' Sound Practice* (iUniverse, 2005).

Olsson, Gunnar, *Abysmal. A Critique of Cartographic Reason* (Chicago: Chicago University Press, 2007).

Oppen, George, *New Selected Poems* (New York: New Directions, 2022).

Orwell, George, *The Road to Wigan Pier* (London: Penguin, 2001).

Oswald, Alice, *Dart* (London: Faber and Faber, 2002).

Oswald, Alice, *Falling Awake* (London: Cape, 2016).

Owczarek, Michał, "Planować w skali planetarnej," *Praktyka Teoretyczna* 41.3 (2021): 137–157.

Palmer, Helen and Vicky Hunter, "Worlding," in *New Materialism Almanac 2016–18*, https://newmaterialism.eu/almanac/w/worlding.html.

Parikka, Jussi, "Deep Times of Planetary Trouble," *Cultural Politics* 12.3 (2013): 279–292.

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

Piszczatowski, Paweł, "Poza kratą mowy. Poetologiczne funkcje milczenia w wierszach Paula Celana z tomu 'Sprachgitter'," *Teksty Drugie* 142.4 (2013): 257–268.

Poe, Edgar Allan, *Collected Tales, Poems, and Other Writings*, ed. Carl Ostrowski (London: Bloomsbury, 2021).

Prendergast, Mark, *The Ambient Century. From Mahler To Moby – The Evolution Of Sound In The Electronic Age. New Edition* (New York: Bloomsbury, 2003).

Ramachandran, Ayesha, *The Worldmakers. Global Imagining in Early Modern Europe* (Chicago: The University of Chicago Press, 2015).

Rankin, William, *After the Map. Cartography, Navigation, and the Transformation of Territory in the Twentieth Century* (Chicago: The University of Chicago Press, 2016).

Ravva, Amaranth, "Curb 2 & 4," in *Map of* Curb(ed), https://divyavictorcurb.org/Amaranth-Ravva.

Reilly, Evelyn, *Echolocation* (New York: Roof Books, 2018).

Reinhard, Kenneth, "Introduction," in Alain Badiou, *Plato's Republic. A Dialogue in Sixteen Chapters, with a Prologue and an Epilogue*, trans. Susan Spitzer (Cambridge: Polity Press, 2012), vii–xxiii.

Rimbaud, Arthur, *Collected Poems*, trans. Martin Sorrell (Oxford: Oxford University Press, 2001).

Romoutar, Natasha, *Bittersweet* (Toronto: Mawenzi House, 2020).

Rose-Steel, Michael, "Of Metaphors and Maps: Cartographic Thinking and the Poetry of Kei Miller," *Politics of Place: Green Connections* 3 (2015): 39–55.

Rossetto, Tania, "Theorizing Maps with Literature," *Progress in Human Geography* 38.4 (2014): 135–144.

Rudy, Susan, "A Queer Response to Caroline Bergvall's Hyphenated Practice: Towards an Interdependent Model of Reading," in *Reading Experimental Writing*, ed. Georgina Colby (Edinburgh: Edinburgh University Press, 2019), 163–184.

Rychter, Marcin, "Poczwórny Harman," in Graham Harman, *Traktat o przedmiotach*, trans. Marcin Rychter (Warszawa: Wydawnictwo Naukowe PWN, 2013), 209–231.

Saldanha, Arun, "Is There Life After Man? Geophilosophy, Geocommunism," in *Posthumous Life. Theorizing Beyond the Posthuman*, eds. Jami Weinstein and Claire Colebrook (New York: Columbia University Press, 2017), 225–247.

Scalapino, Leslie, "Eco-logic in Writing," in *)((ECO(LANG)(UAGE(READER))*, ed. Brenda Iijima (New York: Nightboat Books, 2010), 60–78.

Schafer, Murray, "The Music of the Environment" in *Audio Culture, Revised Edition: Readings in Modern Music*, eds. Christoph Cox and Daniel Warner (New York: Bloomsbury, 2017), 31–42.

Scholtes, Esther, "Terra Nullius. Cartographic Metaphors In-Between World And Representation," *kunstlicht* 41.2–3 (2020): 10–18.

Schrott, Raoul, *Erste Erde* (München: Carl Hanser Verlag, 2016).

Schrott, Raoul, "From Raoul Schrott: Selected Poems," trans. Iain Galbraith, *Pen America*, 28 August 2017, https://pen.org/raoul-schrott-selected-poems/.

Schwarzlose, Rebecca, *Brainscapes. The Warped, Wondrous Maps Written in Your Brain – And How They Guide You* (Boston: Houghton Mifflin Harcourt, 2021).

Sekula, Allan, *Ship of Fools / The Dockers' Museum*, ed. Hilde Van Gelder (Leuven: Leuven University Press, 2015).

Shaviro, Steven, *Post-Cinematic Affect* (Winchester: Zero Books, 2010).

Shaviro, Steven, *Discogniton* (London: Repeater Book, 2016).

Shklovsky, Viktor, "Art as Device," in *Viktor Shklovsky. A Reader*, trans. and ed. Alexandra Berlina (New York: Bloomsbury, 2017), 73–96.

Silverman, Hugh J., "Malabou, Plasticity, and the Sculpturing of the Self," *Concentric: Literary and Cultural Studies* 36.2 (2010): 89–102.

Skepoet2, "Marginalia on Radical Thinking: An Interview with Graham Harman," *Symptomatic Commentary*, 22 September 2014, https://symptomaticcommentary.wordpress.com/2014/09/22/marginalia-on-radical-thinking-an-interview-with-graham-harman/.

Skoulding, Zoë, *Poetry & Listening. The Noise of Lyric* (Liverpool: Liverpool University Press, 2020).

Skoulding, Zoë, "Introduction," in *Poetry's Geographies. A Transatlantic Anthology of Translations*, eds. Katherine M. Hedeen and Zoë Skoulding (Swindon: Shearsman Books, 2022), 9–23.

Sloterdijk, Peter, *In the World Interior of Capital. For a Philosophical Theory of Globalization*, trans. Wieland Hoban (Cambridge: Polity, 2013).

Sloterdijk, Peter, *Spheres. Volume 2: Globes, Macrospherology*, trans. Wieland Hoban (South Pasadena: Semiotext(e), 2014).

Smith, Tracy K., *Life on Mars* (Minneapolis: Graywolf Press, 2011).

Soja, Edward, "Thirdspace: Expanding the Scope of the Geographical Imagination," in *Human Geography Today*, eds. Doreen Massey, John Allen, and Philip Sarre (Cambridge: Blackwell, 1999), 260–278.

Spitzer, Susan, "Translator's Preface," in Alain Badiou, *Plato's Republic. A Dialogue in Sixteen Chapters, with a Prologue and an Epilogue*, trans. Susan Spitzer (Cambridge: Polity Press, 2012), xxiv–xxviii.

Spivak, Gayatri Chakravorty, "'Planetarity' (Box 4, WELT)," *Paragraph* 38.2 (2015): 290–292. Reprinted after: *Dictionary of Untranslatables: A Philosophical Lexicon*, ed. Barbara Cassin, trans. Steven Rendall, Christian Hubert, Jeffrey Mehlman, Nathanael Stein, and Michael Syrotinski (Princeton: Princeton University Press, 2014).

Srnicek, Nick and Alex Williams, "#ACCELERATE MANIFESTO for an Accelerationist Politics," *Critical Legal Thinking*, 14 May 2013, https://criticallegalthinking.com/2013/05/14/accelerate-manifesto-for-an-accelerationist-politics/.

Srnicek, Nick and Alex Williams, *Inventing the Future. Postcapitalism and a World Without Work* (London: Verso, 2015).

Srnicek, Nick, *Platform Capitalism. Technology after Capitalism* (Cambridge: Polity, 2017).

Stengers, Isabelle, *In Catastrophic Times: Resisting the Coming Barbarism*, trans. Andrew Goffey (Open Humanities Press, 2015).

Stengers, Isabelle, "Ursula K. Le Guin, Thinking in SF Mode," in *The Legacies of Ursula K. Le Guin. Science, Fiction, Ethics*, eds. Christopher L. Robinson, Sarah Bouttier, and Pierre-Louis Patoine (Cham: Palgrave MacMillan, 2021), 121–136.

Szerszynski, Bronislaw and John Urry, "Visuality, Mobility and the Cosmopolitan: Inhabiting the World from Afar," *The British Journal of Sociology* 57.1 (2006): 113–131.

Tally, Robert T. Jr, "The Space of the Novel," in *The Cambridge Companion to the Novel*, ed. Eric Bulson (Cambridge: Cambridge University Press, 2018): 152–167.

Tennyson, Alfred, Lord, *An Anthology*, ed. F.L. Lucas (Cambridge: Cambridge University Press, 2014).

Thacker, Eugene, *In the Dust of This Planet* (Winchester: Zero Books, 2011).

Thacker, Jack, "The Thing in the Gap-Stone Style: Alice Oswald's Acoustic Arrangements," *The Cambridge Quarterly* 44.2 (2015): 103–118.

Thrift, Nigel, "Steps to an Ecology of Place," in *Human Geography Today*, eds. Doreen Massey, John Allen, and Philip Sarre (Cambridge: Blackwell, 1999), 295–322.

Tokarczuk, Olga, "Prace Hermesa, czyli jak tłumacze codziennie ratują świat," in *Czuły narrator* (Kraków: Wydawnictwo Literackie, 2020), 73–92.

Tompkins, David, "Weird Ecology: On The Southern Reach Trilogy," *Los Angeles Review of Books*, 30 September 2014, https://lareviewofbooks.org/article/weird-ecology-southern-reach-trilogy/.

Toop, David, *Haunted Weather. Music, Silence and Memory* (London: Serpent's Tail, 2005).

Toop, David, *Ocean of Sound. Ambient Sound and Radical Listening in the Age of Communication* (London: Serpent's Tail, 2018).

Toscano, Alberto and Jeff Kinkle, *Cartographies of the Absolute* (Winchester: Zero Books, 2015).

Toscano, Alberto, "The Mirror Of Circulation: Allan Sekula And The Logistical Image," *Society and Space*, 31 July 2018, https://www.societyandspace.org/articles/the-mirror-of-circulation-allan-sekula-and-the-logistical-image.

Tsing, Anna L., *The Mushroom at the End of the World. On the Possibility of Life in Capitalist Ruins* (Princeton: Princeton University Press, 2015).

Tsing, Anna L., Jennifer Deger, Alder Keleman Saxena and Feifei Zhou (eds.), *Field Guide to the Patchy Anthropocene. The New Nature* (Stanford: Stanford University Press, 2024).

Tsing, Anna L., Jennifer Deger, Alder Keleman Saxena, and Feifei Zhou (eds.), *Feral Atlas. The More-Than-Human Anthropocene*, https://feralatlas.org.

Turchi, Peter, *Maps of the Imagination: The Writer as Cartographer* (San Antonio: Trinity University Press, 2004).

Twitch, JD and Fergus Clark, *Miracle Steps: Music From The Fourth World 1983–2017*, OMLP09 (Glasgow: Optimo Music, 2017).

Tynan, Aidan, "Geotrauma. Towards a Concise Definition," *Violent Signs*, 30 March 2012.
Uexküll, Jakob von, *A Foray into the Worlds of Animals and Humans. With a Theory of Meaning*, trans. Joseph D. O'Neil (Minneapolis: University of Minnesota Press, 2010).
Ulstein, Gry, "'Through the Eyes of Area X': (Dis)Locating Ecological Hope via New Weird Spatiality," in *Spaces and Fictions of the Weird and the Fantastic. Ecologies, Geographies, Oddities*, eds. Julius Greve and Florian Zappe (Cham: Palgrave Macmillan 2019), 129–148.
Unger, Richard W., *Ships on Maps. Pictures of Power in Renaissance Europe* (Cham: Palgrave, 2010).
Usher, Philip John, "Untranslating the Anthropocene," *diacritics* 44.3 (2016): 56–77.
Vandermeer, Jeff, "The New Weird: 'It's Alive?'," in *The New Weird*, eds. Ann Vandermeer and Jeff Vandermeer (San Francisco: Tachyon Publications, 2008), ix–xviii.
Vandermeer, Jeff, "Conversation #1: China Miéville and Monsters," in *Monstrous Creatures. Explorations of Fantasy through Essays, Articles and Reviews* (Bowie, MD: Guide Dog Books, 2011). Kindle Edition.
Vandermeer, Jeff, "The Uncanny Power of Weird Fiction," *The Atlantic*, 30 October 2014, https://www.theatlantic.com/entertainment/archive/2014/10/uncanny-fiction-beautiful-and-bizarre/381794/.
Vandermeer, Jeff, *Annihilation* (New York: Farrar, Straus and Giroux, 2014).
Vandermeer, Jeff, *Authority* (Toronto: Harper Collins, 2014).
Vandermeer, Jeff, "Hauntings in the Anthropocene. An Initial Exploration," *Environmental Critique*, 7 July 2016, https://environmentalcritique.wordpress.com/2016/07/07/hauntings-in-the-anthropocene/.
Vandermeer, Jeff, "Johannes Heldén's Astroecology and Storytelling in the Anthropocene," *Environmental Critique*, 5 April 2017, https://environmentalcritique.wordpress.com/2017/04/05/jeff-vandermeer-on-johannes-heldens-astroecology-and-storytelling-in-the-anthropocene/.
Vandermeer, Jeff, *This World is Full of Monsters* (Tor Books, 2017).
Victor, Divya, *Curb* (New York: Nightboat Books, 2020).
Victor, Divya, *Map of* Curb(ed), https://divyavictorcurb.org/Map.
Victor, Divya, "A Conversation with Divya Victor, Author of *Curb*, and writer Snigdha Koirala," *Nighboat Books*, 20 August 2021, https://nightboat.org/a-conversation-with-divya-victor-and-snigdha-koirala/.
Virillo, Paul, *The Vision Machine*, trans. Julie Rose (Bloomington: Indiana University Press, 1994).
Warburg, Aby, *Bilderatlas Mnemosyne*, Warburg Institute Archive, research lead: Claudia Wedepohl, https://warburg.sas.ac.uk/archive/bilderatlas-mnemosyne.
Wark, McKenzie, *Molecular Red. Theory for the Anthropocene* (London: Verso, 2015).
Wark, McKenzie, *General Intellects* (London: Verso, 2017).
Wark, McKenzie, "On the Obsolescence of the Bourgeois Novel in the Anthropocene," *Verso Books Blog*, 30 August 2018, https://www.versobooks.com/blogs/3356-on-the-obsolescence-of-the-bourgeois-novel-in-the-anthropocene.
Wheeler, Wendy, *The Whole Creature. Complexity, Biosemiotics and the Evolution of Culture* (London: Lawrence & Wishart, 2006).
White, Kenneth, "Elements of Geopoetics," *Edinburgh Review* 88 (1992): 163–178.

Whitman, Walt, *The Complete Writings of Walt Whitman* (New York: Putnam's Sons, 1902).

Whitmore, Sarah, "Materialist Returns: Practising Cultural Geography in and for a More-than-human World," *Cultural Geographies* 13.4 (2006): 600–609.

Wolak, Jakub, "Uziemienie. Filozoficzne marginalia do *The Stack* i *O antropolizie* Benjamina Brattona," *Praktyka Teoretyczna* 41.3 (2021): 169–190.

Woodard, Ben, *On an Ungrounded Earth. Towards a New Geophilosophy* (New York: Punctum Books, 2103).

Woszczek, Marek, *Potencjalność, fizyka i odkrycie surrealności natury* (Warszawa: Wydawnictwo Naukowe PWN, 2021).

Wróbel, Szymon, "Otchłań przedmiotu. O filozofii, która nie jest już strażniczką bytu," in Graham Harman, *Traktat o przedmiotach*, trans. Marcin Rychter (Warszawa: Wydawnictwo Naukowe PWN, 2013), xi–lv.

Wynter, Sylvia, "On How We Mistook the Map for the Territory," in *Not Only The Master's Tools. African-American Studies in Theory And Practice*, eds. Lewis R. Gordon and Jane Anna Gordon (London: Routledge, 2006), 107–169.

Yusoff, Kathryn, *Geologic Life. Inhuman Intimacies and the Geophysics of Race* (Durham: Duke University Press, 2024).