

Peggy Karpouzou / Nikoleta Zampaki (eds.)

Symbiotic Posthumanist Ecologies in Western Literature, Philosophy and Art

Towards Theory and Practice



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Through the burgeoning fields of Posthumanities and Environmental Humanities, this edition examines the changing conception of human subjectivity, agency, and citizenship as shaped by the dynamic interplays between nature, technology, science, and culture. The proposed 'symbiotic turn' (the awareness of the multitude of interactions and mutual interdependencies among humans, non-humans and their environment) aspires to explore the complex recompositions of the "human" in the 21st century. By organizing and promoting interdisciplinary dialogue at multiple levels, both in theory and practice, *Symbiotic Posthumanist Ecologies* is suggested as a new narrative about the biosphere and technosphere, which is embodied literarily, philosophically, and artistically.

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Symbiotic Posthumanist Ecologies
in Western Literature, Philosophy and Art

STUDIES IN LITERATURE, CULTURE, AND THE ENVIRONMENT

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Pramod K. Nayar

Looking through the Symbiotic Lens

What posthumanism has achieved is a reorganization of the thinking on “ecology” and “ecosystems” by pointing out the symbiotic nature of all life on earth, including a symbiosis with the non-living and the technological. Radically decentering the Human, dislodging it from its position as the apotheosis of the planet’s evolutionary process and realigning the Human with the “rest-of-the-world” has demanded attention to connections, dependencies and mutuality. Conversely, the rise of the discourse of the Anthropocene has produced queries over the ways in which the Human, assuming this “centric” role for itself, has savaged the planet and generated the crisis of speciesism, eco-disaster, climate change and other planetary crisis-situations.

It would be uncharitable to assume or argue that posthumanism emerged from within a crisis – around the role of the human, climate change, technology such as cloning or AI – but it cannot be wished away either since posthumanism does address each of these massive seismic shifts in humanity’s re-evaluation of itself, its very being and, most importantly, a history of its ‘working’ on (literally) the planet. If pop culture is an index of our collective anxieties and aspirations, then some of posthumanism’s thinking on these matters of ecology, the human and the nonhuman, has already been at the edges of ecodystopian texts and crisis films, for example, or techno-thrillers obsessed with the ‘rise’ of the machines that would eventually supplant the human.

The acknowledgement of this not-so-praiseworthy role of the Human has resulted in posthumanism and ecological thought coming together in volumes such as this, but also in the work of Francesca Ferrando, Stacy Alaimo, Ursula Heise, Rosi Braidotti and several others, drawing upon texts by Karen Barad, Donna Haraway, Tim Morton and other philosophers/critics but also the work of scientists, anthropologists, evolutionary biologists and commentators, from Lyn Margulis to Bruce Clarke and Anna Tsing.

Critical Theory such as those from the above-mentioned commentators has returned, one could say, to the idea of the *responsible* Human who needs to enunciate – as Haraway would argue – a different *response* to the world around. It develops a new grammar and vocabulary of connections and rhizomatic movements even as it strives assiduously to not retain the Human at the centre.

A volume such as this, signalling a shift away from both, anthropocentrism and ecohumanism as traditionally practised, is the next step in Critical Theory, where the insights from ecosophy, materialist philosophy, biology make common cause with – symbiotically, one could say – technocriticism and posthumanism. In the process, it heralds a new posthumanism too – by asking for posthumanism to account for the ecological.

Consequently, a re-enchantment of the world is underway, in the face of imminent and immanent extinction (as explored by thinkers as diverse as Frank Kermode in *The Sense of an Ending*, Claire Colebrook in *Death of the Posthuman* and Deborah Rose, Thom Van Dooren, Matthew Chrulew in *Extinction Studies*). This re-enchantment finds expression in four “modalities” – if we can call them that – exemplified in the volume at hand.

First, it (the volume) refocuses attention upon nonhuman forms of life with an intensity and ethical gaze that is unusual, necessary and political. With this move, essays in this volume through their reading of multiple kinds and genres of contemporary narratives, from literature to philosophy, point to the necessity of seeing evolution and life itself as the result of cooperation and not competition, dependency and not isolation, co-survival rather than autonomous existence.

Second, it calls for a rethink of the body – human, animal, humanimal, plant – and thereby the ontological status of species too. In texts devoted to, say, fungi, plants or trees (Richard Powers’ *The Overstory* comes to mind here, but also the work of Anna Tsing and the field of Critical Plant Studies), the connections between bodies and the earth are explored as never before.

Third, it redefines what we understand as an ecosystem, human or nonhuman. In this particular case, the role technology plays in defining, say, urban spaces where life intermixes with devices, waves, ambient intelligent machines, among others. Cyborgs and machines assisting and prolonging life are no longer the stuff of speculative fiction, as we now know.

Fourth, it has induced a revisit of philosophical thought, whether phenomenology, cosmopolitanism or ethics. Thus, concepts and ideas of climate justice, environmental justice and multispecies justice engagingly muddy the philosophical waters to enable the recognition of the deeper dwellers of the biome. It entails revisiting the very idea of Human “stewardship” of the planet, and the ethical demands on such a role.

Posthumanism’s insistence on the symbiotic as the lens through which Humans think and act is timely, and this volume’s contribution to the debates around symbiosis in the natural sciences, Critical Theory and the arts cannot be overemphasized. Working with ideas such as transcorporeality and multispeciesism, the volume’s diverse and yet linked essays are ethicist, materialist and exemplary.

Francesca Ferrando

“We Are The Earth”: Posthumanist Realizations in the Era of the Anthropocene

We are the Earth; we are Everything. The trees dancing in the rain and creating the oxygen we breathe. The technosphere, which allows us to connect the human-sphere – that is, humanity and all ‘things’ human. We are part of a planet: this, we cannot forget, or our ignorance will endanger our own survival. This is who we are.

Ideas can help to better understand our cosmic presence; they can also obfuscate clarity and discernment. Academia is a powerful source where collective realizations shape (and eventually promulgate in) the world. We have a big role in our species manifestations, at the individual, social, bio-technological, and ontological levels. Sometimes, academia suits specific perspectives that are only of an era. Anthropocentrism fitted the ideological *episteme* of the Industrial revolution; it was, symbolically speaking, its ‘steam engine’, sustaining and guiding political actions, technological innovations and ecological devastations; it has fulfilled its role. Now, it’s time to change, as this paradigm no longer works in the 21st century. Ours is not just the era of the Anthropocene, but an anthropogenic epoch in which challenging characteristics of living in the Anthropocene are expected, and experienced daily; for instance, climate change and global pandemics are no longer ‘fears’: they are realities.

The emergence of the coronavirus has dramatically demonstrated how deeply we are connected to our own species, to other species, and to viruses. Scientifically, viruses are not considered alive, because they are inert outside of a living host: they are unable to perform biological processes without relying on the cellular system of another organism. From a human standpoint, ‘they’ become alive by becoming ‘us’, including (but not limited to) our genetic makeup. According to a recent study: “Our DNA contains roughly 100,000 pieces of viral DNA. Altogether, they make up about 8 percent of the human genome” (Zimmer, 2017). This is neither good or bad; it's who we are, at the evolutionary level.

These years have been eye-opening. In urgency, we have realized that the dignity of non-human nature can only ensue in global awareness; otherwise, other viruses currently hosted by non-human animals will also affect human survival – for example, in the possible case that some humans persist in disrupting natural habitats and invading wilderness. Technology can be of help, but obviously, is not the solution; for instance, the current bio-technological ‘fixes’ of the spread

of COVID-19 variants have shown to be only partially successful. We, humans of the 21st century, cannot do it alone: we are part of the planet.

In awareness, we thrive. Posthumanism reveals itself as a precious tool to navigate these spatio-temporal conditions, by comprehending our role in the big picture. Posthumanism points towards a path of self-existential dignity for all beings. The posthuman intention of shedding from damaging myths of anthropocentric mastery of the world is currently manifesting in new endeavors and resolutions, requiring personal commitment and pluralistic elaborations. This book generates out of this need, by addressing the notion of “symbiosis” in deep and exhausting manners, and by approaching ways of existing as (posthuman) humans in the 21st century: not only in theory but, more urgently, in practice. This is the result of a new wave of academic clarity that approaches our trajectories as a species in order not just to describe, but to actualize them: in this, we are not alone. This volume sustains a real cathartic understanding of agency, which embraces multispecies co-existence through a thorough revisitation of urban engineering, art, literature, philosophy and myth, among other related fields.

The present journey of re-evaluating ourselves as planetary beings is ongoing, in awareness and response-ability: Welcome!

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Zimmer, Carl, ‘Ancient Viruses Are Buried in Your DNA’, *New York Times*, 4 October 2017, <https://www.nytimes.com/2017/10/04/science/ancient-viruses-dna-genome.html> [accessed January 2022].

Peggy Karpouzou and Nikoleta Zampaki

Introduction: Towards a Symbiosis of Posthumanism and Environmental Humanities or Paving Narratives for the Symbiocene

The era of the disastrous human impact on Earth's systems, recently named the "Anthropocene", poses several epistemological and methodological challenges for the Humanities, particularly in studying the relationship between the human and the more-than-human within a damaged world, full of shared precarities, vulnerabilities, and "unchosen proximities".¹ Even if the material world is conceived as strictly tied to the non-human life-forms, the latter are bound to the human reality as humans are "enmeshed within the material flows, exchanges, and interactions of substances, habitats, places, and environments".² Nevertheless, most public and academic discourses about the relationship of human and more-than-human world are grounded in an anthropocentric worldview that also entails the belief that human beings, assisted by technology, can use the planet to meet the needs of both current and future generations. Anthropocentrism (the narrative of humanity's kinship with nature based on our needs) is diametrically opposed to a range of contemporary post-anthropocentric approaches in Arts, Humanities and Social Sciences, such as the discussions of new materialism, including vital materialism³. Vitalist approaches reject speciesism and human supremacy, putting the spotlight on "the politics of life itself".⁴ Therefore, new modes of analysis and interpretation of these entangled webs of life must be

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- 1 Jeffrey J. Cohen, 'The Sea Above', in *Elemental Ecocriticism: Thinking with Air, Water, and Fire*, ed. by J.J. Cohen and L. Duckert (Minneapolis: Minnesota University Press, 2015), 107.
 - 2 Stacy Alaimo, 'New Materialisms, Old Humanisms, or Following the Submersible', *NORA: Nordic Journal of Feminist and Gender Research* 19.4 (2011), 281.
 - 3 Jane Bennett, *Vibrant Matter. A Political Ecology of Things* (Durham: Duke University Press, 2010); Kyla Wazana Tompkins, 'On the Limits and Promise of New Materialist Philosophy', *Lateral* 5.1 (2016), n.p.
 - 4 Nikolas Rose, *The Politics of Life Itself: Biomedicine, Power, and Subjectivity in the Twenty-First Century* (New Jersey: Princeton University Press, 2007), viii.

developed if we seek to go beyond the binaries that underpin the human species' separation from the non-human other and jeopardize the planet's sustainability.

By focusing on the notion of symbiosis, this volume aspires to contribute to rethinking human subjectivity and agency in the 21st century as shaped by dynamic interplays between nature, technology, science, and culture. As Francesca Ferrando remarks, "Once we underline the human not as one but as many, some may emphasize that other notions and practices – such as interdependence, symbiosis, affinity, and so on – are as fundamental as the category of alterity [...]"⁵ The subject's shifting nature⁶ is here perceived within the narratives of Posthumanism and Environmental Humanities, which are both prominent trends of the current global discussion about the future of humanity and the reimagining of the Humanities.⁷

Posthumanism, embracing a non-dual account of human beings and a non-anthropocentric perspective of the world, is a well-established critical discourse of Humanities and Social Sciences since the 1970s and 1980s. It has greatly affected the study of the relationship between humans and non-humans. While transhumanism promotes human beings' biotechnological physical and cognitive enhancement to something radically different from their current status and conception,⁸ posthumanism does not imply a literal end of mankind. It rather indicates the end of a particular human image.⁹ It scrutinizes a historical moment "in which the decentering of the human, its imbrication in technical, medical, informatics, and economic networks is increasingly impossible to ignore."¹⁰ A more dynamic conception of the human involves an expansion of the

5 Francesca Ferrando, *Philosophical Posthumanism* (New York and London: Bloomsbury, 2019), 70.

6 Rosi Braidotti, *The Posthuman* (Cambridge: Polity, 2013), 56–57.

7 Claire Colebrook, *Death of the PostHuman. Essays on Extinction*, vol. 1 (Ann Arbor: Open Humanities with Michigan Publishing-University of Michigan Library, 2014), 158–184.

8 Julian Savulescu, 'The Human Prejudice and the Moral Status of Enhanced Beings: What Do We Owe the Gods', in *Human Enhancement*, ed. by J. Savulescu and N. Bostrom (Oxford: Oxford University Press, 2010), 214.

9 Ihab Hassan, 'Prometheus as Performer: Towards a Posthumanist Culture?', *Georgia Review* 31.4 (1977), 845.

10 Cary Wolfe, *What Is Posthumanism?* (Minneapolis and London: University of Minnesota Press, 2010), xv; see also, Stacy Alaimo, 'Sustainable This, Sustainable That: New Materialisms, Posthumanism, and Unknown Futures', *PMLA* 127.3 (2012), 561: "the material self cannot be disentangled from networks that are simultaneously economic, political, cultural, scientific, and substantial [...]"

terrain in which it is constituted and the understanding that its structuration involves diverse layers, grids, and activations. Posthumanism criticizes anthropocentric humanism and opens its inquiry to non-human life including earth, materials, plants, animals, artificial intelligence, diverse processes, and potential entities such as hyper objects.¹¹ The posthumanist condition is thus computational as much as it is ecological. For Louise Westling, posthumanism could assist in defining the place of humans within the ecosystem by “interrogating or erasing the boundary that has been assumed to set our species apart from the rest of the living community”.¹² A new “ecological posthumanism”, within an “eco-philosophy of multiple belongings”, calls for emergence as it raises issues of “power and entitlement”¹³ in the age of the Anthropocene. At the same time, it also questions the self-reflexivity of the subject at the center of classical Humanism and its contemporary variations.

Similarly challenging anthropocentrism are “ecocentrism” (ecosystem-centered ethics), which “places intrinsic value on all forms of life” and “biocentrism”, a life-centered ethics which, [...] accounts for “the obligations and responsibilities we have with respect to the wild animals and plants of the Earth”.¹⁴ The momentous posthumanist turn of Environmental Humanities (post-ecocriticism) is engaged with the nexus between organic and inorganic life-forms, expanded on sustainability and responsible action. Ethical responsibility is considered within a new materialist and posthumanist sense of the human¹⁵ as all entities emerge through, and as part of, their entangled intra-relating and are perpetually “intra-connected” with the “flows of substances”¹⁶ and the agencies of environments.

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- 11 Neil Badmington, ‘Posthumanism’, in *The Routledge Companion to Literature and Science*, ed. by B. Clarke and M. Rossini (London: Routledge, 2012), 374; Gilles Deleuze, *Spinoza: Practical Philosophy* (San Francisco: City Lights, 1988), 101; Rosi Braidotti, *Posthuman Knowledge* (Cambridge: Polity, 2019), 45–46, 363.
 - 12 Louise Westling, ‘Literature, the Environment, and the Question of the Posthuman’, in *Nature in Literary and Cultural Studies. Transatlantic Conversations on Ecocriticism*, ed. by C. Gersdorf and S. Mayer (Amsterdam-New York: Rodopi, 2006), 30.
 - 13 Braidotti, *The Posthuman*, 49.
 - 14 Bryan L. Moore, *Ecological Literature and the Critique of Anthropocentrism* (New York and London: Palgrave Macmillan, 2017), 6.
 - 15 Jerry Lee Rosiek, Jimmy Snyder and Scott L. Pratt, ‘The New Materialisms and Indigenous Theories of Non-Human Agency: Making the Case for Respectful Anti-Colonial Engagement’, *Qualitative Inquiry* 26.3–4 (2019), 336.
 - 16 Stacy Alaimo, *Bodily Natures. Science, Environment, and the Material Self* (Bloomington and Indianapolis: Indiana University Press 2014), 9.

The interplays between posthumanism and Environmental Humanities raise some questions such as how humans could be truly symbionts with more-than-human world. There are also concerns about the ‘danger’ of blurring the boundaries between human and non-human life-forms. The narratives of both posthumanism and Environmental Humanities reflect a desire to figure out the future of human beings as “it requires new forms that challenge views of human ‘dominion’ over the world and acknowledge the multitude of interactions and mutual interdependencies among humans, non-humans and their environment”.¹⁷ Our volume aims to contribute to this by formulating specific questions and elaborating conceptual tools that assist us in thinking about such issues.

“Symbiotic Posthumanist Ecologies”¹⁸ as a concept has analogies with relevant postulates of “Critical Posthumanism”¹⁹ which equally “favours co-evolution, symbiosis, feedback and responses as determining conditions rather than autonomy, competition and self-contained isolation of the human”.²⁰ Other research strands that resonate with the idea of humans’ embeddedness in more-than-human networks include “systems theory”²¹ and “actor-network-theory” (ANT).²² This perspective also has strong correlations within Environmental Humanities and especially their relatively new subfield of Environmental Posthumanities.²³ The idea of “ecology”, introduced already in 1866, broadly refers to

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- 17 Ivan Callus and Stefan Herbrechter, ‘Posthumanism’, in *The Routledge Companion to Critical and Cultural Theory*, ed. by P. Wake and S. Malpas (New York: Routledge, 2013), 149.
 - 18 See also Rosi Braidotti and Simone Bignall, eds., *Posthuman Ecologies. Complexity and Process after Deleuze* (Lanham: Rowman & Littlefield, 2019). This edited volume has a philosophical scope and displays specific readings and uses of Deleuze’s conceptual apparatus on the posthuman condition.
 - 19 Pramod K. Nayar, *Posthumanism* (Cambridge: Polity, 2014), 20; Braidotti, *The Posthuman*, 47–48.
 - 20 Nayar, *Posthumanism*, 20. See also the affinities with postulates of the “Philosophical Posthumanism” in Ferrando, *Philosophical Posthumanism*, 187; Braidotti, *The Posthuman*, 81–89.
 - 21 Nayar, *Posthumanism*, 70.
 - 22 Symbiosis could be another term for “hybridity” in Bruno Latour’s account of hybrid networking. See more in Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2005).
 - 23 Christine Daigle proposes in her relevant chapter the term “Environmental (Post) humanities” to expose the extreme difficulty of clear demarcation between Environmental Humanities, Environmental Posthumanities and their various subfields. See Christine Daigle, ‘Environmental Posthumanities’, in *Palgrave Handbook of Critical*

the study of the relationships among organisms and the relationship with their surrounding environment, where we can include all conditions of existence. The focus is on the relations rather than the beings. The natural world is conceived as a dynamic flow, structured by constant streams of matter-energy, resulting in various bodies, forces, alliances, intimacies, etc.²⁴ To be ecological means to participate in a mutuality, a collectivity: “ecology clearly shows the totality of the natural world -nature viewed in all its aspects, cycles and interrelationships-cancels out human pretensions to mastery over the planet”.²⁵ A recent relevant posthumanist and environmental concept to reconfigure nature, culture and human nature is “emergent ecologies”, which designates ecological communities formed through “chance encounters between life-forms, historical accidents and parasitic invasions”.²⁶

Various environmentalisms, such as “deep ecology” and “dark ecology” have affinities with western posthumanist ethics.²⁷ “Deep ecology” is an ecosophical approach²⁸ that embraces a holistic vision of the world and humanity’s relationship with non-human life-forms, defends the universal and non-quantifiable right of all forms of life to live, and is frequently endorsed by environmental movements striving to protect our planet. Expanding upon the critique of anthropocentrism, Timothy Morton urges ecological awareness in *Dark Ecology* through a critical reimagining of the terms ecology, nature and life and a radical

Posthumanism, ed. by S. Herbrechter, I. Callus, M. Rossini, M. Grech, M. de Bruin-Molé, C.J. Müller (Palgrave Macmillan Cham: Palgrave Macmillan, 2020), 2–3.

- 24 New Materialistic and Material Feminist approaches e.g. Serenella Iovino and Serpil Oppermann’s “material ecocriticism”, Stacy Alaimo’s “trans-corporeality”, etc. are some examples of examining the interactions, intra-actions, flows and forces of bodies within their environments, including them as well. See also Stacy Alaimo, ‘New Materialisms’, in *After Human. Culture, Theory, and Criticism in the 21st Century*, ed. by Sherryl Vint, (Cambridge: Cambridge University Press, 2020), 180, 182–183.
- 25 Murray Bookchin, ‘The Power to Destroy, the Power to Create’, in *Ecology and Revolutionary Thought*, ed. by Murray Bookchin (New York: Times Change Press, 1970), 51.
- 26 Eben Kirksey, ‘Emergent Ecologies’, in *More Posthuman Glossary*, ed. by R. Braidotti, E. Jones and G. Klumbyté (New York and London: Bloomsbury Academic, 2022), 42.
- 27 Ursula K. Heise, ‘Environmentalisms and Posthumanisms’, in *The Bloomsbury Handbook of Posthumanism*, ed. by M.R. Thomsen and J. Wamberg (London and New York: Bloomsbury, 2020), 117–128.
- 28 Thomas S.J. Smith, *Sustainability, Wellbeing and the Posthuman Turn* (New York: Palgrave Macmillan, 2019), 66–69.

reconsideration of our coexistence on the planet.²⁹ The practices and processes of becoming fully and ethically aware of the connection between humans and the more-than-human world³⁰ reestablish the ties of the Humanities with the Natural Sciences.

Symbiosis, the Gaia Hypothesis and Life

Natural Sciences have developed the study of “symbiosis” to access various relationships among life-forms.³¹ The concept of symbiosis, has its roots in the Greek verb *συμβιώνω* which means live in close connection. It describes an association between different organisms attached to each other and living together, ideally referring to mutual and beneficial living. Albert Bernhard Frank first coined this living together in 1877 as “symbiotismus” to describe the mutualistic relationship among lichens.³² However, symbiosis can take different forms, obligatory or facultative. It can be mutualism (all agents benefit), commensalism (one benefits and others continue to live unharmed), and parasitism (one benefits and the other one, who is the host, is harmed).³³ For instance, the majority of human societies are stated to be in a relation of “non-mutual symbiosis” or “parasitic” relationship with our planet Earth.³⁴

Symbiosis has a growing recognition as a core principle of contemporary biology, replacing an essentialist conception of “individuality”.³⁵ However, despite

29 Timothy Morton, *Dark Ecology. For a Logic of Future Coexistence* (New York: Columbia University Press, 2016), 1.

30 Michael J. Gormley, *The End of the Anthropocene. Ecocriticism, Universal Ecosystem, and the Astropocene* (Lanham: Rowman & Littlefield, 2021), 22.

31 Different terms such as *closeness, bonds, care, kinship, intimacy*, etc. have been proposed in the relevant literature in humanities to study the human-nonhuman’s relationship. See, ‘Human-Nature Relationship Model’, in Neil H. Kessler, *Ontology and Closeness in Human-Nature Relationships. Beyond Dualisms, Materialism and Posthumanism* (Cham: Springer, 2019), 92.

32 Albert Bernhard Frank, ‘Über die biologischen Verhältnisse des Thallus einiger Krustenflechten’, *Cohn Beiträge zur Biologie der Pflanzen* 2 (1876), 195–196.

33 Kent A. Peacock, ‘Symbiosis in Ecology and Evolution’, in *Philosophy of Ecology*, ed. by K. deLaplante, B. Brown, and K.A. Peacock (Oxford, Amsterdam and Waltham, MA: Elsevier, 2011), 226.

34 Francesca Ferrando, ‘The Party of the Anthropocene: Post-humanism, Environmentalism and the Post-anthropocentric Paradigm Shift’, *Relations* 4.2 (2016), 162–163.

35 Bruce Clarke, *Gaian Systems. Lynn Margulis, Neocybernetics, and the End of the Anthropocene* (Minneapolis: University of Minnesota Press, 2020), 237.

the appreciation and use of symbiosis in natural sciences and philosophy, the concept lacks further and in-detail approaches to what it is and how it works today.³⁶ The debates among those who accept the primacy of symbiosis in nature and those who deny it were triggered by the lack of a clear picture of symbiosis' biophysics as a natural phenomenon,³⁷ i.e., how biological associations within a symbiotic relationship entail adoptions, energy, flows, interactions, abundance, distribution, etc., involving the same or different agents (intra- or inter-specific ones).

A way to understand the concept of symbiosis and its role in life's evolution on Earth is to proceed through the various embedded assemblages, systems, and collaborative networks.³⁸ Their relationship is studied in the "Gaia hypothesis" (Lovelock and Margulis, 1974; Margulis and Hinkle, 1991; Lovelock, 1995; Margulis, Sagan and Eldredge, 1995; Margulis, 1998), the idea that the Gaia (a Greek name for Mother Earth) is a living entity and life can be seen as a collaborative process. The Gaia forms a physiological self-regulating system where different agencies and life-forms interact effectively to sustain the biosphere (all the parts of Earth that make up the living world) and its evolution through time. Moreover, it is claimed that the planetary Gaian system functions as "interrelated dynamic life processes"³⁹, and as "an open thermodynamic system" where "energy flow across gradients generates organization and order".⁴⁰ The Gaia hypothesis postulates that the conditions on the planet are kept within boundaries favorable to life by self-regulating feedback mechanisms involving organisms tightly coupled to their environment. Under this account, Tyler Volk embraced research on models about "chemical flows with and without life" and their consequences on the sustainability of their environments:

If anything, Gaia theory is going to be a theory about Earth's chemistry, because the chemical constituents of the air, water, and soil are what the organisms primarily affect [...]. What we need are models that look at chemical flows with and without life in a

36 Peacock, 'Symbiosis in Ecology and Evolution', 219.

37 Kent A. Peacock, 'Sustainability as Symbiosis: Why We Can't Be the Forehead Mites of Gaia', *Alternatives. Perspectives on Society, Technology and Environment* 21.4 (1995), 22.

38 Lynn Margulis, *Symbiotic Planet: A New Look at Evolution* (New York: Basic Books, 1998), 4.

39 Lynn Margulis, Celeste A. Asikainen, and Wolfgang E. Krumbein, eds., *Chimeras and Consciousness. Evolution of the Sensory Self. Evolution of the Sensory Self* (Cambridge, MA: MIT Press, 2011), 99.

40 Margulis et al., *Chimeras and Consciousness. Evolution of the Sensory Self*, 93.

generalized manner and that examine the consequences of life on the resistance and resilience of their environments.⁴¹

The Gaia hypothesis is an eco-systemic theory⁴² in which geological and biological elements “interlock abiotic and biotic subsystems”.⁴³ All life-forms bear constant modulations and configurations through these subsystems. According to this hypothesis, Gaia is “more an enormous set of nested communities that together form a single ecosystem than she is any single organism”.⁴⁴ The “nested” scales and systems shaped by symbiotic relations, – “from the nature reserves that are targets of rewilding to the human bodies that are subject to biome restoration”⁴⁵ – are also central in probiotic approaches. The dynamic interactions among various system scales are studied, for example, by Eric J. Koch and Margaret McFall-Ngai, who examine the symbiotic relationships within nested ecosystems that link the biological scales of the body and its environment.⁴⁶ This dynamic scalar approach of interactions in a system illustrates how a system is embedded within larger systems and is built of smaller subsystems. Lynn Margulis’ accounts on cellular evolution are centered on describing symbiosis mainly at the molecular level. According to Margulis, symbiosis is apt to the “organization of the living”; it shapes hence also, the structure and operation of ecosystems and Gaia as a “system” that embodies “living systems”.⁴⁷ In this sense, the study of symbiosis in biology is a Gaian approach itself, not only a biological term and issue.⁴⁸

41 Tyler Volk, ‘Toward a Future for Gaia Theory. An Editorial Comment’, *Climatic Change* 52.4 (2002), 425–426.

42 Clarke, *Gaian Systems. Lynn Margulis, Neocybernetics, and the End of the Anthropocene*, 10.

43 Bruce Clarke, ed., *Earth, Life and System. Evolution and Ecology on a Gaian Planet* (Fordham University Press: New York, 2015), 4.

44 Margulis et al., *Chimeras and Consciousness. Evolution of the Sensory Self*, 6.

45 Jamie Lorimer, *The Probiotic Planet. Using Life to Manage Life* (Minneapolis and London: University of Minnesota Press, 2020), 7.

46 Eric J. Koch and Margaret McFall-Ngai, ‘Model Systems for the Study of How Symbiotic Associations between Animals and Extracellular Bacterial Partners are Established and Maintained’, *Drug Discovery Today Disease Models* 28 (2019), 9; Lorimer, *The Probiotic Planet. Using Life to Manage Life*, 59.

47 Clarke, *Gaian Systems. Lynn Margulis, Neocybernetics, and the End of the Anthropocene*, 3–4; Margulis, *Symbiotic Planet: A New Look at Evolution*, 5; Jamie Lorimer, *The Probiotic Planet. Using Life to Manage Life*, 58.

48 Clarke, *Gaian Systems. Lynn Margulis, Neocybernetics, and the End of the Anthropocene*, 235.

Although the Gaia hypothesis is a biocentric approach,⁴⁹ it does not appear to be able to address current environmental challenges. Margulis' affiliation with Gaia hypothesis contributed to the rise of "symbio-studies", an interdisciplinary field of research dealing with both symbiosis and "symbiogenesis" (an evolutionary process that may lead members of different species that live in physical contact to merge physiologically and genomically to generate new organisms and species). She argues that life evolved by incorporating bacteria into other bacteria to create the mitochondria common to all eukaryotic life-forms.⁵⁰ In this sense, symbiogenesis is an evolutionary term that describes the "origin of new tissues, organs and organisms -even species- by establishing long-term or permanent symbiosis".⁵¹ The concept of symbiogenesis involves various interplays between different kinds of "actors"⁵² (such as individual entities or collectivities) perceived in interactions of hybridization, mutualism, commensalism, parasitism, etc. The missing mark in Margulis' involvement with Gaia as a complex autopoietic system through symbiosis, is underscored in Haraway's account about "symbiosis" and "symbiogenesis" as a troublemaker for autopoiesis:

Symbiosis makes trouble for autopoiesis, and symbiogenesis is an even bigger troublemaker for self-organizing individual units. The more ubiquitous symbiogenesis seems to be in living beings' dynamic organizing processes, the more looped, braided, outreaching, involuted, and sympoietic is terran worlding.⁵³

Furthermore, the proposed "cooperation" over "competition" in Gaia hypothesis, this kind of "arrangement" of symbiogenesis "doesn't show that cooperation is the norm or that cooperation is always good or that it's always possible [...] and you can't read into it any message such as that nature is fundamentally cooperation".⁵⁴ The reverse process of symbiogenesis, or another way to put the sympoietic tangling, the incessant composing and decomposing of each other

49 Lynn Margulis, 'Gaia Is a Tough Bitch', in *The Third Culture: Beyond Scientific Revolution*, ed. by J. Brockman (New York: Simon and Schuster, 1995), 140; "The Gaia hypothesis is a biological idea, but it's not human-centered".

50 Clarke, *Gaian Systems. Lynn Margulis, Neocybernetics, and the End of the Anthropocene*, 235–236.

51 Margulis, *Symbiotic Planet: A New Look at Evolution*, 15.

52 Margulis, *Symbiotic Planet: A New Look at Evolution*, 10–11.

53 Donna J. Haraway, *Staying with the Trouble. Making Kin in the Chthulucene* (Durham: Duke University Press, 2016), 61.

54 John Brockman, ed., *The Third Culture: Beyond Scientific Revolution* (New York: Simon and Schuster, 1995), 141.

of earthly critters in life processes, is the process of “sym-thanatosis”, proposed by Claire Colebrook. It is suggested as a “violent symbiosis” to describe how human has evolved in the Anthropocene “as ‘man’ – the animal that turns against the milieu and sustenance of his own life”. As she claims, man “is neither accident nor exception, for ‘life’ as such – in its lure of self-maintaining organisation – is an anarchic, order-destroying tendency towards extinction”.⁵⁵ Symbiosis as symbiogenesis (or sym-thanatosis) emphasizes the ecological multiplicity of all living arrangements and challenges the humanist principle about an essential humanity composed of uniquely human individuals.⁵⁶ Symbiosis, thus, may provide an eventual epistemic ground for reconstructing Humanities-Natural Sciences coalitions and a ‘bridging’ between posthumanism and Environmental Humanities.

Symbiosis, Agency and Subjectivity

The concept of symbiosis also encompasses theoretical and empirical reconsiderations of agency and subjectivity. The representation of non-human agents entwined in more-than-human relations with humanity often eludes tools of expression or frames of cognition. As Sherryl Vint notes, the genre of science fiction provides a viable platform for thinking and representing them:

The more-than-human world is often at the center of science fiction given the genre’s ability to create characters of intelligence and agency who may be alien, manufactured, or even other species given voice and a point-of-view. Such works become posthumanist when they imagine the agency of their species as part of a conversation about viable futures.⁵⁷

The posthumanist and environmental perspectives confront us with the question of the adequacy of these literary narratives concerning not only the non-human beings but also the humans’ place in the world. Symbiotic perspectives, allegories and metaphors could pave a path to understanding and representing different real, potential, or fantastic agencies in literature and art. Shifting from an anthropocentric to a post-anthropocentric worldview entails a rapidly changing approach of symbiosis within the “linkage across present and past in the act of

55 Claire Colebrook, ‘Not Symbiosis, Not Now: Why Anthropogenic Change Is Not Really Human’, *Oxford Literary Review* 34.2 (2012), 203.

56 Bruce Clarke, ‘Symbiogenesis’, in *Posthuman Glossary*, ed. by R. Braidotti and M. Hlavajova (New York and London: Bloomsbury Academic, 2018), 419.

57 Sherryl Vint, *Speculative Fiction* (Cambridge, MA: MIT Press, 2021), 228.

constructing and actualizing possible futures”:⁵⁸ Jane Bennett’s “vital materiality”, which runs through and across human and non-human bodies, Karen Barad’s theory of “intra-actions” underscoring how the agents in a network are themselves constituted by the actions that relate them to others, Lauren Fournier’s study of “fermentation”, Donna J. Haraway’s “compost” kinships, Anna L. Tsing’s anthropological perspective of human nature as an “interspecies’ relationship” through “contamination”, Stacy Alaimo’s “trans-corporeality”, are some of the approaches that study the constant flows of human and various non-human life-forms, emphasizing on the material networks in which humans and non-humans are constantly embedded.

According to Bennett, “thing-power materialism” addresses the mutual implication of humans and non-humanity, as the latter is an active actant.⁵⁹ Thus, agency is perceived in terms of assemblages of humans and non-human entities and forces. Accordingly, Barad studies the constant entanglement between materialism, culture, human and more-than-human world, which exist in a mutual accord.⁶⁰ While “interaction” describes the contact between pre-existing entities assumed to be separate, “intra-action” emphasizes the agential nature of each entity. Barad’s contribution to “agential realism” refers to “agency” which is not aligned with human intentionality or subjectivity. It is an “enactment, not something that someone or something has”:⁶¹ Moreover, in Barad’s study entitled *Meeting the Universe Halfway*, “agential realism” encapsulates the “matter’s dynamism” as “matter refers to phenomena in their ongoing materialization.”⁶²

Extensions of symbiosis can be traced in Lauren Fournier’s study of “fermentation”, which brings together fermentation and feminism, energizing the latter by the processes of transformations and interactions which concern a change from anthropocentrism to post-anthropocentrism. According to him, “fermentation

58 Rosi Braidotti, ‘Affirming the Affirmative: On Nomadic Affectivity’, *Rhizomes. Cultural Studies in Emerging Knowledges* 11/12 (2005–2006), <<http://www.rhizomes.net/issue11/braidotti.html>> [accessed 7 October 2022], npg.

59 Jane Bennett, ‘The Force of Things: Steps toward an Ecology of Matter’, *Political Theory* 32.3 (2004), 360.

60 Karen Barad, ‘Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter’, *Gender and Science* 28.3 (2003), 801.

61 Barad, ‘Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter’, 826–827.

62 Karen Barad, *Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007), 151.

is a generative metaphor, a material practice⁶³ and a microbiological process.⁶⁴ One of the ways to think about fermentation is “interspecies symbiosis and co-evolution”.⁶⁵ For instance, the knowledge that the symbiotic cultures of microorganisms constitute fermenting bodies expands the human body’s understanding as “biocultural” and the awareness of the constant cross-species permeability.⁶⁶

The awareness of multi-species’ symbiosis and sympoiesis (co-creation) is structured within different discourses, from new materialism to the critical study of the Anthropocene. Fermentation process has analogies with the well-known Haraway’s “compost” kin-making of human and non-human critters⁶⁷: “Critters are at stake in each other in every mixing and turning of the terran compost pile. We are compost, not posthuman”.⁶⁸ Composting metaphors that emphasize “the dynamic ongoing sym-chthonic forces and powers of which people are a part”⁶⁹ evoke actual metabolic events in which all critters engage daily. In Haraway’s conception of the “Chthulucene”,⁷⁰ -characterized by tentacles or tentacularity, as a reference to a capacity to feel and try, and through this, make connections and attachments-, humans hold a much less central position. “Holobiont” is another term to describe a collection of closely associated species that have complex interactions, the “symbiotic assemblages, at whatever scale of space or time” in competitive or cooperative interactions.⁷¹ According to Haraway the complex kinships of holobionts bring new knowledge about the generations and collaborations of the inorganic life-forms, such as bacteria, perceived through senses and embodied experience.⁷² This understanding of kinship is ethically oriented “to stay with the trouble”, as it requires that kind of thinking beyond inherited categories and capacities. It is postulated that the species could handle the urgencies of the Anthropocene through this “becoming-with” other beings,

63 Lauren Fournier, ‘Fermenting Feminism as Methodology and Metaphor’, *Environmental Humanities* 12.1 (2020), 88.

64 Fournier, ‘Fermenting Feminism as Methodology and Metaphor’, 88.

65 Fournier, ‘Fermenting Feminism as Methodology and Metaphor’, 89.

66 Fournier, ‘Fermenting Feminism as Methodology and Metaphor’, 97–98.

67 Donna J. Haraway, ‘Anthropocene, Capitalocene, Plantationocene, Chthulucene’, *Environmental Humanities* 6.1 (2015), 161.

68 Haraway, *Staying with the Trouble. Making Kin in the Chthulucene*, 97.

69 Haraway, ‘Anthropocene, Capitalocene, Plantationocene, Chthulucene’, 160.

70 Haraway, *Staying with the Trouble. Making Kin in the Chthulucene*, 2.

71 Haraway, *Staying with the Trouble. Making Kin in the Chthulucene*, 60.

72 Haraway, *Staying with the Trouble. Making Kin in the Chthulucene*, 60–61.

entangled in multi-species relationships.⁷³ Human history hence is perceived as a multi-species story.

In the same line, Tsing's approach of human nature as an "interspecies relationship"⁷⁴ elucidates the kinship between humans and non-human life-forms such as plants, animals, microbes and bacteria.⁷⁵ For the American anthropologist, "contamination" is a foundational concept to explain how gathering became happening that is greater than the sum of its parts; it works through collaboration and assures survival. "Staying alive – for every species – requires livable collaborations. Collaboration means working across difference, which leads to contamination."⁷⁶ In this sense, contamination as a symbiotic dynamic of bringing together different agents and material processes encourages biodiversity.

Putting "transitivity" at the center of the discussion of human/non-human bodies and subjectivities, – as "trans" implies interchange, movement across categories –, the trans-theories have turned to forms that have always been troubling clear borders between species and kinds. Colebrook argues that any encounter is already a "transitive encounter" as any dialogue between the human and non-human is "preceded, conditioned, and haunted by a condition of transitivity."⁷⁷ The transmaterial processes are studied by Alaimo, who addresses the shifting nature of the subject by introducing the concept of "trans-corporeality."⁷⁸ The latter recognizes entangled relations between bodies, places, and material substances within the environments and flows that shape and characterize the conditions of interconnectedness.⁷⁹ Trans-corporeality "emerges from a sense of fleshy permeability", eroding a humanist understanding of the world.⁸⁰ Based on Barad's approach and other materialist theories, Alaimo's posthuman environmental ethics promotes human and more-than-human interconnectedness

73 Gormley, *The End of the Anthropocene. Ecocriticism, Universal Ecosystem, and the Anthropocene*, 23.

74 Heise, 'Environmentalisms and Posthumanisms', 122.

75 Anna L. Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* (Princeton: Princeton University Press, 2015), 27.

76 Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*, 28.

77 Claire Colebrook, 'What Is It Like to be a Human?', *TSQ: Transgender Studies Quarterly* 2.2 (2015), 228.

78 Alaimo, *Bodily Natures: Science, Environment, and the Material Self*, 2.

79 Alaimo, *Bodily Natures: Science, Environment, and the Material Self*, 20–21.

80 Stacy Alaimo, *Exposed: Environmental Politics and Pleasures in Posthuman Times* (Minneapolis: University of Minnesota Press, 2016), 78.

constituting material realities⁸¹ and the need to understand our world through relations and affinities that are ethical, cultural and political. This ‘material turn’ in Humanities, Arts and Social Sciences has broadened our knowledge of agencies to understand the vibrant energies that operate in the material world. As a result, it accentuates the urgency to strive for “multi-species abundance,” “by which we mean futures with more diverse and autonomous forms of life and ways of living together.”⁸²

Symbiosis, Humanities and Citizenship

While having a fundamental role in modern Biology and Natural Sciences, symbiosis transgresses disciplinary boundaries. By emphasizing the structural interdependence among species, symbiosis could stand for a re-grounding of both Posthumanities and Environmental Humanities in a materially embedded sense of action, awareness, and ethical responsibility for our planet. As we have seen above, although symbiosis risks keeping an anthropocentric aspect, it seems that we can use the concept metaphorically to learn more about the mechanisms and functionalities of any kind of interaction to better frame our worldviews and shape sustainable futures. It gains not be seen merely as the outcome of a whole process but as a behavioral attitude and enactment. It raises questions such as the following: is it possible to recast symbiosis so that it epitomizes the narratives of posthumanism and Environmental Humanities that render the world as a whole Being rather than a resource for use and exploitation? Could symbiosis be seen as a way to cultivate posthumanist/ecohumanist epistemologies, ethics, politics, and aesthetics of the future? Which symbiotic futures shall we have to pursue? And finally, what a symbiotic future would look like?

Accordingly, the place of the Humanities in this globalized network needs to be re-shaped.⁸³ The future of the Humanities is challenged by new perspectives: the complex human interaction with organic and inorganic non-human agents, tecno-scientific advances, ecological sustainability, and the effects of globalization. As it is no longer enough to deconstruct a certain dysfunctional

81 Alaimo, *Bodily Natures: Science, Environment, and the Material Self*, 24–25.

82 Rosemary-Claire Collard, Jessica Dempsey and Juanita Sundberg, ‘A Manifesto for Abundant Futures’, *Annals of the Association of American Geographers* 105.2 (2015), 323; Sarah Whatmore, *Hybrid Geographies. Nature. Cultures. Spaces* (London, Sage Publications, 2002), 159–164.

83 Rosi Braidotti, ‘The Contested Posthumanities’, in *Conflicting Humanities*, ed. by R. Braidotti and P. Gilroy (New York and London: Bloomsbury, 2016), 9, 22.

approach to reality, we need to establish a new agenda for the future. “This makes it imperative for critical thinkers”, as Braidotti notes, “to develop new genealogies, alternative theoretical and legal representations of the new relational systems we are trying to think our way through”.⁸⁴ The interdisciplinary dialogue between the humanities, the social, and the natural sciences is requested if a genuine transformation to sustainable societies and cities is to be realized. In this sense, more active participation of the citizen communities in scientific research could be valuable. Citizen science is applied in the humanities field as “Citizen Humanities”.⁸⁵ While Digital Humanities and Public Humanities provide Citizen Humanities with data, tools, and techniques through public engagement and participation, enhancing, thus, citizens’ active collaboration, Posthumanities, and Environmental Humanities could stimulate post-anthropocentric perspectives of citizenship in the research. The priming of this symbiosis metaphor in a planetary political arena could signal an “affirmative” mode of human relations to multiple others and encourage research on what it might mean for our daily lives as well as for the citizenship’s policy.

The political implications of a “symbiotic turn”, the awareness of the inescapability of our relational dimension, could be addressed through the potential future forms of citizenship. A new conception of citizenship implies a profound understanding of how we are inserted in an environment different from past centuries. The question is to evaluate and accommodate the concept of citizenship as a co-generative agency distributed among assemblages within the human and more-than-human world.⁸⁶ For instance, Anna Bullen and Mark Whitehead examine “sustainable citizenship” by involving “a trans-human community of being, which crosses time, space and substance”, extending citizenship to include non-human agents.⁸⁷

This kind of citizenship focuses on actions and practices. It also needs a transformation in attitudes, patterns, and behaviors to reconsider the status of

84 Braidotti, ‘The Contested Posthumanities’, 33.

85 Citizen Science is understood in the context of public engagement in scientific research activities actively or by using tools and data resources. In this sense, public engagement is pivotal in the decision-making, research, collection or analysis of data and results. See also Jerome Winter, *Citizen Science Fiction* (Lanham: Rowman & Littlefield, 2021), 2.

86 Alex Latta, ‘Matter, Politics and the Sacred: Insurgent Ecologies of Citizenship’, *Cultural Geographies* 21.3 (2014), 329.

87 Anna Bullen and Mark Whitehead, ‘Negotiating the Networks of Space, Time and Substance: A Geographical Perspective on the Sustainable Citizen’, *Citizenship Studies* 9.5 (2005), 499.

citizenship in a more-than-human world and redefine the rights and responsibilities, allowing, for instance, what Haraway calls “multi-species environmental justice”.⁸⁸ According to Bennett, it could also trigger a broadening of political agency by adopting a notion of “publics as human-nonhuman collectives”.⁸⁹ Symbiotic citizenship, – by taking into consideration the integrated bio- and techno-processes across the local and global scales-, could be seen as an active shaping of united trajectories of posthumanism and environmental humanities to enhance the sustainability of human and more-than-human world. However, this co-shaping brings new issues about the perils of blurring borders or blending internships between the human and the non-human, their misrepresentations, and the query of whether anthropocentrism is ultimately avoided in symbiotic conditions.

This volume builds on the ongoing dialogue between posthumanism and Environmental Humanities and focuses on symbiotic narratives about multi-species entanglements that challenge anthropocentrism. As Christine Daigle points out, “storytelling – philosophical, literary, artistic, or otherwise – is presented as a key method in bringing to life the challenges and experiences faced by the many beings”.⁹⁰ *Symbiotic Posthumanist Ecologies in Western Literature, Philosophy and Art. Towards Theory and Practice*, opening with Professors Pramod K. Nayar and Francesca Ferrando’s forewords, is divided into three parts. The speculation about “posthumanist ecologies” is conducted through an interdisciplinary dialogue of western literature, art, and philosophy. The “symbiocentric” lens adopted here elucidates issues regarding the concept and narrative of symbiosis. For instance, what is symbiosis and for whom, how it is narrated in art, literature, and philosophy, and if the construction of a symbiotic future could entail the survival of both human and more-than-human life-forms. All the volume’s chapters probe new kinds of relationships among humans and the more-than-human world by configuring a close interplay between them and addressing the effects of symbiocentric politics in nature-culture while acknowledging concern about the future of humans and the Humanities.

The first part includes four chapters that discuss the theoretical framework of symbiosis in symbiotic posthuman ecologies, the eventual research methods,

88 Haraway, *Staying with the Trouble. Making Kin in the Chthulucene*, 8.

89 Bennett, *Vibrant Matter*, xix.

90 Christine Daigle, ‘Environmental Posthumanities’, in *Palgrave Handbook of Critical Posthumanism*, ed. by S. Herbrechter, I. Callus, M. Rossini, M. Grech, M. de Bruin-Molé, C.J. Müller (Cham: Palgrave Macmillan, 2020), 2.

and their implications. While living in a technologically shaped and ecologically damaged world, current and future more-than-human subjectivity should adapt to multiple and various forms of agency. Working on how “*techne*” helps us gain knowledge about the symbiosis between humans and technology, Roberto Marchesini questions the humanistic tradition about the auto-poietic view of human beings. His investigation, articulated mainly by the predicates of post-humanist philosophy, focuses on the concept of *techne*, its techno-poietic consequences, and its hybridizing effect on humans. He proceeds to the examination of the forms, role, functions, creativity and multiplicities of techno-science to highlight the ontological and ethical premises posed about the life-forms and their performativity.

Reflecting on philosophical posthumanism and techno-sciences postulates against human autonomy and supremacy, Teresa Heffernan explores through philosophical, political, and fictional discourses the roots of the returning in the robot/AI industry cartesian “animal-machine” analogy that market the animal as machine. She ponders over a sustainable future on the planet by questioning the posthumanist concepts of “multiple belongings” and “queer kin groups,” which obscures the incommensurability among humans, animals, robots, and AI. Finally, she discloses the complex issue of their respective rights within their symbiosis in the real world.

Mieke Bal, on her side, puts further into question the linguistic, philosophical and cultural potential of “post-” in post-humanism and exposes its implications for human and non-human symbiosis. She discusses through philosophical topics and eco-art examples the terminological issues posed by the prepositions “post-”, “trans-” and “inter-” in order to investigate symbiosis perceived as “inter-ship”, where “inter-” means *between* and implies relationality. Her reflection on symbiosis proposes in praxis the concept of “image-thinking” through artistic practices, an activity that opens up the Humanities knowledge to a new model of synthesis of creative and intellectual work.

Another pathway for articulating new narrations and frameworks for a symbiotic dwelling within Earth’s eco- and techno-systems is the exploration of the productive interplay between current scientific discourses and science fiction about more-than-human citizenship. At the end of this part, Peggy Karpouzou engages in discussion with contemporary urban planning discourses about smart cities, posthumanism and Environmental Humanities’ critical discourses, and speculative fiction about future cities. Her analysis investigates how fundamental concepts and principles, such as symbiosis, ecosystem, agency, citizenship and democracy, shape and are re-shaped by the symbiotic concept of “smart biocities”.

In the volume's second part, the close-readings of posthumanist eco-narrations embodied in western literature and art point to new orientations to the question about the kind of posthumans we are and will be.⁹¹ While presenting a re-evaluation of the notion of subjectivity, including posthuman consciousness in possible worlds and envisioning sustainable realities, speculative fiction profoundly explores the boundaries between humans and their environment. The study of behaviors and practices of life-forms in the posthumanist and ecological realm turns to the study of how various life-forms communicate with each other.

Bruce Clarke has pointed out a new mode of fictional understanding of symbiotic posthumanist ecologies by studying Richard Power's *The Overstory* and emphasizing life as a "sentient symphony", all living forms entailing sensation, choosing, and mind. The themes of animacy, animism, and processes of origination and metamorphosis are elaborated in the analysis to address the ontological connotations of interspecies' symbiotic processes in the narrative fiction. By creatively voicing recent trends in biochemistry and ecology of plant behavior, the novel extends the argument that humans and more-than-human world think, feel, and communicate through common processes.

Concerning the sensational entailment, affectivity could be seen as a key aspect of posthuman ecologies. Irene Sanz Alonso studies the fluidity of the post-human subject and how the symbiotic *modus vivendi* between humans and techno-humans, such as the android Bruna, promotes sustainable welfare in Rosa Montero's *Los tiempos del odio*. Alonso proposes approaching a possible posthuman future by understanding life as a mixture of organic and artificial elements and the symbiosis between all species as a "healing" practice to repair damaged ecologies.

The speculations in literary fiction about humanity's future are further extended by joining narratives that explore posthumanist ecologies through performative and fine arts. The creative aspect of this part is closely aligned with artistic ways of understanding and interacting with discourses of posthumanism and Environmental Humanities. By maintaining the conditions for an open future, art can provide an expression of human and inhuman co-performing and symbiotic evolution. More specifically, the following three chapters delve into capturing and reflecting on the interplay of art, technology, and the environment in interdisciplinary ways.

91 Katherine N. Hayles, *How We Became Posthuman. Virtual Bodies in Cybernetics Literature, and Informatics* (Chicago and London: University of Chicago Press, 1999), 246.

The coordination among biological processes and specifically the embodied ones, technology, and the perception of reality is studied by Aleksandra Łukasiewicz. Her working topics are the experimental artistic projects of Neil Harbison and Moon Ribas in which the expanded with prosthetic technology cyber body is considered as a medium of art. The medium of their artistic projects is upgraded “technological sensibility” which is grounded in the artists’ bodies and produces original symbiotic posthumanist ecological artworks (p.e. sound portraits and dance performances).

Dimitris Angelatos studies the interlaces between matter, energy, humans and space by tracing the metabolic artistic practices in two contemporary sculptural artworks -namely of Yiannis Markantonakis (Greece) and Tahir Karmali (Kenya)- and proposes the dynamic concept of “folded tactility”. According to him, the emerging visual and narrative interface folded in these polymorphic sculptures of toxic and waste disposal and natural materials enhances the plastic symbiotic relationships between space, artworks, and their spectators through the effect of intensity and the force of tactility.

The materialist reflections are evident in another, more-than-human, geoartistic way of perceiving the world and imagining a future beyond the Anthropocene, which is geomancy. At the end of the second part, David Fancy proposes and studies the characteristics of a “geomancer” as a person who traces the complex relationalities between the various Earth’s energetic bodies and forces. Fancy focuses on Gilbert Simondon’s philosophical work on resonance, to perceive the role of a geomancer, whose considerations are apt to perceive the transindividual, symbiotic resonances and rhythms of all life-forms’ processes.

Philosophy shares with art the intention to express human being and its complex nature. The work of continental philosophers such as Jacques Derrida, Gilles Deleuze, Félix Guattari, and Maurice Merleau-Ponty goes beyond the stable subject, explores the symbiotic processes of becoming and sets the spatio-temporal framework of new, dynamic, multi-layered subjectivities and their potential agencies. The ontological inquiries of posthumanism and Environmental Humanities engage in this discussion, seeking to envisage the futures outside and beyond our era. The third and final part of the volume delves into insightful philosophical explorations of symbiosis within a more-than-human world, sometimes along with literary accounts, images, cartographies, and ontological drawings.

Nicole Anderson critically discusses the fluid boundaries between human and non-human as presented in several posthumanist discourses. Her criticism of posthumanism’s misuse of the deconstructive method aims to solidify these boundaries. She argues that posthumanism should align with the critical force of

deconstruction, which means to undermine anthropocentrism by exposing and retaining the differences between the various species. The “deconstructive way” of approaching these boundaries in praxis is explored through the example of a symbiotically oriented communication between a human (the author) and a wild animal (a possum).

In the line of the discussion on endless differentiation as the source of being, Fred Evans poses the issues of diversity and resistance to the current form of globalization. He proposes the “parrhesiastic cosmopolitanism” as cosmopolitan political ethics in order to deterritorialize the effects of the “capitalist axiomatic” imposed on subjectivities in the Anthropocene. Drawing on “chaosmos” (Deleuze-Guattari) and Foucault’s quest for “parrhesia”, the “parrhesiastic cosmopolitanism” is the condition and the continuous result of the “mutual audibility” of all human and non-human “voices” of our cosmos, eventually leading to an era of “Chaosmocene”. In the latter, Deleuze and Guattari’s “becoming-everybody/everything” and a symbiotic ethical standing of all cosmic “voices” would be maintained.

The quest to go beyond the anthropocentric passes from a multi-voiced world to the perception of the depths of the world in the phenomenological approach of Glen A. Mazis. He sheds light on the relationship of the embodied phenomenology with posthumanism and underscores the imperative role of the former in the articulation of a not human-centered ontology. Mazis draws on Merleau-Ponty’s indirect ontology of the “flesh of the world” as a matrix of sense and addresses the need to return to *the things themselves* in order to explore the inner nature of the symbiotic relationship between humans and other beings (non-humans). Such an exploration of the manifestations of the displacing of the subject into the depths of the world in an encounter with things is claimed to be inseparably interwoven with the creative use of language in literature, as illustrated through the evoked literary works of Proust, Silko, and Woolf.

In a correlative way, Cassandra Falke approaches the matrixed ontology of symbiosis between the human subject and the natural world through the phenomenological insights of Merleau-Ponty’s *chiasmus* and Jean-Luc Marion’s “saturated phenomenality”. She suggests an eco-phenomenological approach in order to study the human and the more-than-human world’s webs and resonances using the example of sublime landscapes. For this purpose, she provides a narrative of her personal experience of being in the “woods in the dark” during Arctic winter, which is a practice of representing the dynamics, inner nature, and webs of life-forms, including the ‘dark’ complexities of understanding and achieving in praxis a symbiotic and ecologically sustainable way of living.

Remaining on the edge of cognition, the climate, according to poets and philosophers, houses Being and attaches to the unconscious. At the end of this part, Avital Ronell analyzes the premises of climate control from Goethe to Nietzsche and Freud in order to trace a path out of the Anthropocene. She underlines in the work of these “weather prophets” both an assignment to think of futurity and a recognition of the precarity of our *Umwelt*. Her autobiographical accounts of extreme weather episodes and “natural” disasters contribute to the reflection upon the outside/inside correlation, which is seen as a symbiotic relationship between human and more-than-human world on a personal and planetary scale. Finally, Ronell sees climatic change as a motivator for political action and rupture from the induced current destructive worldviews.

To sum up some of the thought-provoking points of the dialogue opened by the contributors of this volume, *Symbiotic Posthumanist Ecologies* aspire to stimulate further the exploration of the complex recompositions of the “human” in the 21st century. By organizing and promoting interdisciplinary dialogue at multiple levels, both in theory and practice, this volume looks for resonant frequencies in the perception of humans and non-humans. However, we must keep in mind that the erasure of species differences for the sake of affinities in some contemporary posthumanist discourses, -as it is in many chapters overtly criticized-, results in a reductive approach to the world’s complexity which is hazardous to the planet’s sustainability.

This dialogue starts with Roberto Marchesini and Teresa Heffernan posing ontological and ethical issues in interspecies communication. Marchesini offers the perception of *techné* as a “virus”, which means that our hybridization with technology, as in artificial intelligence, is not under the control of humans. The eventual creation of artificial entities capable of desire in their relationship with the world will raise issues of “robotics ethology” and the need for forms of consent and negotiation with AI. Heffernan also puts at the center of her thought the ethical problem of rights concerning humans, robots and animals in the Anthropocene and the risks of the collapse of animals and machines in the capitalist smart industry discourse. She underscores the significance of emotions in life-forms individualization against the reduction of differences from the origins of the animal machine analogy in fiction to the posthuman turn about kinships and computing systems simulations.

Thus, although acknowledging our ignorance regarding how the complex sociality of interspecies communications works, we think that philosophy, fiction and art offer a productive ground for speculation. Nicole Anderson also discusses the philosophical and political impact of the reduction of deconstruction when posthumanism pursues the dissolution of the boundaries and differences

between humans and non-human to challenge anthropocentrism. The example of her encounter with Emma, a possum, as a “situated story”, aims to show ways to avoid anthropocentrism and the reduction of the animal to the human-same by assuming both responsibility for the other and a care for the *difference* of the other. Irene Sanz Alonso, in her literary analysis, discusses the difficulty of Bruna, a techno-human endowed with human memories and emotions, to deal with them and relate to others. The constant blurring of boundaries between androids and humans in the novel and issues like identity transferring into organic bodies reveal the fluid and entangled nature of identity in a posthuman world and the importance of empathic feelings for cross-species communication. Accordingly, through fiction, Bruce Clarke explores recent biochemistry trends concerning plant communication and cross-species understanding through common sensory, cognitive and communicative modalities. His investigation of animacy focuses on plants as sentient beings participating in a multi-species ecosystem, whose integrity arises from the distributed sentience of its living systems. He also raises issues about the ontological space for this ecological communication across species and the “involutionary momentum” as the very momentum through which organisms reach toward one another.

The importance of broadening our perception and consciousness is highlighted as a prerequisite for our symbiotic relationships with non-human others. Mieke Bal foregrounds the role of affect in our understanding of art and literature and proposes the “*anthropomorphic* imagination” as a reading attitude that emotionally experiences characters and figures as resembling real people. This creative attitude is not *anthropocentric* since it broadens our perception and assumes human responsibility towards the more-than-human world. To understand how the human emerges from the depth of the world in a co-birthing with myriad beings, Glen A. Mazis proposes in his phenomenological account the exercise of the “*physiognomic* imagination” as an effort to bring forth the latent sense communicated to perceivers by the things themselves. The creative use of language offers this deepening of what is given in perception. It opens the liminal space of displacement into the depths of the world where the encounter with things can occur. On the other hand, Aleksandra Łukaszewicz focuses on the cyborgised body as a medium to further explore the symbiosis with the non-human world. The broadening of the borders of sensibility and the transformation of perception and consciousness is explored through artists who experiment aesthetically with the cyborgization of their body with new technological organs implanted in tissues. The augmented senses of these “*post-bodies*” offer the possibility to build new connections with other elements of our biotechnosphere.

Cassandra Falke and Avital Ronell reflect upon the precarity of our *Umwelt* and an understanding of humans as shaped by natural forces we often strive to instrumentalize. Falke exemplifies the uncertain, touched and perceived nature of human personhood through a phenomenological description of being in the woods in the dark. Through the attention to the invisible and the overwhelming givenness of the natural world, she proposes phenomenology as a means to re-orient humans toward receptivity and raise awareness of our entangled nature. Ronell's readings of the "weather prophets" and her account of her personal exposure to the furor of the elements underscore how the visitation of climate is never merely located outside, nor ours to play with, but is a morph of Being and attaches to the human unconscious in various ways. Energy exchange issues in our relationship with the more-than-human world are also explored in the chapters of Dimitris Angelatos and David Fancy. Angelatos investigates the vital undulations and the plasticity of communication between matter and humans through the metabolic energy of art. The contact with this vibrant matter is proposed as a means to resist the toxic conditions of human and environmental exploitation in the Anthropocene. Fancy also explores matters of resonance, involving the Earth's energetic bodies and forces. He proposes the figure of the "geomancer" as a conceptual persona involved in transindividual resonative activities in order to actualize and render intelligible the complex relationalities constituting our symbiotic world.

Peggy Karpouzou and Fred Evans delve into symbiotic citizenship forms in a more-than-human world that would avoid the damages caused by the capitalist Anthropocene. These alternative political ethics could assist us in envisaging a new, post-geological symbiotic era, described respectively as the "Symbiocene" and the "Chaosmocene". Karpouzou's analysis explores the challenges of resilience, sustainability, democracy and multi-species citizenship posed by the symbiotic concept of "smart biocities" both in the real world and fiction. She speculates about the potential forms and functionalities of symbiotic processes (symbiomimicry, symbiogenesis, symbiocracy) in more-than-human civil identities. The philosophical approach of Evans investigates the form of a cosmic cosmopolitan organization, a political ethics of a "parrhesiastic cosmopolitanism". The latter would assure the mutual opening up and audibility of all the "voices"/becomings in the chaosmos (Deleuze), a unity composed of difference with its three political virtues of solidarity, heterogeneity and fecundity.

Beyond these symbiotic encounters of the chapters, the waves that constitute posthumanist ecologies narratives are essentially heuristic and non-dialectical in that they avoid synthesis. Yet, like the perpetual tossing and breaking of waves in a sea, these narratives could be paving the way for the conceptualization of

an eventual post-geological era of multiple and symbiotic processes, the “Symbiocene”⁹², succeeding the Anthropocene. The current situation of pain and damages caused by the Anthropocene has been depicted by evocative terms, such as the “Necrocene” (for extinctions), the “Capitalocene”⁹³ (for causation), or the “Plantationocene” (for the racial exploitation of the beginnings of the industrial era).⁹⁴ The “Symbiocene” by endorsing the symbiotic entanglement of organic and inorganic forms and developing new forms of citizenship, could signal an era in which human beings are not the only essential actors.⁹⁵ The core message is that networks, webs, and entanglements open new ways to criticize anthropocentric thinking and elaborate new possibilities and potential ways of becoming-world together. “Symbiotic posthumanist ecologies” - a symbiotic term itself - are proposed as an innovative planetary narrative about the biosphere and technosphere, which is embodied literary, artistically, and philosophically. This foregrounding of the multi-layered interconnectivity, welfare, and risks of symbiotic life-forms raises an ecological consciousness that requires new thinking, ethics, and affirmative biopolitics for the more-than-human citizens of this world.

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- 92 Glenn Albrecht, ‘Exiting The Anthropocene and Entering The Symbiocene’, (2015), <<https://glennaalbrecht.wordpress.com/2015/12/17/exiting-the-anthropocene-and-entering-the-symbiocene-via-sumbiocracy-symbiomimicry-and-sumbiophilia/>>, [accessed 7 October 2022], npg.
- 93 Jason Moore, ed., *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism* (Oakland: Kairos, PM, 2016), 6.
- 94 Bridie Lonie, ‘Solastalgia, Extinctions, the Chthulucene and the Symbiosphere’, *Scope: (Art & Design)* 19 (2020), 92.
- 95 In the previously mentioned Haraway’s similar concept of the “Chthulucene”, “the order is rather reversed: human beings are with and of the earth, and the other biotic and abiotic powers of this earth are the main story”, see, Donna J. Haraway, ‘Staying with the Trouble. Anthropocene, Capitalocene, Chthulucene’, in Moore *Anthropocene or Capitalocene? Nature, History, and the Crisis of Capitalism*, 59.

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**PART I Framing the Symbiotic
Posthumanist Ecologies**

Roberto Marchesini

Somatizing Alterity: Technology and Hybridization in the Post-Human Era

Abstract

The humanistic tradition lies on a self-sufficient and autopoietic view of human predicates, thereby considering technoscience – and more generally culture itself – in two ways: on one hand as an emanation of human creativity that enhances man's inherent predicates, on the other hand as the offsetting proof of a deficient nature which establishes its existential potentiality. In this sense, the humanistic tradition considers technology as a tool, and epistem as an instrument of absolute domination. For the post-humanistic approach, instead, technology has a hybridizing effect: to be more precise, it alters human predicates by setting up a new performativity that is only achieved in a hetero-referential context. Post-humanistic philosophy, in this sense, is the best-equipped discipline to understand the products of those technologies (computer science, biotechnologies, etc.) that strikingly show the effects of hybridization. By shedding light on them, it also helps us gain awareness of their techno-poietic consequences. In this paper, I wish to reverse many typical humanist concepts about *téchne*, claiming that: (i) it enhances our inherent predicates without modifying them and inaugurates some new ones, acting not like a probiotic but like a virus; (ii) it does not simply preserve the body, easing its morpho-functions, but it inflicts it by operating a somatic; (iii) it is not at the service of human goals but acts as a supervisor, making new objectives come to light; (iv) it is not the solipsistic fruit of human intelligence, but clarifies the relational and decentralized meaning of any act of creation. In other words, one could wonder: does technology belong to us or, as is more probable, do we belong to technology?

Posthumanist philosophy is essentially a way of interpreting the human condition, which does so by questioning some conceptual tenets of the humanistic tradition.¹ The point is not to hail a posthuman future – that is to say, a pseudo-speciation to come – but rather to revise the ideal of man brought forward by the humanist revolution. The latter, in fact, saw man as a disjointed, autopoietic, focal and self-determined figure that inevitably lacked any hybrid and conjugative dimension. Man was considered pure, autonomous and, above all, ontologically

1 Francesca Ferrando, *Philosophical Posthumanism* (New York: Bloomsbury Academic, 2019), 24–32.

defined and opposed to the whole non-human universe.² From the humanist perspective, the human is, in fact, an autarchic entity, impervious to the world, the bearer of a universal metric perspective that subsumes the whole of reality, positioned at the center, conceivable *iuxta propria principia* and in charge of his own destiny. This view of man is what is now being challenged. Indeed, the post-human age is not the simple chimeric realization of a so-called “post-man”, but the acknowledgment of the hybrid condition of the human being.³ In short, the posthumanist perspective questions some assumptions of the humanist tradition that seem to be wavering in the face of some major changes that have occurred in the twentieth century. To mention some: (i) the full establishment of Darwinian evolutionism, which has brought the theme of animality back to the center of ontological reflection, weakening the “human vs animal” antinomy; (ii) the development of a thought focused on complexity and in particular on the relational and systemic dynamics in the construction of predicational emergence; (iii) the digital revolution, which has turned the workshop of analogical instrumentation into a single organismic reality, endowed with the same language and accessible in all sectors of human life, creating a new dimensionality – the technosphere⁴; (iv) the advent of cognitive sciences and neurobiology, which showed the limits of human intelligence (bias) with respect to computational machines, the chemistry of neuromodulation, the psychotropic possibilities, and the many kinds of knowledge present in the animal world; (v) the great ecological crisis, which affects entire biomes causing mass extinctions, but which puts into question the very survival of man on the planet due to global warming, the carbon cycle, the water supply, the demographic boom and the resource deficit.⁵

What emerges from all this is an anthropo-decentralizing process that inevitably clashes with the anthropocentric exaltation that has characterized Western thought since the fifteenth century. In this sense, the twentieth century has been as a century of transition, a time of inevitable problems, wide-ranging philosophical shifts, and interpretative doubts about the occurring phenomena, showing the inadequacy of traditional answers at the very time in which technoscientific

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- 2 Eugenio Garin, *Italian Humanism: Philosophy and Civic Life in the Renaissance* (New York: Harper & Row, 1965), 7–14.
 - 3 Roberto Marchesini, *Over the Human, Post-humanism and the Concept of Animal Epiphany* (Netherlands: Springer International Publisher, 2017a), 71–86.
 - 4 Roberto Marchesini, *Tecnosfera. Proiezioni per un futuro postumano* (Roma: Castelvecchi, 2017b), 151–173.
 - 5 Donna J. Haraway, *Staying with the Trouble, Making Kin in Chthulucene* (Durham: Duke University Press, 2016), 70–79.

research acquired unexpected and unforeseen potential.⁶ The bioethics of the late twentieth century has also shown how the clumsy attempt to face the new challenges with the old conceptual and value tools could not provide valid or exhaustive guidelines. In this sense, I think that the heuristics of fear, put forward by Hans Jonas, is paradigmatic.⁷ In the same way, while neurobiology showed the complex specialization of the phylogenetic predicates of *Homo sapiens* and evolutionism showed that there is no regressive entity in the adaptive supply chain, humanistic anthropology continued to take refuge in the myth of human incompleteness.

The humanistic triangulation, based on the “animal-man-angel” relational geometry, was shifted onto that of “man-animal-machine”; this implied not only the replacement of the angelic dimension with the mechanical one, but the centrality of the animal as opposed to man. The post-humanistic perspective is therefore first and foremost a philosophy of animality, where to understand or attain the cyber – organic dimension the human being must first recognize his own animality and rely on the animal reference.⁸ The post-humanist perspective therefore offers an eco-ontological or relational ontology approach, by which the human body is open and welcoming rather than closed-off and impervious, albeit enhanced by the techno-therianthropic dimension. Non-human otherness, like technology, is no longer considered an external improvement, something prosthetic-ergonomic – which fits the body like a glove, keeping the hand pristine and preserved in its essential characters – but rather metamorphic. In other words, the body adapts to technology, and the latter is somatized: hence the hybridization and the inevitably contaminated condition of the human being.⁹

In this regard, I would like to address five topics that I consider fundamental in the post-humanistic interpretation of *téchne*: (1) *The connective and conjunctive value of the technosphere*, while the humanist tradition sees it as a sort of uterus that distances itself from the world and maintains the internal, larval and essential purity of the human being *qua* non-declined entity; (2) *The nature of techno-poiesis*, which is an epiphanic and supervenient event aimed at

6 Roberto Marchesini, *Beyond Anthropocentrism, Thoughts for a Post-Human Philosophy* (Udine: Mimesis International, 2018), 98.

7 Hans Jonas, *The Phenomenon of Life, Toward a Philosophical Biology* (New York: Harper & Row, 1966), 102–126.

8 Rosi Braidotti, *The Posthuman* (Cambridge: Polity, 2013), 59–68.

9 Serenella Iovino, Roberto Marchesini, and Eleonora Adorni, Eleonora, ‘Past the Human: Narrative, Ontologies and Ontological Stories’, *Relations* 4.1 (2016), 145–157.

decentralizing and creating new states of non-equilibrium. It does not compensate for an incomplete nature that seeks stability in a crutch/tool, as in the humanist interpretation, but a process of encounter fueled by the human desire to go beyond his limit; (3) *Téchne is like a virus*, it should not be considered a kind of enhancer or relay; it is not a probiotic that amplifies or directs-deviates human predicates, but it makes the predicates – both teleological and operational – emerge; (4) *The process of somatization* of the interface indicates the dissecting action of technology on the somatic structure of the human being and, at the same time, the somatization of otherness, that is to say the ownership and projection meaning of every technopoietic event; (5) *In search of artificial intelligence*, that is, the importance of reviewing the concept of intelligence by returning to the principle of *intus-legere*, i.e. the ability to bring out a meaning based on one's own subjective desiring action, so as to bend reality into a precise field of interpretation and research.

The Connective and Conjugative Value of the Technosphere

The digital revolution has transformed the analog workshop into a single organism that speaks one language, so today it is correct to speak of “technosphere” rather than a set or assemblage of technologies and techniques. The technosphere has become a system, and this should drive us to acquire greater knowledge of the logic underlying complex systems. Most of all, it has become an ecosystem, thereby being related to the three concepts of: (i) niche of specialization, (ii) linear and recursive process chain, (iii) superindividual or superorganismic logics.¹⁰ The fundamental point – which in my opinion represents the greatest challenge to the correct interpretation of our positioning with respect to these three concepts – is to consider this ecosystem dimension of *téchne* as an entity that surrounds us and separates us from the outside world. Indeed, the technosphere may be reminiscent of a kind of filter that maintains internal purity by distancing the organ from the function and avoiding the contamination of the body with the telluric. This image also concretizes the idea of verticalization of the human being that was splendidly represented by Stanley Kubrick in *2001 A Space Odyssey*, where foetalization and hyperuranium seem to merge and delete the passing of time. This, too, is a humanistic interpretation of the technosphere, a product of the future-oriented way of thinking typical of the second half of the

10 Lynn Margulis, *Symbiotic Planet: A New Look at Evolution* (New York: Basic Books, 1999).

twentieth century, which, however, can already be seen in Pico della Mirandola's vertical yearning.¹¹

The technosphere as a disjunctive projection, which not only creates a gap between body and world, but also removes life from the flow of time, is a humanistic leitmotiv that tempted even Nietzsche, albeit within a transfiguration of animality that brings him closer to posthumanist thought. Let us try, then, to examine the two basic humanistic assumptions: (1) the distancing conception; and (2) the purifying function. If we take into consideration the former, we immediately realize that humanism gives technology a very important ontological role: to detach the soma from any functional vulgarity so as to make it diaphanous, virtual, light, neotenic, levitating. But, on closer inspection, the *téchné* does not distance the body from the function nor does it increase virtuality but, on the contrary, it operates in a declinative sense.¹² This principle is easy to understand from an evolutionary perspective: any element that we interpose between the body and the world creates a second-degree specialization, increasing the level of adaptive bending.

In the humanist tradition, the technical apparatus is considered an intermediary capable of carrying out the so-called "dirty work" by separating the hand from the object, like a glove. In this case, one of the possible developments of this division can be used to distinguish the human being from the animal: the latter interacts somatically, i.e. directly, with the context-world, therefore limiting itself to a fruitive action; the human being, instead, is endowed with disjunctive apparatuses, so he can take a step back and contemplate the thing in-itself, without being involved (distracted) or limited by the fruitive signification. The underlying principle is that the function is "absorbed" by the technical apparatus and the body is totally exempted from it. Hence the second implication of this disjunctive conception, namely the purifying action that humanism sees in technology: it supposedly allows the human to cleanse from any trace of telluric,¹³ which in turn allows him to elevate himself up to reaching the angelic dimension. The disjunction, as a search for an alleged purity of the human through an alchemical purification from the infiltrations of the world, requires the technopoietic apparatus to realize a sort of foetalization of the human, proposing a new

11 Pico della Mirandola, *Oratio de hominis dignitate* (Firenze: Vallecchi, 1942).

12 Susan Greenfield, *Mind Change – How Digital Technology Are Leaving Their Mark on Our Brains* (New York: Random House, 2015), 189–208.

13 Roberto Esposito, *Immunitas: The Protection and Negation of Life* (Cambridge: Polity Press 2011), 78–85.

techno-mediated uterine dimension. The technosphere offers a new totally anthropocentric cosmos, which converts distance into purity, and presence into absence.¹⁴

According to the post-humanist approach, on the contrary, the technosphere is a conjugative, non-disjunctive entity, a relationship-fabric or interface-threshold through which the human being acquires greater connectivity and hybridization with the world. Technology does not enrich us: it deprives us, exposing our nakedness in front of reality. This is my first objection to the humanistic view of *téchne*, by which the latter is a reality that separates and protects man from the world. *Téchne*, conversely, is the dimension that increases our hybridization with the world; through *téchne*, we are much more connected to other ecological dimensions – animals, plants, the world of nature in general. We are much more connected and dependent, not more free and emancipated. The deadly mistake is to see *téchne* as a spaceship that contains the human being, separating him from the world and making him increasingly self-sufficient, autarchic, autopoietic. On the contrary, from my perspective, technology is a dimension that makes us more and more indebted to the external world and therefore less autarchic, more and more decentralized from our phylogenetic heritage and increasingly exposed to ontological heteronomy: in other words, the external world determines what we feel and who we are.

The Nature of Techno-Poiesis

The origin of the technopoietic act is not linked to the compensation of some original deficiency of the human being – a view that is a legacy of the humanist manifesto – but is the result of an epiphanic process of encounter with otherness and of the human desire to overcome all limits. Traditionally, man is considered biologically deficient compared to other animals which, conversely, are believed to be complete, the bearers of a specific rank and totally immersed in the fruition of the world. The myth of human incompleteness, which goes from Pico della Mirandola to the twentieth century with the philosophical anthropology of Arnold Gehlen,¹⁵ interprets *téchne* as a crutch to compensate for the performative deficiency of the body and as the cause of an exuberance that is not contained in the functional declination. The view I have exposed in my essay entitled *Over the*

14 Peter Sloterdijk, *You Must Change Your Life* (Cambridge: Polity Press, 2014), 385–396.

15 Arnold Gehlen, *Man. His Nature and Place in the World*, trans. by Clare McMillian and Karl Pillmer (New York: Columbia University Press, 1987), 71–91.

*human*¹⁶ instead, is that techno-poiesis is an exuberant act, resulting from the human desire to overcome one's condition and encounter otherness in epiphany. The evolution of technology always arises from a desire, not a deficiency, and therefore originates from the ability of man to go beyond himself, through processes of imagination and epiphany, reaching dimensions that are projective and never compensatory.

The traditional view of technology as compensation is undoubtedly intuitive, but mistakes the consequence for the cause. It is not the lack that creates desire, but the opposite: the redundancy of desire places the human being in a condition of continuous languor, of permanent dissatisfaction, which however does not arise from a condition of objective lack, but from a surplus of projection. For the human being, a bird's flight becomes a place of epiphany, a projection that ignites desire, not a state of objective lack; so, techno-poiesis does not act by compensation, but increases the needs of the human being by widening his existential sphere. When man reaches a technomediated performative dimension, it is evident that he would then feel naked at the mere idea of depriving himself of it, but this sense of lack is a consequence, not the cause of the technopoietic process. Techno-poiesis does not make up for some deficiency but produces shortcomings. When the human being builds a new technology, he suddenly inaugurates a new existential dimension, ontologically decentralizing himself from his phylogenetic heritage: when this new technology presents itself in his world, he is made deficient.

It follows that we mistake the cause for the effect, that is to say, we believe that the deficiency is what produces technology whereas it is the other way around. To make an example: in the 1970s no one felt the need for a mobile phone, no one felt bad about not having one, but now that it exists a new sense of lack has come into being. From this point of view, using technology is a bit like falling in love: you do not miss a person before falling in love with them, but then you suddenly do. Falling in love, like technology, is a projective process and therefore a form of desire (from the Latin *de-siderare*, that is, to project oneself onto the world of stars, and therefore towards a bigger dimension). The magic of creativity is realized precisely in desire. Therefore, the unpredictable and sublime element of creativity is a strong component of the hermeneutical reconsideration of techno-poiesis I am arguing for; on the contrary, in the compensatory vision, there can be no creativity because technology is nothing more than a crutch that

16 Roberto Marchesini, *Over the Human, Post-humanism and the Concept of Animal Epiphany* (Netherlands: Springer International Publisher, 2017a), 71–91.

compensates for a lack, the outcome of a negative and therefore deterministic calculation.

A hermeneutic reinterpretation of the phenomenon of techno-poiesis is not only fundamental to understand *téchne*, but also to facilitate a new view of man, one that would overcome the humanistic paradigm of incompleteness. The alleged deficiency is first of all a self-perception. Indeed, if one gets used to any technically advanced performativity, for example flying, then if one suddenly loses this possibility, one inevitably feels naked and deprived. This is not due to some *ab-origine* objective lack, but to mere habit: I am accustomed to a certain performativity, whose subtraction makes me perceive a functional insufficiency. So, far from making up for some incompleteness, technology builds new performative assets, which in turn inevitably produce a sense of deficiency with respect to the phylogenetic condition – but the reason lies in the decentralized process. Furthermore, technology is an ontogenetic dimension, so it can be said that when a child grows she does so through the organizational support of the technical introjection. During development, *téchne* organizes the structural and functional networks of the body: a child born in the digital age will have a synaptic, immune and endocrine organization that is completely different from that of previous generations. Therefore the technopoietic event modifies the identity configuration of the human, in terms of both self-perception and ontogeny. It does so in the medium term by intervening on epigenetic processes while, in the long term, by influencing the phylogenetic trajectory itself. Technical externalization, in fact, causes shifts in the selective pressures by modifying the fitness rates of the population. Therefore the point is to overturn the traditional vision: we must move from a compensatory view of *téchne* to one that causes the instability of the system through decentralization and therefore creates new needs and new shortcomings.

Téchne Acts as a Virus

Techno-poiesis does not enhance human predicates. It is not probiotic, but must be considered a virus¹⁷: it enters the organism through a redefinition of the metabolic performative parameters. The effect is to completely disrupt the system and therefore construct new predicates rather than simply enhancing those already present. The hermeneutics of technology as an enhancement of human

17 Roberto Marchesini, *The Virus Paradigm* (Cambridge: Cambridge University Press, 2021), 27–38.

capabilities interprets the latter as an amplifier, a flywheel called to enhance the inherent qualities of the human being, without modifying them. From my point of view this is one of the biggest mistakes that can be made: technology does not enhance an organ or a performativity, but it is a virus that enters the cell and modifies it, causing its metabolism to shift to other dimensions. Humanism is based on three deeply misleading assumptions: (i) the ergonomic conception, which sees the tool as an entity that is modeled on the body and is realized with the body as an architectural reference; (ii) the ancillary conception, which sees *téchne* as a neutral servant of human desires, incapable of producing teleological/value shifts or of governing the human; (iii) the enhancement or probiotic conception, which considers technology unable to modify human predicates or to bring out new predicative dimensions. The post-humanistic approach overcomes these three presuppositions.

For it, *téchne* introduces new purposes and performativities; it is not something that can be completely controlled. In the traditional reading, man stays in his control room and does nothing but enhance his presence in the world. This is a big mistake that leads to an interpretative schizophrenia about *téchne*: on the one hand it is seen as the absolute evil – as a power which therefore causes irreparable damage – on the other it is considered a means of salvation in a sort of soteriology. Such ambivalence produces an intrinsic enantiosemey within *téchne*, a wavering relationship that oscillates like a pendulum from admiration to fear and back, transforming the techno-*imago* into a kind of *deinos*, sublime wonder and dread. This kind of schizophrenic reading comes from interpreting technology as a means of improving our being in the world. If we continue to deal with our relationship with technology in this way we will fall into an inescapable dichotomy: neo-Luddism on one side or techno-enthusiasm on the other, automatically discarding a critical view of technology that is neither an exaltation of it nor a condemnation that confers it the role of absolute evil.

The proposed critical attitude should therefore be able to take into account all the elements that come into play – for example the emergence of new onto-poietic elements in the technomediate event, capable of modifying the body, transforming predicates, bringing out new goals and new values,¹⁸ including the non-autonomy of man's decisional and forecasting power – without falling into a sort of fatalism. If on the one hand we recognize our co-factorial approach in defining our course, if we humbly admit that we are not alone in command of this ship, this does not mean that we have no say in choosing our direction. It is

18 Carol Adams, *The Sexual Politics of Meat* (London: Bloomsbury Academic 2015), 3–18.

therefore a question of having greater humility in this process, because it is from humility that critical thought arises along with our ability to understand the interconnection of the phenomena of technology. Today's technopoietic processes are more and more infiltrating and increasingly accelerated: this requires greater awareness about the relapses of the technopoietic insurgency. On the contrary, it seems to me that while technological development is going incredibly fast, the cultural approach that is adopted when conceiving of *téchne* remains anchored to fifteenth-century humanistic anthropocentrism.

We need a culture that knows how to understand the infiltrating nature of the technosphere, which does not envelop the human being but involves her. With the digital revolution, capable of liquefying the differences of analogue technology, the very concept of tool – that is, of an inherent entity that is used by a being that owns it – has disappeared. Not only does photography have the same structure as text, film or music, but biotechnology speaks the same language as well, and all these elements come into play in a common and liquid vision that is much more integrative than ever before. This shows the immense infiltrative potential of *téchne*, even if, in reality, it has always been infiltrating, ever since the first stones that man used to tear food, consequently lowering the selective pressure on the mandibular bone and modifying the phylogenetic trajectory of the relationship between splanchnocranium and neurocranium. Ours is a story about things like this, so the point is to take this aspect into account, with a critical outlook, keeping away from a fatalistic attitude, but also from a dichotomous polarizing approach between technophobia and technophilia. It is our culture that must change.

The Process of Somatization

Each technique or technology enters the body and becomes somatised, that is, it builds its own niche in the body, interacting with all the phenotypic translation systems. One of the simplest mechanisms to understand is the evolutionary differential that it causes in the ontogenetic process, exercising – therefore developing – some components in spite of others, just like a body building machine. The new discoveries in epigenetics and the most advanced evolutionary theories – think of the concept of organic exaptation¹⁹ (: “Exaptation: a missing term in the science of form”), and the theory of the niche – show that the technical

19 Stephen J. Gould and Elisabeth S. Vrba, ‘Exaptation: A Missing Term in the Science of Form’, *Paleobiology* 8 (1982), 4–15.

dimension is coevolutionary with the human being, just like the forms of mimicry, symbiosis or parasitism. Our body is therefore modeled by *téchne* and modified through actions that take place in different time scans: (i) ontogenetic ones, in the short term; (ii) epigenetic ones, in the medium term; (iii) phylogenetic ones, over longer periods of time. So, the question we could ask ourselves is: does *téchne* belong to us or do we belong to *téchne*? This, though, is an ill-formulated dichotomy, because the process is reciprocal. Technopoietic emergence shifts the entire ontological structure of the human being, even before modifying his body.

Usually the body-technology relationship is evaluated with the extension-amputation metric, when in reality it is the structural-functional (S-F),²⁰ i.e. somatic, matrix that changes profoundly. One of the most interesting processes in this matrix metamorphosis is the resulting dissecting effect: two S-F components, being detached from each other, find new performative potentialities: (i) in terms of acquiring a greater degree of virtuality; (ii) by making themselves available to other morpho-functional trajectories or exaptation effects; (iii) by becoming capable of evolving more easily. The matrix metamorphosis should not be confused with the exemption effect, as it does not result in an excess to be allocated to other activities, but causes a transformation of the somatic system. The system is set up through an introjection of the technological medium, that is to say, by somatizing it. This effect deserves our attention, because it is practically the same process that modifies the morphological structure of a parasite, introjecting the locomotion of its host. We could then say that the technological medium becomes fully part of the adopter's somatic structure, that is, her bodily equipment. In other words, techno-poiesis is a process of somatization of otherness.

The somatization of otherness also happens *before* the technopoietic act, in what I define an epiphanic event. When the human being is faced with a bird's flight she does not learn the technique of flight, nor does she make up her own idea of flight by imitating "how" to achieve it. A bird's flight can appear to the human being: (i) in the form of a mere phenomenon, that is, as an entity "other-than-oneself", to be admired or studied, but with detachment; (ii) in the form of an epiphany, that is, the announcement of a possible existential dimension, therefore projectively experienced as "other-with-oneself". I ultimately think that birds, even before teaching us how to fly, have inspired us to do so, by showing us that "we can fly", transmitting an existential dimension to us. But for this to

20 Burrhus Skinner, *The Behavior of Organism* (New York: Appleton Century Company, 1938).

happen, it is necessary that the human being is projected into the body of the bird, somatizing it, imagining the thrill of flying. Now, flight may simply be a performative dimension, but the ability to hover in the air actually informs a great number of onto-poietic coordinates, namely: a feeling (levity and detachment), a teleology (the verticalization and the angelic dimension), a revisitation of the body and its expression (dance).

So let's stop looking at *téchne* as if it were a gadget, an ornament of everyday life, a functional externalization, or some external equipment [...] because *téchne* is body, just like a spider's web, a bowerbird's bower, a hermit crab's shell, or a bee's honeycomb. *Téchne* produces a hybridization and not simply a performative externalization. Man's episteme only changes under the blows of the telescope and the microscope²¹, just as his ethics – which is only apparently nourished by a-priori values and natural rights. Societies change and so do the sexual dimension of individuals, the logic of dominance-submission, the competitive and collaborative models, the structures of ritualization of aggression. Social networks modify the conditions of relationship and this changes the morphology of the affiliative processes: what changes is the overall, even emotional, involvement of relationships that follow different, but always somatic, trajectories of engagement. Indeed, we are inevitably our body, which is realized through the relationship.

In Search of Artificial Intelligence

What is intelligence? This question, in my opinion, remains unanswered, because of the simple fact that he has taken human rationality as a model and tried to build a computational entity that would simulate its performativity. This is also the reason why we are not able to understand the cognitive plurality of other species, as we only try to identify what animals are able to pass the same tests as the human being. This has the result that the most intelligent animals are believed to be the ones that: (i) resemble us the most from a socio-relational point of view, that is, anthropomorphic ones; (ii) use tools like us, for example corvids; (iii) are able to invent new solutions, moving away from their heritage. I believe that once again the anthropocentric approach does not help us solve the problem. In fact, the world is not made up of objective problems that the individual has to

21 Gaston Bachelard, *Le Nouvel Esprit Scientifique* (Paris: Les Press Universitaires de France, 1934), 11–22.

solve, but of subjective goals that the individual wants to achieve.²² The concept of “*intus-legere*”, that is to read inside, may signify the act of knowing how to go deep and beyond appearances, but ultimately this does not tell us much about the very principle of looking through the fabric of reality, for how it appears to us.

To understand the act of penetrating reality, it is necessary to focus on the ability to reorganize the structure of the real according to a different matrix of conjugation of the entities; we could say that *intus-legere* means bending reality according to one's scheme of action, reconfiguring reality exactly as a perceptual gestalt creates a morphology through an internal scheme of conjugation of the reports and of completion of the percept. *Intus-legere* therefore means bringing out a new reality, discovering a possible configuration of the real, a hidden opportunity between the lines of appearance. This dialogic-emergent act, which treats the real as a range of possibilities to be discovered or tested, is not realized without a motive: it is not the result of an objectifiable process, but of a profound desire. In other words, we think because we desire, not the other way around: it is desire that pushes us deeper beyond the veil of appearance to seek new opportunities, it is desire that turns the world into a territory filled with problems to be solved. This means that without desire there would be no profound questions to answer or problems to be solved.

Animals are endowed with intellectual abilities, that is to say they easily practice *intus-legere*, albeit in their plural mode of cognition. And that is because they desire, that is, because they have a dispositional system characterized by emotions and motivations that arouse the projection into goals and, consequently, into a condition of constant existential problematicity. When one constructs an entity endowed with computational skills but devoid of desire, and calls it intelligent, one is making a semantic-conceptual mistake with respect to the principle of *intus-legere*. My impression is that we are trying to build a house starting from the roof, so that we have created a big calculator that, however, is incapable of reading reality, let alone going deep into it, that is to say beyond appearances. To get closer to real intelligence, on the contrary, we will need to better understand the reasons for desire, before entering the continent of thought. This means, once again, taking leave from humanistic anthropoplasty and building a sort of “robotics ethology” that would start from the simplest motivational systems to understand how to create an artificial entity capable of desire in its relationship with the world.

22 Konrad Lorenz, *Behind The Mirror: A Search for a Natural History of Human Knowledge* (Boston: Houghton Mifflin, 1978), 47–59.

Now I believe I have to make a conclusive reflection, which in a way concludes my entire line of thought on the post-human era. Only a machine that desires is truly capable of *intus-legere*, that is, of going deep and building problems to be solved. But a machine that desires will inevitably assume ownership of itself, that is to say, it will no longer be definable as an instrument available to the human being. As with dogs, the human being will have to find forms of consent and negotiation, not absolute power.

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Teresa Heffernan

Rethinking “Queer Kin Groups”: Cyborgs, Animals, and Machines

Abstract

Wired, hybridized, networked, biotic and abiotic, organic and inorganic, continuous with both the animal and the machine, the human, in Donna Haraway’s well-known 1980s phrasing, has become “cyborg”. The messy interconnected nature-culture embeddedness of the posthuman – techno, human, animal – would seem to forestall the idea of an autonomous human that can be defined as unique against the backdrop of the entire non-human world. If liberal humanism has upheld the human as unique, which has, in turn, encouraged the domination and exploitation of this planet, accepting our lack of uniqueness, posthumanists suggest, may turn out to be the best way to sustain life. Yet do “multiple belongings”, “queer kin groups” and the posthuman better address the ecological crisis we are in than the human rights debates that privilege the human? Or does Haraway’s queer kin group of “lapdogs and laptops in the same commodious lap” glide over the incommensurability between animals and machines and re-centre the human lap? If ecological systems and the long-range survival of life on the planet are the concern, the resurrection of the Cartesian collapse of animals with machines needs to be challenged. This paper explores the roots of the animal- machine analogy, the rise of the robot rights debates, the material and carbon footprint of ‘smart’ technologies, and the fictions that have inspired the artificial intelligence and robotics industry that market the animal as machine.

René Descartes’ mechanistic view of nature led him to argue that non-human animals are complex automata – incapable of judgment, reason, speech, and consciousness. Concluding that there was no difference between beating an animal and beating a machine, he discusses vivisection in his correspondence, giving a first-hand account of cutting open a living dog while feeling its heart valve contract around his fingers.¹ The view of animals as machines, however, was challenged on the grounds that, as Jean-Jacques Rousseau pointed out, ‘beast

1 Gareth Southwell, ‘Descartes’s Dog: Animals, Machines, and the Problem of Other Minds’, 25, <<https://philosophy.garethsouthwell.com/philosophy-books/descartes-dog/>> [accessed 4/06/2020].

and man' share sentience.² In *Discourse on Inequality* (1754), he argued that animals, though "destitute of intelligence and liberty", should, as sentient beings, partake in natural rights.³ Jeremy Bentham also challenged Descartes' mechanistic view arguing that the question about animals is not 'Can they *reason*? Nor, Can they *talk*? But, Can they *suffer*?'⁴ Shifting the focus from Descartes and the question of whether non-human animals can reason to the question of animal suffering, Rousseau, Bentham, and others laid the groundwork for the animal rights movement.

The argument for animal rights has only increased over the centuries, following extensive research into primatology, animal-human interactions, cognitive ethnology, ecology, animal studies, pet culture, and public awareness of violence against animals. This research has inspired the founding of organizations like HSUS (Humane Society of the United States, 1954), PETA (People for the Ethical Treatment of Animals, 1980), and HIS (Humane Society International, 1991). The growth of animal rights law and the recognition of animals as 'legal persons' in their own right have also inspired challenges to many industries that exploit animals, from zoos, circuses and marine parks to the fashion business to trophy hunting to research labs to industrial farming and slaughterhouses.

While the images of baby seals being clubbed to death or dolphins being slaughtered have garnered worldwide attention and generated anger, until recently, few have protested smashing a laptop or breaking a machine. On the contrary, from the spinning jenny to the power loom to industrial sabotage, machine breaking and Luddism have had a long lustrous history dating back to the industrial revolution, when mechanization not only threatened the livelihoods and independence of skilled workers and artisans, concentrating wealth in the hands of the owners of the machines, but also degraded craft production. Yet despite ever-increasing automation, wealth concentration, and the dehumanization of work under platform capitalism, we are witnessing the revival of the Cartesian view of the animal as machine, but with a twist. The representation of animals as organic machines that are not conscious and oblivious to feeling has been

2 Jean Jacques Rousseau, *Discourse on Inequality*, trans. by G.D.H. Cole, 8, <<https://aub.edu.lb/fas/cvsp/Documents/DiscourseonInequality.pdf#page=12&zoom=auto,-13,563>> [assessed 10/09/2021].

3 Rousseau, *Discourse on Inequality*, 8.

4 Jeremy Bentham, 1823 rev'd ed. of 1789 publ., *Principles of Morals and Legislation*, 144, <<https://www.earlymoderntexts.com/assets/pdfs/bentham1780.pdf>> [accessed 10/09/2021].

reversed and machines are now being represented as inorganic feeling beings. In the age of the animated machine, the logic of animal rights and human-animal relations is informing the flourishing industry of robots and tech, and concern about ‘cruelty’ to machines is gaining currency.

The Rise of Robot Rights

In the first decades of the twenty-first century, a number of media stories, government reports, and academic studies started to raise questions about the treatment of robots and the question of rights. Marc Tilden, for instance, designed a five-foot-long robot modeled on a stick-insect to set off landmines. While the trial was a great success and the machine detonated the mines, the army colonel who was observing the event, ordered that the test be stopped because he “could not stand the pathos of watching the burned, scarred and crippled machine drag itself forward on its last leg”, charging that the treatment of the robot was “inhumane”, according to Joe Garreau, who reported on this event in 2007.⁵ He also discussed the bonds between soldiers and their robots, many of which are programmed to have ‘personalities’, so they might spontaneously perform a little dance or karate chop. Soldiers named these robots, awarded them with purple hearts and promotions, credited them with saving their lives, and got visibly upset and distressed when they were injured or destroyed. Online videos of Boston Dynamic robots – Spot and Atlas – being kicked or pushed to test stability have also provoked outrage from viewers as did the destruction of the Canadian Hitchbot.

Daniel Roth, in an article about whether human-like machines deserve rights, discussed his own discomfort watching even the relatively simplistic animated toys (such as Tickle-me-Elmo and Pleo) get mutilated, burnt, or fried on the various you-tube videos that are devoted to this craze:

I’ve seen videos of the incineration of T.M.X. Elmo (short for Tickle Me Extreme); they made me feel vaguely uncomfortable. Part of me wanted to laugh – Elmo giggled absurdly through the whole ordeal – but I also felt sick about what was going on [...] give something a couple of eyes and the hint of lifelike abilities and suddenly some ancient region of my brain starts firing off empathy signals. And I don’t even like Elmo. How are kids who grow up with robots as companions going to handle this?⁶

5 Joe Garreau, ‘Bots to the Ground’, *The Washington Post*, 6 May 2007, <<https://www.washingtonpost.com/wp-dyn/content/article/2007/05/05/AR2007050501009.html>> [accessed 10/09/2021].

6 Daniel Roth, ‘Do Humanlike Machines Deserve Human Rights?’, *WIRED*, 19 January 2009, <<https://www.wired.com/2009/01/st-essay-16/>> [accessed 10/09/2021].

Roth's question gets to the heart of the issue as he reflects on how automatically humans respond to images and sounds of pathos or suffering. It is because Elmo moves and laughs that viewers are disturbed by it burning in ways in which setting fire to or trashing a much more sophisticated machine, like a computer, does not elicit the same response.

Social robots are designed to encourage this response as they mimic human-like emotion, sound, and movement; their soft curves and cute names encourage the anthropomorphizing of these objects. From furbies and real babies to Asimo and Domo, the latest robots are considered "alive enough," in Sherry Turkle's words, for humans to respond to them in increasingly intense ways. *The New York Times* documentary 'A Robotic Dog's Mortality' (2015)⁷ exposed the intensity of this bonding among the Japanese owners of Sony's Aibo. The company's termination of services and parts for its product in 2014 left these owners bereft as they were no longer able to repair or replace their beloved mechanical pets. Turkle notes that even the designer of Domo, Arron Edsinger, likes it when this robot holds his hand. Knowing rationally that the robot does not care, the designer, nevertheless, admits that there is a part of him saying "Domo cares". In this age of robotics as Turkle comments: "One of the world's most sophisticated robot 'users' cannot resist the idea that pressure from a robot's hand implies caring".⁸

The late Clifford Nass, who worked on human-robot interactions, demonstrated in various experiments, confirming Garreau's observations about soldiers, that people interact with robots the same way they do with people, as separate identities. The impression that robots suffer and feel lead Nass to conclude:

It's going to be a tougher and tougher argument to say that technology doesn't deserve the same protection as animals [...]. One could say life is special – whatever that means. And so, either we get tougher on technology abuse or it undermines laws about abuse of animals.⁹

Referring to robots as 'alive' and drawing equivalences between machines and animals have become standard tropes in the field of robotics and AI, drawing a great deal of media attention.

7 Jonathan Soble, 'A Robotic Dog's Mortality', *The New York Times*, 17 June 2015, <<https://www.nytimes.com/2015/06/18/technology/robotica-sony-aibo-robotic-dog-mortality.html>> [accessed 10/09/2021].

8 Sherry Turkle, *Alone Together: Why We Expect More from Technology and Less from Each Other* (New York: Basic Books, 2012), 133.

9 Roth, 'Do Humanlike Machines Deserve Human Rights?'

Kate Darling, a researcher at the MIT Media Lab, works on robot ethics and identifies as “the caretaker for several domestic robots, including her PLEOs: Yochai, Peter, and Mr. Spaghetti”.¹⁰ A PLEO is an animatronic dinosaur toy manufactured by Innvo Labs Corporation. Animatronics are modern-day automatons that are often used in films and theme parks. The goal of the privately-held company is “to blur the line between technology and life”.¹¹ Darling shares Nass’s view that technology ‘abuse’ is equivalent to animal abuse. She maintains that given humans form emotional bonds with digital assistants and robots that are similar to the bonds we form with animals, we should institute laws to protect machines. She prefaces her article on extending legal protection to social robots with a quote from Immanuel Kant: “[H]e who is cruel to animals becomes hard also in his dealings with men”. Expanding on this Kantian logic, she argues that treating social robots badly may negatively impact human-to-human relationships and “given that many people already feel strongly about state-of-the-art robot ‘abuse’, it may gradually become more widely perceived as out of line with our social values to treat robotic companions in a way that we would not treat our pets”.¹² Unlike the animal rights movement, which is premised on the shared sensibility of human and non-human animals, Darling champions perceived ‘relationships’ between animals and machines.

David Gunkel, in one of the most comprehensive explorations on the subject of robot rights, critiques Darling on the grounds that her argument reinforces anthropocentrism as it is all about ‘us’ not the machines. He also points out that her evidence is mostly anecdotal and that her workshops, which are the basis of her findings, are not controlled experiments. Like Darling and Nass, however, Gunkel discusses machines and animals as comparable, declaring that “both robots and animals can be considered ‘the excluded other’ of human social institutions”.¹³ Gunkel moves from historical injustices against women and slaves to the question of rights for machines, which he maintains have remained “perennially” excluded from “moral philosophy’s own efforts to achieve greater levels of inclusion”.¹⁴ He challenges androcentrism and instead invites us to engage

10 <<http://www.katedarling.org/bio>> [accessed 10/09/2021].

11 <https://www.pleoworld.com/pleo_rb/eng/about.php> [accessed 10/09/2021].

12 Kate Darling, ‘Extending Legal Protection to Social Robots: The Effects of Anthropomorphism, Empathy, and Violent Behavior Towards Robotic Objects’, in *Robot Law*, ed. by R. Calo, A.M. Froomkin, and I. Ker (Northampton: Edward Elgar, 2016), 224.

13 David J. Gunkel, *Robot Rights* (Cambridge: MIT, 2018), 42.

14 Gunkel, *Robot Rights*, 60.

in ‘thinking otherwise’ as he adopts what he calls a “Levinasian philosophy of technology”.¹⁵ By this he means we need to respect the alterity of ‘others’ rather than including them in an ever-widening circle that renders them the same and strips them of their difference. Referencing the work of Emmanuel Levinas on “the ethics of otherness” and the importance of the face as initiating an ethical contract, Gunkel makes his case for considering robot rights. He also cites Mark Coeckelbergh’s argument that “moral consideration” should be evaluated in the context of “extrinsic relationships”, within “social relations”, and in a “social context” and not according to “intrinsic properties” or essences.¹⁶ Gunkel concludes that moral status should be granted based not on what the ‘other’ is but on how it appears in relation to and “in the face of the other”.

Very broadly, Levinas argued that ethics must respect alterity, that the other is never fully knowable, and that forcing the other into the logic of the same effaces difference. Hence moral status cannot be determined on the basis of ontology (the essence of being) but can only emerge relationally in “the face of the other”.¹⁷ While Levinas restricts the “other” to humans, Gunkel argues that the refusal to determine in advance what is a deserving moral subject opens this philosophy up to interaction with other ‘entities’, including domestic robots. He uses Levinas to bypass any questions about consciousness or states of mind or intrinsic properties, arguing that properties should not be “the a priori condition of possibility for moral standing”.¹⁸ Gunkel briefly acknowledges that Levinas did not have a theory of technology and most certainly would have objected to this use of his philosophy to argue for robot rights, but Gunkel does not elaborate on why. I will return with some much-needed ‘social context’ for why Gunkel’s argument would have been considered objectionable by Levinas later in this paper.

Arguments against extending rights to animals and/or robots are adamant that attempts in either of these directions threaten the uniqueness of the human. For example, in response to the animal rights philosopher Peter Singer, who supports bestowing personhood upon dolphins, the ethicist, Margaret Somerville, opposing this position, suggests that when the line between humans and other animals is blurred, “the idea that humans are ‘special’ and deserve ‘special

15 Gunkel, *Robot Rights*, 161.

16 Gunkel, *Robot Rights*, 165.

17 Emmanuel Levinas, *Totality and Infinity: An Essay on Exteriority* (Dordrecht: Kluwer Academic Publishers, 1991), 199.

18 Gunkel, *Robot Rights*, 169.

respect’ is eliminated”.¹⁹ As robot rights are often discussed as similar to or as continuous with those of animals, it is not surprising to find the animal rights philosophers Peter Singer and Agata Sagan arguing that, given our record with animals, there is no reason to be confident that we would act morally towards other non-human sentient beings, like robots, if they were to become ‘conscious’ and capable of feeling. Thus, they suggest that despite the many science fiction scenarios of robots taking over and killing humans: “For the moment, a more realistic concern is not that robots will harm us, but that we will harm them”.²⁰ Wesley J. Smith, a lawyer and bioethicist, concerned about the attack on the uniqueness of human life by environmentalists and scientists, has responded to Singer’s argument about robots in much the way Somerville has responded to his position on animals, arguing:

There is a hierarchy of moral worth and humans are the exceptional species. Lose that insight and we not only open the door to harming vulnerable human beings, but we destroy the necessary philosophical foundation supporting universal human rights.²¹

From Descartes to Kant to Levinas, the assumption that man is a unique ‘animal’ has a long tradition in Western culture. At the core of much rights discourse, there has always been the question of how like ‘us’ the party in question is – in this respect, Singer, Summerville, Sagan, and Smith are on opposite sides of the same coin as they debate to what degree animals or robots think, feel, or suffer like humans. Rights discourse considers things like the capacity for individuation, communication, language, feeling, and reason. Women were denied rights because they were deemed to be irrational and in need of paternal guidance (father or husband) and then granted rights because it was determined they were capable of reason. Africans were enslaved because they were deemed to be illiterate; the abolition movement was based around teaching slaves to read and write, and blacks were finally extended rights, amongst other reasons, because

19 Margaret Somerville, ‘We Must Protect Humans’ Special Status’, *Ottawa Citizen*, 25 January 2010, <<https://www.catholiceducation.org/en/science/ethical-issues/we-must-protect-humans-special-status.html>> [accessed 10/09/2021].

20 Peter Singer and Agata Sagan, ‘When Robots Have Feelings’, *The Guardian*, 14 December 2009, <<https://www.theguardian.com/commentisfree/2009/dec/14/rage-against-machines-robots>> [accessed 10/09/2021].

21 Wesley J. Smith, ‘Robots Will Never be People and Should Never Have Right’, *National Review*, 30 December 2009, <<https://www.nationalreview.com/human-exceptioalism/robots-will-never-be-people-and-should-never-have-rights-wesley-j-smith/>> [accessed 10/09/2021].

they were proven capable of literacy. Those in favour of considering dolphins as persons (defined as individuals that have some level of basic moral rights) argue that these animals are autonomous and self-aware enough to recognize themselves as ‘individuals’ in a mirror, have a sophisticated symbol-based language, and have large brains and a complex intelligence. Lori Marino, who is part of the Neuroscience and Behavioral Biology Program at Emory, argues that the neuroanatomy of dolphins “suggests a psychological continuity between humans and dolphins”.²² While Singer and Sagan write: “if the robot was designed to have humanlike capacities that might incidentally give rise to consciousness, we would have a good reason to think that it really was conscious’ and at this point ‘the movement for robot rights would begin’.”²³ Although Gunkel stresses the “alterity” of social robots, like Jibo, in his argument about rights, social robots are designed with a variety of humanlike characteristics (voice, limbs, facial features, movement, etc.) precisely in order to appeal to humans.

Rights discourse is about a model of justice and ethics that is based on similarities, on replicating the same. Rights are extended based on how like ‘us’ (the ‘us’ being those that have the power to decide who fits) the contender is, a model that can accommodate some animals (dolphins, great apes) to some degree. Arguments based on differences have never gained others rights. A woman’s ability to give birth, the rich oral culture of Africans, a male seahorse’s capacity to bear offspring and endure 72 hours of labour, a spider’s ability to spin webs rich in vitamin K and with a tensile strength greater than steel, a parrotfish’s ability to change sexes, a shorebird that can fly from Alaska to New Zealand without a break, an ant that can lift 10-50 times its body weight, a plant with twenty different senses – these factors do not enter the discussion of ethics and rights. An overdetermined emphasis on the question of likeness to the ‘us’ that grants the right is front and center in rights discourse, and this is where social robots have an advantage over non-human animals – in all their variety – that will never be able to mimic human characteristics as well as robots can.

22 William Reville, ‘Dolphins Top Chimps as Our Closest Intellectual Relations,’ *The Irish Times*, 18 February 2010, <<https://www.irishtimes.com/news/science/dolphins-top-chimps-as-our-closest-intellectual-relations-1.623579>> [accessed 10/09/2021].

23 Singer and Sagan, ‘When Robots Have Feelings’.

The Posthuman Turn

Posthuman theorists, in turn, have responded to this problem of rights by decentering this ‘us’, replacing what Rosi Braidotti refers to as “the moral philosophy of rights” with an “ethics of sustainability”²⁴ that calls into question the autonomy of the human. Wired, hybridized, networked, biotic and abiotic, organic and inorganic, continuous with both the animal and the machine, the human, in Donna Haraway’s well-known 1980s phrasing, has become ‘cyborg’. Following Haraway, many have included AI technology, robots, and animals in their wide embrace. Braidotti, for instance, in moving away from anthropocentrism, proposes “undoing the human” by acknowledging “multiple belongings” and a “zoe-centered egalitarianism” that includes animals and “smart” technologies and a “non-dualistic understanding of nature-culture interaction”.²⁵ Katherine Hayles also critiques the autonomous liberal humanist model of subjectivity, arguing that humans extend into ‘smart’ environments that exceed individual cognition. Cognition itself then is distributed between human and non-human agents, and a “dynamic partnership between humans and intelligent machines”, she argues, will temper the humanists’ desire to “dominate and control nature”²⁶. She proposes that we craft a version of the posthuman that sustains the “long-range survival of human and other life-forms, biological and artificial, with whom we share the planet”²⁷. In other words, the messy interconnected nature-culture embeddedness of the posthuman – techno, human, animal – would seem to forestall the idea of an autonomous human that can be highlighted as unique against the backdrop of the entire non-human world. If our sense of our own uniqueness has encouraged the domination and exploitation of this planet, accepting our lack of uniqueness, posthumanists suggest, may turn out to be the best way to preserve it.

Joshua Geller, influenced by this posthuman turn, argues, in *Rights for Robots, Artificial Intelligence, Animal and Environmental Law*, that non-western and Indigenous world views, ecological sensitivity, and a critical environmental ethics should inform debates about robots, proposing that “kinship” may well offer one of the best models of moral and legal obligation. In his view, kinship resists

24 Rosi Braidotti, *The Posthuman* (Cambridge: Polity, 2013), 93.

25 Braidotti, *The Posthuman*, 3.

26 Katherine N. Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 288.

27 Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*, 291.

anthropomorphism, embraces both inanimate and animate entities, and understands that “humans are but one strand in a larger web of relations that fosters mutual responsibility among its constituent elements”.²⁸ In *When Species Meet*, Haraway too argues for a “queer kin group that finds lapdogs and laptops in the same commodious lap”.²⁹

The Problem with Queer Kin Groups: The Rise of Robots and the Decline of Animals

Do “multiple belongings”, “queer kin groups”, and the posthuman better address the crisis we are in than the rights-based arguments that place the human at the centre? The posthuman call to decenter the human, which groups the biological with the artificial and the organic with the synthetic, ignores the giant material footprint of the ‘smart’ technology industry. Grouping lapdogs and laptops in the same kin group glides over the incommensurability between animals and machines and re-centres the human lap. Humans are certainly continuous with the technological and the animal, but if ecological systems and the ‘long-range survival’ of life on the planet are the concern, the resurrection of the Cartesian collapse of animals and machines needs to be challenged.

In *Discourse on Method*, Descartes argued that while it might be possible to build a mechanical monkey that was indistinguishable from a real monkey, a human would always be distinguishable from an automaton as humans have reason, understanding, and language.³⁰ Alan Turing, one of the founders of artificial intelligence, also grouped machines with animals in his 1950s paper, ‘Computing Machinery and Intelligence’, but, unlike Descartes, he maintained that humanlike intelligence was buildable.³¹ Following Turing, from Marvin Minsky to Geoffrey Hinton, many in the AI world share the belief that animals, including humans, are machines. Minsky says people object to the idea of humans as machines because people do not know any computer science and do not have an architectural theory that explains how the body and mind work, so they assume there is a soul or spirit that explains it all. Yet his circular argument begs the question about why an overarching model proposed by the recent field of

28 Joshua C. Geller, *Rights for Robots, Artificial Intelligence, Animal and Environmental Law* (London: Routledge, 2021), 147.

29 Donna J. Haraway, *When Species Meet* (Minneapolis: University of Minnesota Press, 2007), 10.

30 René Descartes, *Discourse on Method* (New York: Philosophical Library, 2015), 66.

31 Alan Turing, ‘Computing Machinery and Intelligence’, *Mind* 59.236 (1950), 433–460.

computer science, that excludes things like history, culture, and the environmental impact of computing technologies, offers any better explanation than the soul or spirit in describing the complexity of life on this planet.

From sex robots to companion robots to robotic pets to smart technology, the entire industry is marketing the view that animals and machines are interchangeable. However, the proliferation of robots and AI, which are resource-intensive commodities backed by Big Tech and the military, stands in sharp contrast to the precipitous decline of animals, which are forcefully rendered commodities under capitalism. Elizabeth Kolbert describes this decline as a human-generated sixth extinction as humans have unquestionably altered the planet, causing massive damage to coral reefs, forests, oceans, and rivers, rendering the planet unliveable for many species. The comparison of robots to animals ignores the fact that ‘smart technology’ is a multi-billion-dollar industry and that multinationals own the computing power, data storage, and online platforms that fuel these machines.

In 2007, Bill Gates published a piece in *Scientific America* about the parallels between the computer market and the robotics industry. One of the wealthiest men in the world, he wrote:

the level of excitement and expectation reminds me so much of that time when Paul Allen and I looked at the convergence of new technologies and dreamed of the day when a computer would be on every desk and in every home. And as I look at the trends that are now starting to converge, I can envision a future in which robotic devices will become a nearly ubiquitous part of our day-to-day lives [...]. We may be on the verge of a new era, when the PC will get up off the desktop and allow us to see, hear, touch and manipulate objects in places where we are not physically present.³²

Robots, he predicted, would prove as lucrative a market as computers and cell phones.

The global capital pushing these technologies is enormous. For instance, in March 2021, the Japanese multinational conglomerate SoftBank Group – as it moved away from investment in solar to an investment in AI and robotics – had a net profit of \$45.88 billion. SoftBank bought the French robotics firm Aldebaran in 2012, which produces the robots Pepper and Neo. In 2017, SoftBank also bought Boston Dynamics from Alphabet Inc. (Google’s parent company); Boston Dynamics has developed robots, like BigDog and Spot, with funding

32 Bill Gates, ‘A Robot in Every Home’, *Scientific American*, 1 February 2008, <<https://www.scientificamerican.com/article/a-robot-in-every-home-2008-02/>> [accessed 10/09/2021].

from DARPA (a wing of the US military). Softbank runs Vision Fund, the world's largest technology-focused venture capital fund. Saudi Arabia is its biggest investor, but others include Apple, Larry Ellison of Oracle, and Foxconn. While Haraway's 1985 manifesto was hopeful that the cyborg would betray its origins in militarism, capitalism, and patriarchy; and that disenfranchised Asian women employed to build the tech would wrest control of it, there have been few signs of a successful revolt. Instead, over the last decade, we have witnessed a massive concentration of wealth and power in the hands of a few multinationals.

Let me return to Gunkel and the need to provide a "social context" for his argument about machine rights that draws on Levinas. Levinas's father and brothers were killed in Lithuania by the SS, and Levinas, a naturalized French citizen, was held as a prisoner of war in a special barrack for Jewish prisoners when Germany invaded France. Levinas' philosophy, which explores the "wisdom of love" and responsibility towards the other, was shaped by the Holocaust and the Second World War. Gunkel is right that Levinas would have most certainly protested the application of his work on ethics to costly commodities entangled with DARPA (Defense Advanced Research Projects Agency) funding and Foxconn factories, infamous for their exploitative labour regimes.

Echoing Gunkel, Geller also considers robots in terms of their "relationality" to humans. Surprisingly, however, though clearly concerned with the environment, he does not mention the environmental cost of the robot/AI industry. Robots require lithium batteries, power sources, internet connections, data centres, plastics, and rare-earth minerals. Moreover, they are built in factories, shipped around the world, and end up as e-waste of which we produced 53.6 million metric tons in 2019. From lithium mining to highly toxic waste to water-thirsty and power-hungry computing, the robotics/AI industry is in direct competition with 'non-human' lakes, rivers, animals, oceans, forests, plains, mountains, and jungles. Data centres, for instance, require on average about 3–5 million gallons of water per day (there are about 3 million data centers in the US alone), forcing humans and other animals to fight with corporations over scarce resources in drought-stricken areas of the globe.

In making his case for robot rights, Geller draws, briefly, on Indigenous world views and notions of kinship and animism, as these societies have thought deeply about ecologies for millennia, but he fails to address the relatively recent but massive impact of capitalism and the industrial revolution on the planet despite his references to the "Anthropocene". Because of the resources they demand, we cannot talk about robots as 'autonomous' entities and the AI industry as separate from capitalism and its unsustainable infinite growth model. As soon as the internet, what should have remained a public resource given it was developed

with tax dollars, was opened up to privatization in the 1990s and taken over by corporations, the rise of Big Tech, largely unregulated, was inevitable.

Another problem with including ‘smart’ technologies as part of an undifferentiated ‘non-human’ world of animals, water, trees, and non-human-made others – as a challenge to anthropomorphism and in the name of multiplying differences and “multiple belongings” – is the failure to acknowledge that ‘smart’ technologies and robots are themselves about reducing differences. The computation model, when unleashed on human society, is necessarily reductive as it organizes the world into categories that are inextricable from power and politics even as they pose as neutral. It also draws on big data sets that are often replete with stereotypes and ‘junk’ that further entrench hierarchies and structural inequalities. More than that, however, the tools themselves, which can measure, for instance, the distance between eyes and brow height or detect skin colour, are employed because this is what a computing machine does best and not because this information produces any necessarily interesting, meaningful or in-depth knowledge about the world. Rather than reflecting an infinitely complex world, a computing machine constructs a world limited by the tools that it has in its belt.

Social robots and affective computing are one example of this reductive approach. According to Aldebaran (which was bought by Softbank), the humanoid robot Pepper “can identify joy, sadness, anger or surprise and respond appropriately, making interactions with humans incredibly natural and intuitive”.³³ Pepper stands 1.2m tall, rolls on a wheeled base, uses a lithium-ion battery, has a tablet on its chest, cameras, microphones, and sensors; it runs on Aldebaran’s proprietary NAOqi operating system and an ‘emotion engine’ directed by algorithms. The robot’s responses are certainly not ‘intuitive’, as the company claims, but programmed based on its identification of an emotion. But what, in any case, does it mean to say it can ‘identify’ emotions?

Minsky, and other AI researchers, viewed emotions as part of a primitive brain, a vestige of evolution, that clouded reason and was irrelevant to higher level thought: “emotions are less than thinking and not more”, Minsky declared in a 2014 video interview with Ray Kurzweil.³⁴ Neuroscientists like Antonio Damasio, however, who spent years studying the brains of patients suffering from

33 Hope Reese, ‘Pepper the Robot: The Smart Person’s Guide’, *TechRepublic*, 11 August 2016, <<https://www.techrepublic.com/article/pepper-the-robot-the-smart-persons-guide/>> [accessed 10/09/2021].

34 Kurzweil Interviews Minsky, ‘Is Singularity Near?’, 14 July 2014, <<https://www.youtube.com/watch?v=RZ3ahBm3dCk24:00>> [assessed 10/09/2021].

strokes, epilepsy, and other diseases, argued that emotions (outward) and feelings (inward) are key to reason, decision making, learning and are at the root of consciousness.³⁵ The field of affective computing, which acknowledges the centrality of emotion in thought and thus to models of intelligence and computer-human interaction, arose in the mid 90s. Yet affective computing builds not only on a highly contested model of emotions, but draws on discredited fields like physiognomy, phrenology, and craniometry that presume things like skulls and faces indicate character, thoughts, and feelings. In other words, it presupposes that internal states can be detected from external expressions and that affect recognition is a pattern recognition problem.

These systems are trained on labelled images grouped under what are considered seven basic emotions (commonly used datasets for image classification are the Cohn-Kande and the FER2013/Face Expression Recognition, which comprises 30,000 labelled images). The technology has been used by anything from policing and security surveillance systems, such as SPOT (screening of passengers by observation) to automated job interview software, like HireVue. Information is extracted from pixels in an image and the emotion is determined by measuring the relationship between points on the face expressed in ratios and numbers. Predictions of facial expressions have variable accuracy rates even when working within the limited parameters of labelled data sets. Unable to clearly distinguish between emotional expressions of fear, surprise and disgust, for instance, these are often grouped under surprise. These problems explain why Pepper's emotion identification system is limited to four emotions.

The neuroscientist and psychologist, Lisa Feldman Barrett, has argued that not only is cognition central to emotion but that the experience of emotion is highly individualized, challenging the model of 'basic' and 'universal' emotional expressions that these affective computing systems presume.³⁶ As Kate Crawford argues, the "one-size-fits-all recognition model is not the right metaphor for identifying emotional states" as these models overly simplify the complexity of emotions that shift and change in relation to such things as history and culture.³⁷ Affective computing is thus a process of continual reduction of differences. Unlike the natural world, which is infinitely complex, computing systems

35 Antonio Damasio, *The Feeling of What Happens: Body and Emotion in the Making of Consciousness* (New York: Mariner Books, 2000).

36 Lisa Feldman Barrett, *How Emotions Are Made: The Secret Life of the Brain* (New York: Houghton Mifflin Harcourt, 2017).

37 Kate Crawford, *Atlas of AI* (New Haven: Yale University Press, 2021), 177.

that attempt to simulate it are not only inevitably reductive, but destructive to the very thing they are trying to replicate. In any case, as of June 2021, Softbank has halted the production of Pepper because the robot is often ignored by customers or switched off by staff in stores, challenging all the research by Darling and others on the supposed intensity of robot-human bonds cited earlier in this paper. It seems that once the novelty wears thin, humans quickly lose interest in these machines and often find them annoying.

The Fictional Origins of AI and Robotics

Why, from its inception, has the field of robots and ‘intelligent machines’ asked us to accept that there is an affinity between animals (including humans) and machines when AI is a combination of math and engineering that involves computer algorithms, a specific set of unambiguous instructions in a specific order, applied to information that has been turned into data (ones and zeros)? And, further, when Big Tech, which owns the technology, is mostly concerned with building profitable artifacts and consolidating wealth and power?

AI and robotics draw from many fields, including statistics, psychology, engineering, automation, information systems management, mathematics, data science, behavioural sciences, but perhaps, most importantly, the field is rooted in fiction. Literal readings of fiction have given rise to the fantasy of birthing humanlike intelligence, life-like machines, and immortality. To be clear, it is literal as opposed to literary readings of fiction that are the problem – not fiction per se. The former approaches fiction, both dystopic and utopic, as instrumental knowledge or information – as if fiction functioned as a set of instructions for the future. The latter understands that fiction does not foretell the future but resets and rethinks current trajectories. The study of literature offers a training in the ‘ethical imagination’ and prepares the mind to approach the world in all its social, historical, and political complexities.³⁸ Global heterogeneity, biodiverse ecosystems, the multifariousness of reality cannot be accommodated by restrictive binaries, the basis of all computing models. From Turing and his ‘child machine’ to Norbert Wiener, who wanted to erase the differences between living and non-living things in his theory of cybernetics, to Silicon Valley’s transhumanists, like Hans Moravec, who want to upload their brains to computers, this field, from its beginning, has been shaped by reductive readings of fiction.

38 See, for instance, Gayatri Chakravorty Spivak, *An Aesthetic Education in the Era of Globalization* (Cambridge: Harvard University Press, 2012).

The first entry in Turing's bibliography for his paper 'Computing Machinery and Intelligence' is the 'Book of the Machines,' three chapters in Samuel Butler's 1872 novel *Erewhon* (nowhere spelt backwards, almost). The novel follows in the tradition of Jonathan Swift's *Gulliver Travels* with its satiric tales of the inhabitants of such places as Lilliput, Brobdingnag, and Laputa. In *Erewhon*, the hero travels to a fictitious land where all machines, including a mangle used by wash-women, have been destroyed after heated debates about the status of these inventions. Fear that these machines would evolve and grow sentient inspires the inhabitants to destroy 271 years of inventions. Although this satiric novel appears only in the list of references, it seems to have inspired Turing to take its arguments in earnest and to fantasize about an 'evolving' machine, leading him to equate programming with procreation and to compare children to computers: "In attempting to construct such machines we should not be irreverently usurping His power of creating souls, any more than we are in the procreation of children"³⁹ he wrote in 1950.

Similarly, Wiener invoked the legend of Golem and fourteenth-century kabbalist numerology to breathe life into his machines. While transhumanists, like Moravec, openly claim fiction as the source of their ideas. The roboticists, Minoru Asada, Karl MacDorman, Hiroshi Ishiguro, and Yasuo Kuniyoshi, in a paper on robotics and cognition, also cite fiction as key to their inspiration:

Robot heroes and heroines in science fiction movies and cartoons like Star Wars in US and Astro Boy in Japan have attracted us so much which, as a result, has motivated many robotic researchers. These robots, unlike special purpose machines, are able to communicate with us and perform a variety of complex tasks in the real world. What do the present day robots lack that prevents them from realizing these abilities.⁴⁰

The roboticist group at the MIT Artificial Intelligence Laboratory points out that "humanoid robotics labs worldwide are working on creating robots that are one step closer to science fiction's androids"⁴¹

Cynthia Breazeal, director of the Personal Robots group at the Media Lab at MIT,⁴² credits *Star Wars* as inspiration for her military-funded robots, arguing

39 Turing, 'Computing Machinery and Intelligence', 443.

40 Minoru Asada, Karl F. MacDorman, Hiroshi Ishiguro, Yasuo Kuniyoshi, 'Cognitive Developmental Robotics as a New Paradigm for the Design of Humanoid Robots', *Robotics and Autonomous Systems* 37 (2001), 185.

41 Bryan Adams, Cynthia Breazeal, Rodney Brooks, and Brian Scassellati, 'Humanoid Robots: A New Kind of Tool', *IEEE Intelligent Systems* 15.4 (2000), 25–31.

42 Susan Lewis, 'Friendly Robots', *PBS*, 1 November 2016, <https://www.pbs.org/wgbh/nova/article/friendly-robots/> [accessed 10/09/2021].

that as humans already ascribe authentic emotional states to fictional machines – like R2D2 and C3PO – there is no reason that this emotional relationship cannot be replicated by off-screen animated devices. Breazeal is also the founder of the consumer social robotics company, Jibo Inc., where she served as Chief Scientist. An interview with Breazeal about Jibo begins:

What has made droids like BB-8, R2D2 and C-3PO so popular wasn't just the fact that they were robots that could do cool things, but that they seemed to have real emotions and would react to their human and alien counterparts in a variety of ways. While emotional robots have been a thing of science fiction for decades, we are now finally getting to a point where these kinds of social robots will enter our households.⁴³

The robots in *Star Wars* or *Astro Boy* are no less fictional than Chewbacca or Darth Vader or Bruton, all of which we ascribe emotions to but none of which we expect to enter our households, and yet industry robots read through the lens of fiction are often presented as interchangeable and continuous with their fictional counterparts, as if magically leaping from stories into our lives. Ascribing ‘genuine and authentic’ emotions to expensive machines and moving from the screen and imaginary worlds to the real world of industry robots may help market the technology, but this approach is fraught with problems as it shuts down the important critical function fiction plays in society.

The very term robot was birthed in fiction in the 1920 play by the Czech writer Karel Čapek, *R.U.R. (Rossum's Universal Robots)*. The plot follows the plight of mass-produced and single-tasked biological workers that eventually rise up against their masters and overthrow them. Robot is derived from the Slavonic word ‘robota’, which means servitude or slavery. It refers to the system of serfdom, which demanded that a tenant pay rent in forced labor or service to the owner of the land. In the play, the biological robots, indistinguishable from humans, are the new ‘labour machines’ that serve factory capitalism by increasing the production of goods. The play was not an instruction manual for building future ‘robots’, but very much of its day as it offered a critique of modern machine warfare, mass production, the dehumanizing impact of mechanization, and the exploitation and deskilling of labour. In the 2000s, with the rise of digitalization and globalization, the play might be usefully read in the context of automation and the ever-increasing quest for efficiency and profit. The new army of

43 Dylan Martin, ‘Why This Boston Startup’s Family Robot Could Be a Game Changer’, *BostInno*, 18 May 2017, <<https://www.bizjournals.com/boston/inno/stories/inno-insights/2017/05/18/why-this-boston-startups-family-robot-could-be-a.html>> [accessed 10/09/2021]

serfs, Amazon workers forced to perform as machines or gig workers directed by indifferent algorithms, are made to serve largely unregulated corporate-owned platforms (the new 'estate' owners).

If Plato denounced fiction as no more than lies and simulations that manipulated emotions and clouded the truth, Aristotle argued that the desire to represent the world was innate and that fiction was cathartic. Neither, however, mistook fiction for reality or the emotion of fictional characters as 'genuine or authentic.' Fiction, in all its complexity, involves some combination of simulation, mimesis, play, craft, and imagination. The global robotics and AI industry, on the other hand, is concrete, resource-intensive, and leaves an enormous carbon footprint in its wake. As we witness anthropogenic causes of dramatic species extinction, we need to challenge the Cartesian coupling of animal and machine that drives 'smart' technologies, interrupt literal and reductive readings of fiction, restore the 'literariness' of literature, and return the animal/human as machine back to its home in fiction, allegory, and metaphor.

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Mieke Bal

How to Say It? Symbiosis as Inter-Ship

Abstract

My contribution concerns something as simple-seeming as terminology. According to dictionaries, “symbiosis” is a collaboration between living organisms, to the advantage of both. That sounds encouraging. I would like to reflect on the implications of this concept, but not in view of a “posthuman” position. I have been militating against the frequent use of “post-”, which suggests that what follows can be or has been left behind. This is deceptive, especially when what is left behind cannot be discarded. We can strive for a “post-humanism” in the sense of “post-anthropocentric”, although it will be a hard struggle to really achieve that. “Post-human”, in contrast, is impossible, unless we let the clowns that rule the world continue their narcissistic destruction by disavowing the responsibility of each of us “humans” to do something about it. As long as they do so, thereby sustaining the current hysterical capitalism and global injustice that make especially “post-colonial” a ludicrous misnomer, “post-” is dangerous and misplaced. Sometimes, precision in language is politically indispensable.

In my contribution to this volume I explore “symbiosis” as an “inter-ship”. With that term I have been advocating the deployment of the preposition “inter-” over the facile “trans-”, which means nothing but traversing without, precisely, engaging. In contrast, “inter-” means “between”, in relationship with. And if the neologism I coined resembles “internship”, so much the better. For, that educational term refers to learning through practice. The combined (“symbiotic”) discussion of these terminological issues will inevitably lead to a proposal to change the term “Humanities” as well. My grounding in this reflection is in “image-thinking”, an activity that opens up disciplinary knowledge to the creative contributions to thinking that can come from image-making.

Pre-lude

My essay concerns something as simple-seeming as terminology; its usefulness and its drawbacks, with special focus on prepositions. Prelude, pre-lude, or playing beforehand: let’s take a look at this artwork, before starting my argument about “post-”. For, playful it is indeed. Jackie Shatz is an American sculptor whose work *Other Minds* I just stumbled upon when I began to write this essay.

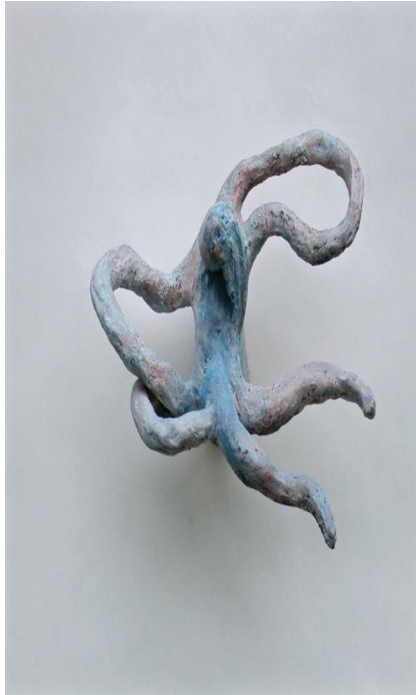


Image 1: Other Minds, 2017 © Jaqueline (Jackie) Shatz

Some blue stains, some pink; outreaching tentacles and in-curving circular forms; a small head, bent sideways, as if the creature cannot manage to hold it up on its own. No body to speak of. Or perhaps the clump of blue against which the small head rests can be considered a body, albeit not a human one. It seems, rather, a case of what Karen Barad called, with a challenging term, “spacetime mattering” (2003). With that fanciful term Barad drew attention to the importance, the participation of matter in the world, and in her argument, she plays (*lude*) on the felicitous double sense in English of matter as noun, equivalent of “stuff”, and as verb, indicating importance, as I had once done in an article on baroque aesthetics (2011a). In her protest against the negligence of matter as mattering, Barad wrote: “Language matters. Discourse matters. Culture matters. There is an important sense in which the only thing that does not seem to matter

anymore is matter.”¹ This indifference to matter is a major stumbling block of current thought, and it constitutes the occasion for the kind of thinking against which this essay, in turn, protests.

The “other minds” in the title of Shatz’s sculpture, are not “represented”, only suggested. Or rather, left to the viewer to infer, or to project. Even the plural is in question. The limbs, or tentacles moving outwards from the clump of matter, as well as those circling back insinuate movements that refuse to be locked up within a single body or mind, a state of locking up that separates. In this sense, the work’s openness to forms that don’t have simple bodily equivalents in humans, invites viewers to dream along with the artist on what is possible, thinkable, and shapeable, outside of the classical individual human form as a model for figurative three-dimensional art. Yet, the term “abstract” would not be adequate either, although this term comes up in interviews and reviews of Shatz’s work. An instructive example is the announcement of a 2021 exhibition, *Harbinger*, in the LaiSun Keane gallery in Boston, not yet open as I am writing this. The wording of that announcement is captivating. There, Shatz’s sculptures are called “abstracted”, with a past participle, not “abstract” as a qualifier. This is a way of pointing to the artistic activity (of abstracting), as well as to the temporality (of pastness) involved. Moreover, the work is characterized as “figuration”, not “figures”. The text’s insistence on distancing from the usual terminology seems to aim at the openness that makes the visitor part of the process, and to situate the activities of both artist and visitor in time: “Shatz uses her sculptures to record the fleeting moments and ever-changing status in life.” This temporality in an allegedly still sculpture is crucial. “Fleeting moments” suggest a speed we must struggle to keep in tune with; and “ever-changing” prohibits stilling, halting, fixing. If matter matters, it is because it participates in a live interaction.²

The work, an element in a series the artist sometimes calls “wall sculptures”, or “floating ceramics”, is also suspended between genres. Instead of “neither this” (a freestanding three-dimensional sculpture) “nor that” (a wall hanging, a decoration)” I saw in this artwork the double and doubling conjunction “both [...] and”. In a very revealing statement, the artist who made this sculpture said this about her “wall sculptures”:

1 Karen Barad, ‘Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter’, *Signs* 28.3 (2003), 801.

2 I quote from the announcement of the exhibition *Harbinger* by the LaiSun Keane gallery, found on the internet. On Jacqueline Shatz’ work, see <<https://artspiel.org/jacqueline-shatz-overcoming-gravity/>>.

My wall sculptures involve suspended states of being and the permeable nature of time. The images of swimming, floating and “about to” gestures imply anticipation, hesitancy, anxiety or relief from anxiety. I did not set out to express specific qualities – they emerged from the selection of the figures and the creation of the pieces themselves. The meanings are hidden like the meanings in dreams. These works ride the edge between painting and sculpture; between stillness and movement; between the figurative and the abstract. The dimensions of the sculptures allow one to look into an intimate space [...].³

Wall sculpture: it is already an in-between genre, and as the artist articulates it, as “between” in many different ways. Between painting and sculpture: that sounds simple enough, but between stillness and movement seems already quite challenging. The works “ride”, they move, between the two well-known, fixated genres. That the work hinges between figurative and abstract is relatively easy to see, although what that means, entails, and in what it results, is an open question. The tiny head, the most figurative element, seems to ask for help, or for answers: what am I? If anything, this artwork “is” nothing, it cannot be boxed in, “classifixed”. Instead of *being* something, it *does* something; it acts.⁴

This hovering between media, genres, and meanings is an instance of what French philosopher Jean-François Lyotard in 1971 termed “the figural”, in his attempt to overcome the binary between words and images (2020).⁵ The phrase “suspended states of being” probes ontological uncertainty, and the “hidden meanings” challenge the viewer to “make sense” of these works. For me, the “permeable nature of time” is the key phrase here. Permeable... can we traverse time? In a chapter on time in a forthcoming book I have likened the complexity of time to an octopus, with tentacles that go in all directions (2022). At first sight, this metaphor may seem close to what Donna Haraway calls “tentacular thinking”.⁶ I don’t use the metaphor of time as an “octopus” in the same way as Haraway does,

3 Jacqueline Shatz, see <<https://www.jacquelineshatz.com/artist-statement>> [accessed 22 August 2021].

4 The tongue-in-cheek term “classifixation”, which critiques the fixating effect of categorization, was proposed by Iris van der Tuin (2015). See Tuin and Verhoeff (2022) for an entire range of such unorthodox, helpful analytical concepts. With my insistence on “doing” I am alluding to the well-known concept of performativity, first proposed by linguist John Austin, most lucidly explained by Culler (2007) and recently brought to bear on controversial art by Alphen.

5 Jean-François, Lyotard, *Discourse, Figure*, [1971], trans. by Antony Hudek and Mary Lydon (Minneapolis, MS: The University of Minnesota Press, 2020).

6 Donna J. Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* (Durham, NC: Duke University Press, 2016), 31.

however. Her primary metaphor is the spider, and its meaning, not so much distinction among possibilities (as in my chapter) but connections.⁷ For me, the octopus of time reaches out, in order to allow distinctions such as the two-ways linearity of time, with past and present changing places. But Shatz makes the metaphor more complex by figuring the tentacles as turning back to the clump/matter/body as well, a move that implies time.⁸

And the animal's tentacles have "sucking cups", the octopus's tools enabling nourishment, especially from attention. Perhaps it is there, suggested by the rough surface, that we must search for the dream-like hidden meanings. Lyotard also referred to Freud's dream theory to explain the figural. The surface of the ceramic insists on the materiality and the artist's manual handling of it, by an artist who caresses the clay with her fingers, establishing an inter-ship with that matter that matters. The artist insists on temporality. Shatz's creature suspends not only time, though, but all the other categories we usually apply to understanding art, as well as other relational elements of our world. The wavering between two- and three-dimensionality stands out immediately. "Betweenness" of figuration and abstraction is also a prominent one. According to Deleuze, abstraction is an incentive to come up with new forms, not yet in existence but ready to come about, instead of a negatively formulated non-form, as the more traditional views of abstraction have it. That emergence of new possible, thinkable forms is in itself a temporal process. That "riding" figures the temporality and the movement. All this entices me to generalize: there is no question of "beyond" or "post-" here; the process continues. And the intricate relationships between dimensions, colours, forms, inside-outside in and through "permeable time" I can only indicate with the neologism "inter-ship".⁹

7 Haraway, *Staying with the Trouble: Making Kin in the Chthulucene*, 30–58.

8 On the concept of the figural, see Rodowick (2001, ch. 1), and for the temporality especially in images, Ionescu (2018). The figure of the octopus is currently quite popular in aesthetic and philosophical thought. An example of aesthetic "octopusing" is the group Oktolab, <<http://www.okto-lab.org>>, and for a scientific-philosophical analysis, the book by Godfrey-Smith (2016) and his later article (2019). Godfrey-Smith posits a multiple brain, comparable to Shatz's *Other Minds*.

9 On the Deleuzian view of abstraction, see Rajchman (1995) and for a more extensive discussion, 1998. I have introduced the concept of "inter-ship" in an article on our cinematic response to 1956 novel Flaubert's *Madame Bovary* (2017), made with Michelle Williams Gamaker.

From Pre-Positions to Eco

So, after the foreplay/prelude with Shatz's plural creature, I can begin my argument about terminology. I do this by proposing "inter-ship" as an alternative to the deeply problematic, pervasive culture of "post-". Intership brings together all activities qualified with the preposition inter-, from interdisciplinary to intertextual, international, intermedial, intercultural to interdiscursive. "Inter-" means *between*. It denotes a willingness to exchange on an equal basis; it is relational. Inter-ship seems close to the more common term "internship", for the learning-through-practice that students do between their scholarly and their professional training. That coincidental resemblance between the terms seems relevant to me. "Post-", in contrast, disavows what came before and hastily rejects it. This, I will argue, is an irresponsible, unthinking gesture.

Prepositions are short additions to words, mostly nouns, that qualify the primary word's meaning. To begin with a general point in which the preposition "post-" is caught: the collective project of academic thinking is steeped in attempts to move forward; to discover new ideas. This is, of course, very useful. But one important drawback threatens, which remains unnoticed, hence, permanent, and enduringly damaging. Current trends in academic thought frequently contain a too-fast, too-facile "post-" attitude. That preposition is profoundly and irretrievably temporal, while denying the user's participation in the main noun it qualifies. Terms such as "postcolonial", "poststructuralist", "postmodern", even post-postmodern, and now, "posthumanist" and most clearly the disingenuous term "posthuman", written by people who, I suppose, would not prefer to die, yet, claim to be already in the "beyond", testify to this inclination. In all these cases, the risk is to disavow, and thus have an excuse to no longer know that which came before. What gets lost is, quite simply, history. And what seems a step forward is, in fact, a step backward: back to nineteenth-century evolutionism.

This evolutionist ideology considers the present as "beyond", "after" and of course, "better" than what came before. Let's keep in mind how it also leads to contempt for cultural differences, with the consequence that cultures other than our own are automatically considered in terms of backwardness; as underdeveloped, as we used to call them, or, in an attempt to appear a bit more ethical, but only in terminology, and no less condescending: "developing". As one of my favourite, most inspiring anthropologists, Johannes Fabian, has persuasively argued long ago, what happens in the currently raging "post-" culture (my term, not his) is the withholding of contemporariness from others. Fabian calls that temporal togetherness, "coevalness", although it is more usually called contemporaneity. Fabian's incisive book (1983) has been widely read and cited, but it

has not had the de-facto influence it deserves. For the nuances of the theory too easily rejected or, temporally speaking with “post-”, remain hidden; their point, unseen. As a result, and in spite of the call, mostly by conservative historians, to “historicize! historicize!”, history is annulled, and concepts meant to help specification and detailed analysis become diluted. Unfortunately, the tendency to jump over the hurdle to actually have to first get to know, understand, and deploy that which one seeks to overcome, leads to regress, not progress.

In critical responses to my early work, I have sometimes been considered, even scolded for, being a-historical. This critique pertained only to my rejection of a simplistic, linear, evolutionist view of history, however. But then, in 1973, Hayden White’s *Metahistory* appeared. At that time, I was exclusively working in literary theory and, with my structuralist inclination, not too versed in considerations of history. What I studied was the imagination; a richer field I could not imagine. But as a literary theorist I was somewhat embattled by those who did not believe the imagination had anything to do with reality and could therefore not be subjected to the test of “truth”. I countered that the imagination is part of reality, even if the worlds it produces may not exist in themselves. I maintain that conviction to this day. White’s subtitle, *The Historical Imagination in Nineteenth-Century Europe*, made my day. Those were days of fierce polemics, when we had not yet learned to be nuanced and to refuse being locked up in binary oppositions. You either did history, or you were “a-historical” and hence, dismissed by the other party. My sense of “form” – of the aesthetic side of the artifacts I studied, the impact of form on meaning – was too strong to compromise, and so, I happily called myself a “formalist”. When I started to work on visual art I realized that, simultaneously with White’s “formal”, indeed, literary turn in historiography, the contextual turn was beginning to rage in art history, and there, “formalism” rapidly became a fresh taboo. And as we know, taboos are forms of hiding, obscuring, refusals to acknowledge, let alone understand, before rejecting. But there is more to it.

As very different from “post-” thinking, a controversial element of our thinking about culture that cannot be condensed in a preposition, was what I call the “anthropomorphic imagination”. No preposition works there, unless we call it “post-anthropocentrism”. But that would be wrong; neglecting the desinance (as distinct from preposition). “Morphic” means “formal”. The anthropomorphic imagination is the reading attitude that considers, or rather, emotionally experiences, characters and figures as resembling real people. This reading posture plays such an activating role in reading narrative. Problematic as this may be, it does not justify the way it is looked down on as naive rather than explained and taken on board with nuances. For, it is an element of reading as an interactive

process; it helps us reading with feeling, or to use a better term: affect. And this is important if art and literature are to have an impact on, a “say” in what we do with the world, including making matter matter again. From that inside insight, it must and can be criticised where necessary. But affect is an indispensable element of reading, and it manifests itself when we respond to forms. Anthropomorphic, where “morphic” concerns forms, is not the same as anthropocentric, where humans self-constitute as the centre of the universe. I am afraid the term “post-humanist” threatens to confuse those two very different attitudes, and thus reject our entanglements with the world.

Indeed, the wholesale rejection of “reading for people” is a case of throwing away the baby with the bathwater. For, the potential identification or empathy with figures or characters can help us take distance from the anthropocentric bias and instead, deploy the imagination to “see” others differently; differences we must see, acknowledge, and consider in terms of equality. With “others” I include other creatures, also called critters (Haraway, 2016) and things (Neef, 2022). The potentially affective relationship with such others is imperative. Only through an affective relationality is it possible to change, however, slightly, our attitudes and conceptions toward others. Affect, in this sense, is not activist, foregrounding specific political issues and enlisting people to militate in relation to those issues, but more generally, or openly, *activating*. Activating art compels people to think, but instead of propagating a particular cause, it leaves them free to decide *what* they think. This freedom is, for me, an essential element of the interaction with art.

But due to the rejection (“post-”) of such anthropomorphic imagining, the concept of reading or viewing itself has lost much of its important activating thrust. Along with that loss, the distinction between anthropomorphic and anthropocentric – in my view, a totally crucial distinction – is diffused, diluted, and hence, disappeared. I use that verb in the active voice here, for “post-” thinkers actively reject, repress, obscure, hence, *disappear* distinctions and differences that matter. This dilution happens in the wake of “post-culture”. A more productive attitude is to respond to, engage, instead of disavowing, what came before (post=), or what is similar to (anthropomorphic) being humans. Critically: yes; ignoring and uncritically pretending to surpass: no. Instead, affective engagement with everyone and everything around us, an openness to such relationships we never had thought about, and the temporality this entails, is a more productive attitude. Creative artists can lead the way, in what we can call “eco-art”. Shatz’s floating “critter” with its limbs outreaching and circulating back can be seen as a work of eco-art in that sense.

To understand affect without (anthropocentrically) resorting to psychology, a good resource is a combination of the work of Gilles Deleuze and one of his primary sources of inspiration, Henri Bergson. Another one is Spinoza, on whose ideas more below. At stake is the relationship, rather than distinction, between the still and the moving image, which Shatz's formulations already hinted at. Painting, photography and cinema each produce images, different ones in many respects. Yet they also share something fundamental that is a property of images as objects of perception. Bergson's book *Matter and Memory* from 1896 starts with a thesis about perception. Bergson claims that perception is not a *construction*, as we have considered it in the "post-realism" era, but a *selection*. The subject makes that selection from among all the perceptible things in the world around her, in view of her own interests. This is how the subject acts upon the perceptible world, and makes matter *matter*. Perception, in Bergson's view, is an *act of the body and for the body* as it is positioned in the midst of things to select from. This is why texture, colour, and dimensions, all striking aspects in Shatz's sculpture, matter as much as figures, space, and perspective. It also brings the viewer into the orbit of what art is, and thus questions the idea of art's autonomy. Perception is an act of the present. But this might entail a naïve presentism – a narrowing of time to the brief moment of *now*, a temporal selfie – if it was not for the participation of memory.

This is where perception is crucially temporal. Occurring by definition in the present, perception is bound to memory. Without memory, the portion of the visible world we select to look at would not make enough sense to be selected. Since it is the subject's interest that motivates the selection that perception is, a perception image that is not infused with memory images would make no sense whatsoever. Nor would it have a sensuous impact, since we perceive *with* as well as *for the body*. This is why the body also remembers. Shatz's bent small head, if it is one, carries for me memories of powerlessness, dependency; a useful reminder of the limit of the power we might think we have. And the holes that appear to be eyes, and thus turn the sculpture into something in which the anthropomorphic imagination participates, recall my childhood eagerness to see, even if that turned out difficult. At the end of his book, Bergson writes how memory participates in perception, and as a consequence, intimates how affect can participate in (bodily) memory.

That participation accounts for the subjective nature of perception, even if the things we perceive exist outside our consciousness. Eco-art follows that lead to coexistence. *Other Minds* does not at all intimate psychological insight, but togetherness in time. The emphasis on the moments merged together also explains why Bergson insisted so strongly on duration. And as Deleuze wrote in

Bergsonism, coexistence is precisely the point: “Bergsonian duration is [...] defined less by succession than by *coexistence*”.¹⁰ Fabian would agree. This is most clearly visible in another medium, video installation. In such installations, the simultaneous presence of – and hence the simultaneous movement on – multiple screens, embodies the coexistence of duration and different moments. It is a visible instance of Bergson’s plurality of moments contracted into “a single intuition”.¹¹ Contemporariness, coexistence, coevalness: the terms don’t matter, but the preposition “co-” or “con-” does. That togetherness is indispensable for eco-art; it is its beating heart.¹²

I have taken “affect” in the Deleuzian sense of *intensity*. Deleuze defines intensity in *Difference and Repetition* as a “qualitative difference within the sensible”.¹³ There is a subtle temporal discrepancy involved here: between perception and understanding. Deleuze adds that intensity can only be grasped, or felt, *after* it has been mediated by the quality it creates.¹⁴ This posteriority defines affect and makes it difficult to grasp, impossible to locate since it is not a “thing”, yet crucial for political art. Keeping the temporality of this posteriority in view forbids the use of the preposition “post-”. This is one of the reasons why temporality is such an indelible aspect of Shatz’s affectively powerful works. That temporality can hardly be called a “form”, as Eugenie Brinkema’s influential book *The Forms of the Affects* (2014) has it, but I reckon she would accept it as an analyzable *trigger* of affect. The artwork needs the mediation of the image that moves through duration, thereby moving the spectator who, in turn, must float away from her fixed position, yet keeping that former position present in her mind. In a similar fashion, affect as a provisionally semantically unspecified intensity can only be experienced and recognized once it has been followed, filled, specified, by emotional and cognitive feeling and understanding.

The way affect has been foregrounded recently is useful. It has been called upon to help us articulate the effects hitherto called political or ethical, aesthetic

10 Gilles Deleuze, *Bergsonism*, trans. by Hugh Tomlinson and Barbara Habberjam (New York: Zone Books, 1988 [1966]), 60.

11 Henri Bergson, *Matter and Memory*, trans. by N.M. Paul and W.S. Palmer (New York: Zone Books, 1991 [1896]), 292.

12 On contemporaneity in art, see my small 2020 book. On memory and early experiences of perception, I have just begun as series of fragments, “Moments of Meaning-Making”, in the American feminist journal *PhiloSOPHIA* (2021).

13 Gilles Deleuze, *Difference and Repetition*, trans. by Paul Patton (New York: Columbia University Press, 1994 [1968]), 182.

14 Deleuze, *Difference and Repetition*, 182.

or sexual, under a unifying rubric that does not depend on the figurative quality of a given artwork, as the prior centrality of representation would by necessity assume. Here, the term “figuration” as the Boston gallery brought it to bear on Satz’s wall sculptures takes another layer of meaning. The bent, small head of the figure of *Other Minds* now seems a remnant only of an anthropomorphic memory. Indeed, affect as a central concept has two advantages. It helps to provide the cultural disciplines with a *unifying* and with a *comparative* concept that can bring such divergent art forms as painting, film, video, music, and exhibition practices, under a single perspective, while still allowing differentiation, both between media and between artworks. Brinkema’s timely call for affect’s analyzability brings us back to the humanities’ primary skill and task for the larger cultural world: detailed and subtle analysis of the complexity and nuances of art. She attempts to point out, in (film-)texts, what it is that triggers the affective intensity between the artwork and the viewer or reader.

While I wholeheartedly underwrite and adopt her endeavour, I do not think the phrase “the forms of the affects” is the most suitable formulation; it may lead to “classifixating” misunderstandings. Affect is not a “thing” that has a form. It is a process that occurs between the artwork and the viewer, as Ernst van Alphen has convincingly argued (2008). Yet, what can be analyzed and deployed for the kind of close reading Brinkema rightly advocates, is not the *form* of the affects, but the elements and aspects in the artworks that *trigger* the occurrence of affective intensity. These are performative. Occasions or triggers of affect, rather than forms, then; but forms can function as such triggers. Affect-based analysis can do more for our understanding of art than formalist analysis only, while still including form in the endeavour. No preposition, no “post-” is called for here.

Affect, thus, enjoys analytical advantages that “representation” does not. Affect has the additional merit of facilitating analysis of the *agency* of art. To put it succinctly: the affective effect is a specific instance of the more general concept of performativity. Here, again, it helps unify what earlier concepts kept separate. For, in its interest in “what happens” to receivers of art and literature in what we must now call the “event” of art, the concept of affect unifies such divergent effects as sexual arousal, political manipulation, ethical and intellectual edification, the compulsion to reflect. It can even account for the eagerness to learn, to have new experiences, or to fondly remember old ones, that would fall under the didactic mission of art and museums. To sum it up in one word, affect *activates* viewers.

Critique of Post- as Loss, of Trans- as Indifference

The preposition “post-” suggests that what follows can be, or has already been left behind, and no longer exists. This is a big loss; the loss of the past. It is also deceptive, especially when what is left behind cannot be discarded, because we live inside it. We can strive for a “post-humanism” in the sense of “post-anthropocentrism” and like many of us today, I do, without endorsing the term; although it will be a hard struggle to really achieve that. Shatz’s sculpture’s title, *Other Minds*, suggest this effort, and the clearly dependent head of the figure places it, in its anthropomorphic form, in a situation that is not anthropocentric. The humanoid form is there, recognizably so, and the maker/artist does not disavow her belonging to that species. But the multiple form as a whole relativizes its centrality. The plural of the title “*Other Minds*” acknowledges that those other forms have something we would anthropocentrically call “minds”. The use of the preposition “post-” wouldn’t help, because it obscures rather than revealing the remnants of the past. So, “post-humanism” or “post-anthropocentrism” would partake of that move that “surpasses” too fast something that the more modest title, instead, acknowledges and welcomes.¹⁵

“Post-human”, in contrast, is impossible, a cowardly and arrogant term. Unless we let the clowns that rule the world continue their narcissistic destruction by disavowing the responsibility of each of us “humans” to do something about it, we cannot, indeed, must not call ourselves “posthuman”. We cannot forget that those clowns do get elected, or almost, by a frightening number of “humans”. As long as they do so, thereby sustaining the current hysterical capitalism and global injustice that make especially the term “post-colonial” a ludicrous misnomer, “post-” is dangerous and misplaced. Sometimes, precision in language is politically indispensable. The current attempt to remedy that problem of “post-colonial” by calling it “decolonial” helps a bit, but not enough. Colonial relations cannot be wished away so easily.

To argue for a generalizing validity of this point, let me allege a different example of the need for precision. Another preposition of which the dubious consequences need to be spelled out, is “trans-”. I have to bracket the currently actualized use of “trans-” in relation to gender; I have a more general academic

15 See Cary Wolfe (2010) for an introduction to “post-humanism”. Haraway also rejects the “post-ness” in the current terminology when she writes, with her usual playfulness: “I am a compostist, not a posthumanist”: Haraway, *Staying with the Trouble: Making Kin in the Chthulucene*, 97.

meaning in mind. A long time ago, we started to develop relationships among disciplines. I have participated in that movement, and advocated what I insist on calling “interdisciplinarity”. What is the difference between “trans-” and “inter-”, and why does it matter? Generally, when we discuss a more open relationship among disciplines, most people talk of “transdisciplinarity”. “Trans-” suggests “going through”, as reminiscent of the “trans-Siberia express” train. At the time that train ride became possible, this was miraculous: traversing continents without being bothered by the differences among them. The preposition “trans-” implied going through without noticing, let alone being impacted by, the landscapes or, later, disciplinary fields that we traverse. It points to indifference. In contrast, the preposition “inter-” implies relationality – what Haraway would call “composting”.¹⁶

As an instructive example of the necessary rejection of “trans-” thinking, I allege the famous mist rooms of Belgian sculptor Ann Veronica Janssens. These artworks hinder straight, self-evident looking, as well as hastily glancing. Nothing is “trans-”parent there. The power of these works is incredible. They don’t let us rest in self-evident looking. The beauty of these works is precisely that: it takes time, effort, attention, to see what is there to see. To see the plinths, walls, thresholds of ordinary rooms, and most importantly, other visitors with whom we share the space, take time, focus, and concentrate. But then, the reward is immense. For those “things” and people slowly emerge from nothingness, as a gift. The vague transition from colour to colour – sometimes from pink to orange to yellow, or from purple to blue – is visible, but not graspable. It is impossible to point out where exactly one colour stops and the next colour takes over. Janssens’ mist rooms, in their unique difference from other artworks, slow looking down in a very compelling way. As a result, they transform the very processes of visiting, looking, and remembering the aesthetic event. The political power of her work resides, precisely, in the way she revitalizes abstraction in the Deleuzian sense. The politically effective affect of these works resides primarily in their temporality: the slowing down of looking that compels keen attention and chases away any temptation of indifference.¹⁷

16 Haraway, *Staying with the Trouble: Making Kin in the Chthulucene*, 97. See Bal (1988) for my first foray into this discussion of interdisciplinarity; and 2002 for a summing up. In a comparative study of a well-known misogynistic story I argued against indifference, proposing an “ethics of non-indifference” (2008).

17 I have written extensively about the work of his artist, known as “abstract” but, according to her own statement: abstract and political (2013), so I won’t repeat that complexifying argument here. On pages 2 and 5 of that book are images of the mist rooms. More images on her website.

Live Inter-Ship: Sym-Biosis

After this all-too-brief transition (to use a word) I finally turn to the assignment for this anthology, which was to write about “symbiosis”. According to dictionaries, “symbiosis” is a collaboration (sym-) between living (bio) organisms, to the advantage of both. That sounds encouraging. I would like to reflect on the implications of this concept, but not in view of a “posthumanist” position. Leaving anthropocentrism behind too quickly would entail a rejection of the responsibility for the consequences of millennia-long domination, colonisation, and destruction. In this regard, we must go back, in a move opposite to “post-ness”, to the seventeenth century. In an earlier, co-authored article (Bal and Vardoulakis, 2011), I have compared the philosopher Baruch Spinoza (1632–1677) with the equally world-famous painter Rembrandt van Rijn (1606–1669). Of both, we only have traces in the form of writings for the former and paintings, etches and drawings for the latter. To sum up quickly what they have in common in relation to matter: Spinoza’s materialism can be likened to Rembrandt’s realism. In this view, the individuality of the painter’s figures would demonstrate the philosopher’s insistence on the innumerable modes of being. Moreover, the psychological depth of the figures’ appearances in the paintings can be an expression of man’s unity of body and soul, for which the philosopher argued. And both shared an interest in the relation between actions and passions. Thus, Spinoza’s dynamic conception of desire could be embodied in Rembrandt’s depiction of continuity and change within figures, which he depicted as in a present moment replete with a past and ready to step into the future. Furthermore, Rembrandt’s interest in the lower classes might recall Spinoza’s grounding of democracy in “the multitude”.

Bringing these two people from the past together in view of such currently relevant issues is a performance of anachronism as an element of thought. I have made a strong plea for anachronism as productive and indispensable, in what I have termed pre-posterous history (1999). Such a view, where time is not linear and history is “inter-temporal” (my metaphor of the octopus) is opposed to “post-” thinking. Spinoza’s theory of affect as inherent in ethics is important in current cultural philosophy and analysis. For my argument here, it is the distinction between guilt and responsibility that matters most, but then, in view of the ethics of affect. It is that distinction that precludes a “post-” attitude; a surpassing of the past without taking the responsibility in the present on board. True, “we”, as we live now, cannot be held *guilty* of the colonization that happened before our birth. But this does not relieve us of the consequences, the ongoing inequality, for which we remain *responsible*. The desire to escape that responsibility

is, I contend, one of the strong motivations for the “post-” attitude. It is why that attitude cannot be sustained in terminology.¹⁸

Here is a contemporary example of what matters in Spinoza’s sense. “Each unit is approximately the length and width of a standard coffin,” Colombian artist Doris Salcedo wrote in the artist statement for her 2009 work *Plegaria Muda* [*Silent Prayer*]. The word “coffin” stuck in my throat. When I was asked to write about Salcedo’s work for the catalogue, I had just had my own experience with coffins. For a feature film on madness that I was involved in making, I had travelled to Seili Island, Finland, to a former psychiatric hospital, a pinkish building amidst green meadows. On Seili, a former leprosy colony had been converted into a “madhouse” – something that, as Michel Foucault has told us (1961), had been done in many cases. The alleged disappearance of leprosy marked the invention of the madhouse, or psychiatric hospital. On Seili, patients were admitted on one condition: they had to bring their own coffin. This chilling fact turned our filming on that location into a historically layered moment that for me is deeply political.¹⁹

Salcedo not only uses the dimensions (“approximately”) of coffins but also the material: wooden tables; and the colour, or discoloration, of the grey that we recognize from her work *Unland* (1995–98), which was also made of treated and aged table tops. But how do coffins relate to tables? Working with and for the victims of political violence has been Salcedo’s artistic program and life project from the beginning of her career. Death caused by human hands; victims de-humanized when their bodies could not be retrieved, buried, mourned, because the violence was denied. Mass graves hidden in green pastures, where the hiding is like a second killing, parallel with, but opposed to the traditional second burial. In *Plegaria Muda*, those killing grounds themselves become visible – barely, piercing through their attempts to stay hidden – for the first time. Green, growing grass, life: it is almost shocking to see those tiny bits surface from between the grey, dead slabs. The term “eco-art” is more than adequate here.

Like the coffins of the history of Seili that sentenced, without trial, the allegedly mad (including petty thieves or adulterous women) to life imprisonment, never to be seen again, Salcedo’s coffin-size sculptures do not explicitly reference

18 See the lucid and accessible study by Moira Gatens and Genevieve Lloyd (1999). They bring Spinoza’s ideas to bear on postcolonial theory, among other subjects, such as affect, collective thinking, and the distinction between guilt and responsibility.

19 See <<http://www.miekebal.org/artworks/films/a-long-history-of-madness/>> for more information about the film I co-authored with Michelle Williams Gamaker (2012).

any violence at all. They do not tell stories; they just “are”, touching the visitor with hair-raising horror while remaining mute, immobile, silent as the grave. Yet there is a reality behind them, or inside them: the reality of ordinary lives cut short by mass murder. How does this eco-art work, then? The tables, pieces of common household furniture that constitute the sculptures, are remnants of the ordinary lives of the victims. Their ordinariness is key to the power of the artwork. That is the reality of the history of and in the present, its *liveness* in the aftermath of which we live and enjoy great works of art. An aftermath we cannot possibly pretend to have “surpassed”.

Obviously, the preposition “post-” would be grossly misplaced here, as would the indifference of “trans-”. This reality is invoked in a manner that is both absolutely inevitable and yet indirect. The numerous units, working together to constitute a mass – as in “mass graves” – cannot avoid working *together* to convey or touch us with the horror that inspired them and cannot leave us indifferent. This is why the anthropomorphic imagination is indispensable. But nowhere can any *representation* of violence be seen. Like Shatz’s and Janssens’ works, Salcedo’s table-coffins only show small stalks of grass, which colour beautifully with the grey of the old wood, while insisting on the liveness of the artwork. Even the grass of the killing fields is modest, small, growing shyly from between two layers of wood that evoke but do not represent the coffin. It is as subtly present as the coffins on Seili, hidden in the past.

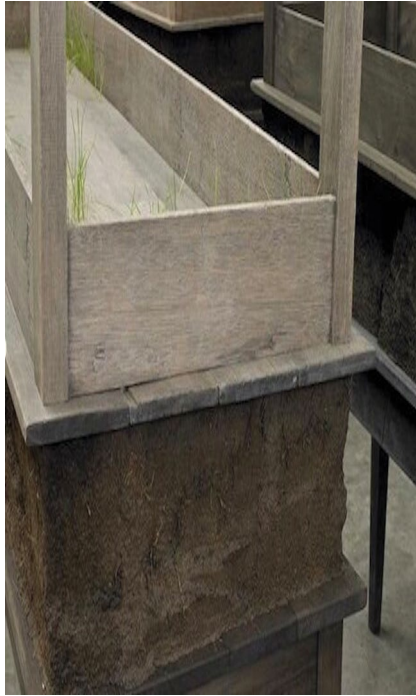


Image 2: *Plegaria Muda*, 2009 © Doris Salcedo

Re-thinking Small Words

I must end this essay without coming up with a conclusion. My polemic against the casual use of misplaced prepositions is itself a bit uncertain, wavering as it does between two other short words, frequently used as prepositions: “anti-” and “counter-”. The former implies a wholesale rejection, the latter a polemical discussion. Instead of being overly decided I propose to stay with what Haraway called “the trouble” (2016), which is the unclarity and undecidability of many words before which we hesitate. Instead, the beautiful word symbiosis (as per the CfP for this volume from the Greek: nexus and companionship) helps imagine, with that indispensable anthropomorphic imagination, what living together for mutual benefit can be. That word affirms the interconnectedness between life and all living things, and as such, deserves to be endorsed, without the rejection of “anti-” and with the qualifications to which “counter-” encourages.

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Peggy Karpouzou

Symbiotic Citizenship in Posthuman Urban Ecosystems: Smart Biocities in Speculative Fiction

Abstract

The “ecoprecarity” induced by the Anthropocene’s modes of living vivifies the concern for environmental sustainability and the development of sustainable and resilient urban communities. A new more synergetic model of human living involves mutual beneficial relationships among humans and more-than-human life-forms by replicating in praxis the symbiotic and mutually reinforcing life-reproducing forms and processes of living systems. The chapter proposes the concept of “smart biocity” through an interdisciplinary dialogue between posthumanism, environmental humanities, and the current urban planning discourses. The depictions of a smart biocity, -a thoroughly hybrid city to come that acknowledges the interplay of human and more-than-human agencies in a complex web of processes-, are investigated in a speculative fiction stories’ collection entitled *A Flash of Silver Green: Let’s Imagine Future Cities*. The processes of “symbiomimicry”, “symbiogenesis”, and “symbiocracy” are proposed to recast who or what counts as a citizen in these smart biocities, as well as to trace how citizenship is articulated symbiotically via communities and urban practices. These different narratives of symbiosis invite us to think of symbiotic citizenship as a procreation of place, originating self in a more-than-human citizens’ world. Moreover, it is suggested that current scientific research on sustainable, resilient, livable, and democratic cities might become more inventive in modeling our symbiotic planetary futures by engaging in this dialogue with critical theory and speculative fiction.

From the Anthropocene to the Symbiocene: Towards Symbiotic Citizenship

During the Anthropocene, the era in which “humankind has become a global geological force”,¹ the increasing capitalist models of development have a series

1 Will Steffen, Jacques Grinevald, Paul Crutzen, and John McNeill, “The Anthropocene: Conceptual and Historical Perspectives”, *Philosophical Transactions of the Royal Society* 369.1938 (2011), 843; Will Steffen, Paul Crutzen and John McNeill, “The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature?”, *Ambio* 36.8 (2007), 616.

of effects on Earth's systems. They have aggravated climate change and environmental degradation by disturbing biogeochemical or element cycles, disrupting water cycles, halting biodiversity, and even leading to species extinction. This precarious state of the environment but also the precarious lives that humans lead in the event of an ecological disaster are described by Pramod K. Nayar as "ecoprecarity".² By recognizing "the vulnerability of *all* lifeforms, their attendant ecosystems and the relationship between and across lifeforms/species", ecoprecarity is a concept beyond anthropocentrism.³ It raises awareness about the urgent need for environmental sustainability and the building of sustainable and resilient communities.

The Anthropocene "requires a new take on this issue which focuses not only on human populations but on questions of coexistence and symbiosis with non-human species".⁴ Therefore, speculations have been formed about the conception of a new mode of living that might reintegrate the humans "psychologically and technologically, into nature and natural systems"⁵ and encapsulate the mutual beneficial relationships between different life-forms. This post-geological era, named the "Symbiocene" (Albrecht, 2011, 2014, 2016), has been conceived as an "opposite"⁶ to the Anthropocene.⁷ It "will be characterized by human intelligence and praxis that replicate the symbiotic and mutually reinforcing life-reproducing forms and processes found in living systems".⁸ Although there are different kinds of symbiotic relationships in nature (such as commensalism, or even parasitism), the ideal type of symbiosis (mutualism), facilitates the best distribution of resources among symbionts. The aim of this mutual symbiosis is that all symbionts -and among them, the young, the weak, and the vulnerable- get their fair share to achieve a better chance for the entire life-sustaining ecosystem.

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- 2 Pramod K. Nayar, *Ecoprecarity. Vulnerable Lives in Literature and Culture* (New York and London: Routledge, 2019), 7.
 - 3 Nayar, *Ecoprecarity. Vulnerable Lives in Literature and Culture*, 14.
 - 4 Eva Horn and Hannes Bergthaller, *The Anthropocene. Key Issues for the Humanities* (London and New York: Routledge, 2020), 9.
 - 5 Glenn Albrecht, 'Ecopscychology in the Symbiocene', *Ecopsychology* 6.1 (2014), 58.
 - 6 Glenn A. Albrecht, 'Exiting the Anthropocene and Entering the Symbiocene', *Minding Nature* 9.2 (2016), 12.
 - 7 Glenn A. Albrecht, 'Negating Solastalgia: An Emotional Revolution from the Anthropocene to the Symbiocene', *American Imago* 77.1 (2020), 21.
 - 8 Glenn A. Albrecht, *Earth Emotions: New Words for a New World* (Ithaca, NY: Cornell University Press, 2019), 102; Albrecht, 'Exiting the Anthropocene and Entering the Symbiocene', 14.

Some characteristic examples of the complexities of symbiosis in praxis are the “wood wide web” – an underground network of roots, bacteria, and fungi helping to interconnect plants and trees and transfer nutrients⁹ and the coral reef ecosystems, which have the highest biodiversity of any marine ecosystem.

The conception of a posthumanist “symbiotic citizenship”, constituted on the symbiosis among human and more-than-human world, would entail questions about the nature of this citizenship and the involved acts, practices, and ethics. Closely connected with the idea of political agency, citizenship is generally understood as a legal status with associated rights and duties of those who are full members of a community. Here we are rather interested in “lived citizenship”, i.e. the embodied, relational and lived experiences of being a citizen in everyday life in city-regions, chosen as a particular spatial context for civic life.¹⁰ Although it seems that there is a wide methodological background, citizenship’s practical implications are still in progress as well as the current re-invention of urban space. Setting a framework for environmental and posthuman civil studies involves rethinking human agency and habitats. Contemporary urban planning about “smart”, “digital”, or “algorithmic”¹¹ cities and “green” or “ecocities”¹² finds a match with science fiction’s speculations about the complexities of living in future cities,¹³ often presented as “techno-utopias/dystopias” and “eco-utopias”. This research about an alternative symbiotic urban citizenship is motivated by

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- 9 Gabriel Popkin, “‘Wood wide web’ – the underground network of microbes that connects trees – mapped for first time”, *Science* (2019), <<https://www.sciencemag.org/news/2019/05/wood-wide-web-underground-network-microbes-connects-trees-mapped-first-time>>, [accessed 6 October 2022]. For an examination of the life beneath the forest floor and the complexities of this communication, see also, Merlin Sheldrake, *Entangled Life. How Fungi Make Our Worlds, Change Our Minds and Shape Our Futures* (New York: Random House, 2020) and Robert Macfarlane, “The Understory” in *Underland: A Deep Time Journey* (New York and London: Norton, 2020).
 - 10 Kirsi P. Kallio, Bronwyn E. Wood, and Jouni Häkli, ‘Lived Citizenship: Conceptualising an Emerging Field’, *Citizenship Studies* 24.6 (2020), 2, 9.
 - 11 Miguel de Castro Neto and Tiago de Melo Cartaxo, ‘Algorithmic Cities: A Dystopic or Utopic Future?’, in *How Smart Is Your City? Technological Innovation, Ethics and Inclusiveness*, ed. by M.I. Ferreira Aldinhas (Cham: Springer, 2021), 60.
 - 12 Richard Register, *EcoCities: Rebuilding Cities in Balance with Nature* (Gabriola Island: New Society Publishers, 2006); Jennie Moore, Sahar Attia, Adel Abdel-Kader, and Aparajithan Narasimhan eds., *Ecocities Now. Building the Bridge to Socially Just and Ecologically Sustainable Cities* (Cham: Springer, 2020).
 - 13 Carl Abbott, *Imagining Urban Futures: Cities in Science Fiction and What We Might Learn from Them* (Middletown, Connecticut: Wesleyan University Press, 2016), 22.

the assumption that all urban planning, which is driven by historical, political, sociocultural, and economic interests and occurs through both discourse and practice, is intrinsically ideological and usually represents dominant ideologies.¹⁴

Given the fact that an estimated 70% of the world's population will live in cities by the year 2050, it only makes sense that the discourses about the rapid urbanization in urban policy and planning are seeking sustainable solutions, involving “smart cities”,¹⁵ “green cities”, and their coexistence.¹⁶ However, the definitions and concepts are still emerging, and there is currently no clear and consistent definition for a smart city or a green city as they are related to the contextual mindset of the respective communities of scholars. Both are ideological constructs as well as a set of actual practices. For instance, current discourses about smart cities often involve broader theoretical frameworks, such as technological utopianism, neoliberalism, security and surveillance, and digital citizenship. The British Standards Institute defines smart cities as “the effective integration of physical, digital and human systems in the built environments to deliver a sustainable, prosperous and inclusive future for its citizens”¹⁷ (BSI, 2014). According to Francesco Gonella, “the element that seems to be shared by all of the various approaches to city smartness is the application of Information and Communication Technologies (ICTs) to basic infrastructural services”,¹⁸ such as administration, healthcare, public transportation, education etc.

In smart cities, citizens are supposed to live in a bidirectional relationship with the various autonomous systems that characterize a smart city as a complex ecosystem of people, processes, policies, technology, and other enablers who work together within multiple layers to provide various outcomes. Nonetheless,

14 Kristin Scott, *The Digital City and Mediated Urban Ecologies* (New York: Palgrave Macmillan, 2016), 7.

15 Marta Peris-Ortiz, Dag R. Bennett, and Diana Pérez-Bustamante Yábar eds., *Sustainable Smart Cities. Creating Spaces for Technological, Social and Business Development* (Cham: Springer, 2017).

16 Considering that “smart city” and “green city” can correlate but are not the same concept, see Kevin Stolarick and Olga Smirnova, ‘Are Creative and Green Cities Also Smart and Sustainable?’ in *Smart Cities as Democratic Ecologies*, ed. by D. Araya (New York: Palgrave Macmillan, 2015), 87.

17 BSI (2014), ‘Smart cities framework – Guide to establishing strategies for smart cities and communities’, <<https://www.centreforcities.org/reader/smart-cities/what-is-a-smart-city/>> [accessed 2 January 2022].

18 Francesco Gonella, ‘The Smart Narrative of a Smart City’, *Frontiers in Sustainable Cities* 1.9 (2019), 1.

substantial problems in the implementation of smart cities have already been identified in practice. Smart cities' citizens are plugged into digital information devices to supply information for the cities' operating systems. They are connected as passive mass users, while the data control center determines what to do with the information. Hence, the smart city is perceived by critical thinkers as a "top-down, master-planned vision shaped around the needs of suppliers rather than the needs of citizens",¹⁹ inextricably linked to the neoliberal project. In this sense, these smart cities have the potential to undermine true democratic practice or participation and are not sustainable or socially just. In response to this techno-centric smart city, the current urban-planning research is versed towards an experimental, citizen-centric city, a transition from controlled data mining to open access and user-centred systems in which the smart use of information can increase transparency, participation, and collaboration.²⁰ This raises the question of how we can create more open, democratic, self-regulated, participatory, and "green" socio-technical urban systems.²¹ A step further in this direction is to explore a "symbiotic citizenship" between the human and the more-than-human world in the urban environment.

The 'Smart' Narrative of the City as an Urban Ecosystem: Smart Biocities

As contemporary cities are central to how the Anthropocene is developing, the city has frequently represented the worst excesses of human inhabitation of the natural environment. Therefore it is often a topos of apocalyptic visions in modernist and postmodern literature. On the other hand, cities could represent a much better hope for the future than other configurations of human inhabitation by the fact that the assemblage of people and resources could lead to more efficiency. Cities are conceived as evolving assemblages of intertwined cultural, material, ecological and technological elements mediated by relationships and networks operating at multiple scales. These multiple scales are often depicted

19 Igor Calzada, *Smart City Citizenship* (Amsterdam: Elsevier, 2021), 18; Germaine R. Halegoua, *Smart Cities* (Cambridge, MA: MIT Press, 2020), 30.

20 Susanne Hecker, Muki Haklay, Anne Bowser, Zen Makuch, Johannes Vogel, and Aletta Bonn, *Citizen Science. Innovation in Open Science, Society and Policy* (London: UCL Press, 2018), 22.

21 Igor Calzada and Cristobal Cobo, 'Unplugging: Deconstructing the Smart City', *Journal of Urban Technology* 22.1 (2015), 32.

with the biocentric term of “urban metabolism”²² as a model that describes and quantifies the main flows (e.g., materials and energy) that enter in the city to be used or stored, and then exit from it. In other words, urban metabolism designates “the sum total of the technical and socio-economic processes that occur in cities, resulting in growth, production of energy, and elimination of waste”.²³

This need to deconstruct the city-nature binary is further expressed in “urban ecology”, a rapidly expanding interdisciplinary field of study that takes up understanding urban systems by building on ecological analogies.²⁴ The research embraces “ecology *in* cities” and “ecology *of* cities”.²⁵ The first strand of research raises some questions about urbanization’s impact on ecological organisms. The second one refers to the interactions among environmental and social systems in urban settings in order to understand the patterns of urbanization and ecological processes.

Contemporary urban ecology is ultimately concerned with sustainability – both of the environment and those who live in it.²⁶ To prevent the destructive effects of climate change, it seems that the challenge of cities is no longer their digitalization but how this shift could make them more ecological and human. One possible solution could be to transform cities into an extension of the natural world, into “biocities”,²⁷ conceived here as cities that function more like self-sufficient ecosystems that produce the resources they need to thrive and promote life.

Nature has evolved distributed systems where millions of interconnected elements make part of complex ecosystems that foster a more balanced way of

22 Peter Baccini, ‘A City’s Metabolism: Towards the Sustainable Development of Urban Systems’, *Journal of Urban Technology* 4.2 (1997), 28.

23 Teresa Laginha Sanches and Nuno Ventura Santos Bento, ‘Urban Metabolism: A Tool to Accelerate the Transition to a Circular Economy’, in *Sustainable Cities and Communities. Encyclopedia of the UN Sustainable Development Goals*, ed. by W. Leal Filho, A. Marisa Azul, L. Brandli, Ö. Pinar Gökcin, and W. Tony (Cham: Springer, 2019), 1.

24 Christopher Schliephake, *Urban Ecologies: City Space, Material Agency, and Environmental Politics in Contemporary Culture* (Lanham: Lexington Books, 2015), xviii–xxiii.

25 Jari Niemelä, Jürgen H. Breuste, Thomas Elmqvist, Glenn Guntenspergen, Philip James, and Nancy E. McIntyre, *Urban Ecology. Patterns, Processes, and Applications* (Oxford: Oxford University Press, 2011), 2.

26 Scott, *The Digital City and Mediated Urban Ecologies*, 16.

27 Jan Christensen and Ursula K. Heise, ‘BioCities: Urban Ecology and the Cultural Imagination’, in *The Routledge Companion to the Environmental Humanities*, ed. by U.K. Heise, J. Christensen, M. Niemann (London and New York: Routledge, 2017), 452–461.

life. “Ecosystems” could replace “machines” as the philosophical design metaphor and the practical model for architectural design. In that case, the built environment may be seen less as a collection of distinct autonomous buildings and infrastructures but rather as nodes that become conduits or producers of energy and nutrients (materials) in a complex cyclic system.²⁸ The study of cities as ecosystems gains to be applied to “smart city” where digital technologies could follow the same model to rebuild porous networks as if these were neural systems that connect people, processes and things.²⁹ A paradigm shift, an environment where the digital and the biological merge, could be our urban model for “smart biocities”, aspiring to be sustainable by providing an example of the most dynamic scenes of symbiosis in which humans are participating as “symbionts”.³⁰ This study explores how fundamental concepts and principles, such as agency, ecosystem, symbiosis, citizenship and democracy, shape and are re-shaped by the symbiotic smart biocity.

This chapter claims the necessity of a dialogue among up-to-date scientific research about smart cities and urban design, critical theory, and representations of urban futures in speculative fiction. It highlights the role of literature and particularly of speculative fiction in order to visualize the eventually unconceivable projections of urban environments in extreme conditions like climate change and reform scientific data, statistics or models inaccessible or unclear for a large number of non-experts into embodied stories that impart new knowledge and understanding through the use of metaphors and images.³¹ By taking into account the research about how ecosystems can be robust, resilient, and capable of adapting to constant change, this approach explores eventual strategies and techniques to overcome these future environmental problems as presented in speculative fiction. More specifically, the research proposes taking ecosystem processes as models for inspiration in determining urban design for resilient

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- 28 Maibritt Pedersen Zari and J.B. Storey, ‘An Ecosystem Based Biomimetic Theory for a Regenerative Built Environment’, *Lisbon Sustainable Building Conference* 7 (2007), <<https://www.irbnet.de/daten/iconda/CIB11734.pdf>> [accessed 2 January 2022].
 - 29 Sotiris Zygiaris, ‘Smart City Reference Model: Assisting Planners to Conceptualize the Building of Smart City Innovation Ecosystems’, *Journal of the Knowledge Economy* 4 (2013), 218.
 - 30 Donna J. Haraway, *Staying with the Trouble. Making Kin in the Chthulucene* (Durham and London: Duke University Press, 2016), 60.
 - 31 Olivia Bina, Andy Inch, Lavínia Pereira, ‘Beyond Techno-Utopia and Its Discontents: On the Role of Utopianism and Speculative Fiction in Shaping Alternatives to the Smart City Imaginary’, *Futures* 115 (2020), 7.

and sustainable smart biocities (*symbiomimicry*) and exploring the potential for human and nonhuman citizens' equality and interconnection through *symbiocracy* and even *symbiogenesis*.³² The working title of this case study is entitled *A Flash of Silver-Green. Stories of the Nature of Cities* (2019). This collection of fifty-seven flash fiction stories from twenty-one countries speculates about future cities in an age of ecological change. "Flash Fiction" is a short fiction story of extreme brevity³³ that still aspires to character and plot development. The proliferation of various forms of short fiction throughout the era of globalization reveals that brevity does not appear to be a constraint to depicting the complex and interrelated challenges emanating from empire, global capitalism, climate crisis, international migration, war, and technology. On the contrary, as Angela Naimou asserts, the techniques of narrative brevity enable historical and political imagination in the Anthropocene as flash fiction can encapsulate global patterns and stage the interrelationality of various scales of time and geopolitical space.³⁴ Following this line of thought, the selected flash fiction collection is postulated to capture critical issues related to the conception and operation of smart biocities.

Imagining Sustainable and Resilient Cities: Symbiomimicry

Speculation on catastrophe and how we imagine the material city's unfolding in the future is a valuable heuristic tool. It offers an alternative vision and carves an opening for different futures; our interest is focused primarily on sustainable and resilient ones. In the flash fiction stories, I discuss how future urban environments could successfully address the impacts of the interlinked issues of climate change and biodiversity loss, given that all species, human and non-human alike, will suffer the effects of these major disasters.

To build sustainable techno-spheres³⁵ for a presumptive Symbiocene, we have to rethink and go beyond the principle of "biomimicry". Biologist Janine M. Benyus' book *Biomimicry – Innovation Inspired by Nature* (1997)³⁶ popularized

32 Maibritt Pedersen Zari, *Regenerative Urban Design and Ecosystem Biomimicry* (New York and London: Routledge, 2018), 235.

33 Its word count ranges from 5 to 1,000 words on average, and tops out at 1,500 words.

34 Angela Naimou, 'Short Fiction, Flash Fiction, Microfiction', in *The Cambridge Companion to Twenty-First Century American Fiction*, ed. by J. Miller (Cambridge: Cambridge University Press, 2021), 21–42.

35 Peter K. Haff, 'Humans and Technology in the Anthropocene: Six Rules,' *The Anthropocene Review* 1.2 (2014), 127.

36 Janine M. Benyus, *Biomimicry: Innovation Inspired by Nature* (New York: Harper Collins Publishers, 1997).

“Biomimicry” as a principle in three parts: using “nature’s models” as inspiration for designs that seek to solve human problems; using “nature as measure” (p.e. to evaluate the effectiveness of innovations via ecological standards); and using “nature as mentor”. In that case, biomimicry is seen as a new way to learn from nature and redefine how humans relate to and value nature.³⁷ One crucial assumption for biomimetic urban design is that by emulating or mimicking natural shapes, structures and ecosystems, the built environment could adapt to climate change impacts while responding to ecosystems’ degradation and biodiversity loss.³⁸ Furthermore, quantifiable evidence has shown that design based on understanding the living world could increase human psychological well-being.³⁹

Biomimetic production would eventually contribute to more “symbiotic relationships, much more mutualism, [and] much more cooperation”,⁴⁰ if it ceased to be under economic logic. In this direction, Glenn Albrecht’s (2019) concept of “symbiomimicry”, underlines the vital interconnections between nature and humans:

in addition to mimicking the forms of life, we replicate the life processes (organic processes) that make strong and healthy the mutually beneficial association of shared life between and within different life forms.⁴¹

Symbiomimicry⁴² paves the way for a new understanding of nature as a metaphor for relationships between humans and non-humans. In this sense, symbiomimicry aligns with the mutual synergy of all life-forms to overcome the vulnerabilities, enhance nurturing, and promote an affirmative ethics of thriving.⁴³ Ecosystems offer a model for community’s rebuilding and the possibility of reconnecting the living systems that embody balance and interconnectedness. Nevertheless, symbiosis does not mean stability. Ecosystems as a form of symbiotic entanglement of their parts, are not equilibrium or stable state systems; they are, in fact, in a permanent state of flux.⁴⁴ Through contemplation,

37 Benyus, *Biomimicry: Innovation Inspired by Nature*, 6; Pedersen Zari, *Regenerative Urban Design and Ecosystem Biomimicry*, 17.

38 Pedersen Zari, *Regenerative Urban Design and Ecosystem Biomimicry*, 1.

39 Pedersen Zari, *Regenerative Urban Design and Ecosystem Biomimicry*, 18.

40 Jesse Goldstein and Elizabeth Johnson, ‘Biomimicry: New Natures, New Enclosures’, *Theory, Culture & Society* 32.1 (2015), 76.

41 Albrecht, *Earth Emotions: New Words for a New World*, 105.

42 Albrecht, ‘Exiting the Anthropocene and Entering the Symbiocene’, 14–15.

43 Olga Cielemeńska and Christine Daigle, ‘Posthuman Sustainability: An Ethos for Our Anthropocenic Future’, *Theory, Culture & Society* 36.7–8 (2019), 67–87.

44 Pedersen Zari, *Regenerative Urban Design and Ecosystem Biomimicry*, 78.

comprehension, and analysis of nature, we learn the basic principles that sustain life: interaction, belonging, constant change, uncertainty, and even loss/death. Taking ecosystems and their various cycles as models for symbiomimetic urban design would also impact our knowledge of what it means to be human in nature.

A biology-based narrative describes internal city processes as the exchange of matter and energy between living organisms and the environment. One of the principles of ecosystems is that diversity is linked to resilience in a constantly changing system. Claire Miye Stanford's story, 'Neither Above Nor Below', refers to a latter-day version of Jakarta in Indonesia. This city is adapted to a changed ecology after the rising sea levels and soil subsidence due to decades of aquifer depletion. Future Jakarta in 2099 is a city immersed in water but not drowned. Instead, the city is rebuilt on the same level of the water, letting the water in and offering a new model of coexistence between humans and nature:

That their city was the only place in the world that lived so close to the water, the only city in the world that had found a way to coexist with the rising tides [...]. Many fled to higher ground, but those who stayed welcomed the water.⁴⁵

In this sense, Jakarta, "the only city in the world that had found a way to coexist with the rising tides", is a city that is operated by the constant and natural flows of energy that are symbiotic. Here the "symbiotic citizenship" is perceived as Jakarta is a natural habitat, a well-adapted hydrosphere:

To him, it is beautiful, a never-ending playground of mangroves and sea hibiscus, long-tailed monkeys and heron. [...] Those who remained adapted, rebuilt. They raised their houses on stilts; they grew accustomed to moving about the city on makeshift rafts. They built the platforms that Hasan runs across now.⁴⁶

The city is seen as a "living organism" which resists the past human (colonial) and future natural assaults (tides). It is an example of a resilient city, a space of hope, enabling her meaning "Jayakarta" as a "Victorious" city. A new ethics of respect, trust, and care between humans and animals is illustrated in the story as an eight-year boy named Hasan is asked to help collect data for the study and protection of sea life. Through Hasan's observation of a turtle is described the stance of living symbiotically with the water:

45 Claire Miye Stanford, 'Neither Above Nor Below', in *A Flash of Silver-Green. Stories of the Nature of Cities*, ed. by D. Maddox, C. Walker, and M. Lovejoy (n.c.: The Nature of Cities, ArtsEverywhere/Musagetes, and Publication Studio Guelph, 2019), 16.

46 Stanford, 'Neither Above Nor Below', 16.

The waterways cut through the city like a maze for which Hasan knows every turn and curve and dead end. The turtle, too, knows its way. The turtle, too, has been here before. The turtle watched the ingress of water into the city, but unlike the humans, it watched without fear, without alarm.⁴⁷

A new mode of coexistence with animals emerges by drawing a parallel with their movement through the water city: “The turtle makes a sharp right. From where Hasan stands, the turtle’s logic is unclear, but no matter. Hasan has only to follow, to trust that the turtle knows where it is going and why?”⁴⁸

In another story, entitled ‘NCGCC 2099’, written by Chris Rothery, “New New York” is also conceived as a resilient city on the sea in 2099, after the floods due to climate change. It thrives by adopting some ecological principles as the city of BioPhiladelphia:

The next speaker was the delegate from BioPhiladelphia. He spoke proudly. “We have done what was deemed impossible by our great-grandfathers. We created a new paradigm and turned back annihilation. When we stopped adjusting nature to *our* patterns and started adjusting ourselves to *nature’s* patterns, only then did we truly thrive...”⁴⁹

Part of the resilient nature of living systems is that if one aspect of an ecosystem fails or ceases to exist (for example, a particular function, process, or organism), there are usually other ways to preserve the continuity of the system as a whole.⁵⁰ These resilient biocities have adapted to some symbiotic urban architectural patterns, such as “the roofs” turned to “habitat for seals”: “At sea level, the roofs of smaller buildings sticking occasionally out from the surface created habitat for seals.”⁵¹ The symbiosis among humans and more-than-human world in this flooded “New New York” is evident as the city is sustained by algae which colonize urban habitats and reveal great biodiversity. Algae are essential to a healthy marine ecosystem because they capture and use energy from sunlight, carbon dioxide, and water to produce organic compounds. Similarly, biocities can promote a type of bio-economy that integrates environmental resources to produce—for instance—biofuels, ecological food, bioplastics, carbon fibers, or construction materials. The narration about algae-food, algae-fuel etc. explains that the city’s

47 Stanford, ‘Neither Above Nor Below’, 15.

48 Stanford, ‘Neither Above Nor Below’, 16.

49 Chris Rothery, ‘NCGCC 2099’, in *A Flash of Silver-Green. Stories of the Nature of Cities*, ed. by D. Maddox, C. Walker, and M. Lovejoy (n.c.: The Nature of Cities, Arts Everywhere/Musagetes, and Publication Studio Guelph, 2019), 55.

50 Pedersen Zari, *Regenerative Urban Design and Ecosystem Biomimicry*, 74.

51 Rothery, ‘NCGCC 2099’, 54.

smart computational tools are customized to direct the integration of any biological organism like algae:

The Algae trade is the key...you got algae-fuel, algae-plastic, food, medicine, sewage treatment..." Suddenly the canals opened up to a great expanse of water: "Central Marine Reserve. Great fun for sailing, diving, you name it, but it's really all about protecting our fish stock"⁵²

Here the water is a "symbiont", conceived as "a sort of battery or energy circuit, capturing and recirculating external flows of energy";⁵³ symbiotically connected with the human welfare and daily life in many of its sectors such as food production, consumerism, medicine, energy, waste, etc. The water's streams follow the city's flows in the regeneration of the latter. In stories such as Joanne Bristol's poetic reflection about urban interspecies relationships entitled 'From eaves to footfall', the lines between human and non-human, city and nature, blur to the point where one is frequently difficult to distinguish from the other. Human citizens follow natural patterns ("After months of closely studying swallows inscribing homes on the creek banks, we realized how to proceed").⁵⁴ They mimic ecosystem's functions (provision of water, purification, waste used as a resource etc.), adopting symbiomimicry design for the urban space and life:

Our ecosan and waste bioremediation infrastructures – "holey unsettling," we call them – are sustained by labyrinths of streamlets and cultivated small water bodies, their designs informed by careful studies of beaver and muskrat dam and channel construction.⁵⁵

Anthropocene's cities are rather heavy consumers and polluters while human habitats are also seen as permanent structures being part of a global system of capital that gives them value as property.⁵⁶ A whole other set of values is to be explored if cities and habitats are to adapt to a symbiotic more-than-human

52 Rothery, 'NCGCC 2099', 54.

53 Kent A. Peacock, 'Symbiosis in Ecology and Evolution', in *Philosophy of Ecology*, ed. by K. deLaplante, B. Brown, and K.A. Peacock (Oxford, Amsterdam and Waltham, MA: Elsevier, 2011), 228–229.

54 Joanne Bristol, 'From Eaves to Football', in *A Flash of Silver-Green. Stories of the Nature of Cities*, ed. by D. Maddox, C. Walker, and M. Lovejoy (n.c.: The Nature of Cities, ArtsEverywhere/Musagetes, and Publication Studio Guelph, 2019), 75.

55 Joanne Bristol, 'From Eaves to Football', 76.

56 David R. Cole and Yeganeh Baghi, 'When Two Worlds Collide: Creatively Reassessing the Concept of a House Beyond the Human', *Qualitative Inquiry* (2022), 8.

environment, embracing “becoming”⁵⁷ (Deleuze) as the core condition of relational being rather than being as dwelling. In Theo Leworthy’s story entitled ‘The Third-Party Man’ are presented the miniature cities, the “micro-cities” which “manage humans and resources intelligently” as the current smart-cities. Micro-cities are also biocities as they emulate several ecosystems’ principles as the one indicating that “ecosystems are self-organizing, decentralized and distributed”⁵⁸. Moreover, these micro-cities are conceived as embedded, niche ecosystems that have lifecycles (“the intelligent systems usually dictated when a city’s lifecycle came to an end”) in order to preserve the balance of the global, planetary ecosystem:

That’s where the first micro-cities came from. The tech was there already. You could put up a miniature city in a few weeks. Automated systems constructed easy-build houses, roads; global water networks were rerouted, and purifying plants were deployed. Vertical farms were brought in by the floor and put together into towering skyscrapers. Energy was easy. Internet was easy. And people? They were the easiest things of all: we’ve all got a little nomad in us.⁵⁹

The story implies a “nomadic” conception of both citizens and cities, as micro-cities are considered temporary structures. Instead of destroying nature, they thoroughly mimic natural processes. For instance, the micro-cities are designed to follow ecosystem processes and functions, such as purifying the water or producing renewable energy. By using “purifying plants” or “vertical farms”, they respect principles as the following ones, that “part of ecosystems and organisms are often multi-functional” or that “ecosystems and organisms within them optimize the whole system rather than maximise components”.⁶⁰ Moreover, they emulate the basic principles that “ecosystems are capable of adapting to constant change” and “they use cyclic process in the utilization of materials”.⁶¹ All these ecological functions explain the narrator’s comments about the micro-cities: “When they’re packed up and gone, well, nature should see a positive return on its investment in the human species”.⁶² These imaginary micro-cities, emulating in

57 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus. Capitalism and Schizophrenia*, trans. by Brian Massumi (New York and London: Continuum, 1987).

58 Pedersen Zari, *Regenerative Urban Design and Ecosystem Biomimicry*, 82.

59 Theo Leworthy, ‘The Third-Party Man’, in *A Flash of Silver-Green. Stories of the Nature of Cities*, ed. by D. Maddox, C. Walker, M. Lovejoy (n.c.: The Nature of Cities, ArtsEverywhere/Musagetes, and Publication Studio Guelph, 2019), 161–162.

60 Pedersen Zari, *Regenerative Urban Design and Ecosystem Biomimicry*, 83.

61 Pedersen Zari, *Regenerative Urban Design and Ecosystem Biomimicry*, 86.

62 Leworthy, ‘The Third-Party Man’, 162.

their conception a planetary scale, could be described as “cities that think like planets”.⁶³

In sum, a more-than-human, smart biocity wholly connected to and in its environment can be envisioned as built from locally and sustainably sourced materials, saving, circulating, or even producing energy. As a temporary structure, it would be open to change, decay, or transport to another place if the environmental conditions require it.⁶⁴

Ensuring Unplugged Spaces and Connection with Nature in Smart Biocities

Citizen Science Fiction stresses upon the problematic construction of citizenship as “totalitarian in nature”.⁶⁵ Moreover, Daniel Araya claims that “there remains a paucity of literature on smart cities that explores issues associated with democratic agency and governance”.⁶⁶ The development of sustainable and resilient communities based on new, symbiotic values and practices could avoid the dangers of technocratic regimes, overthrowing democracy through increased surveillance and control of citizenship.⁶⁷ The future smart biocities should also take into account the fictional warnings about the effects of condensed, vertical and oppressive urban environments, characterized by increased social inequality and profound alienation from nature.

The smart city is a hyper-connected entity that disregards individual uniqueness and interaction ability. According to the current research, the widespread use of ICTs in a wired urban world is rather designed to incite citizens to provide greater input into highly centralized institutions than to offer urban residents greater agency in collaborative decision-making.⁶⁸ A more democratic, participatory, and even symbiotically oriented citizenship with the more-than-human world could start by creating unplugged urban spaces and ensuring a connection

63 Marina Alberti, *Cities That Think Like Planets. Complexity, Resilience, and Innovation in Hybrid Ecosystems* (Seattle and London: University of Washington Press, 2016), xiii.

64 Cole and Baghi, ‘When Two Worlds Collide: Creatively Reassessing the Concept of a House Beyond the Human’, 8.

65 Jerome Winter, *Citizen Science Fiction* (Lanham: Rowman & Littlefield, 2021), 2.

66 Daniel Araya, ed., *Smart Cities as Democratic Ecologies* (New York: Palgrave Macmillan, 2015), 2.

67 Giuseppe Grossi and Daniela Pianezzi, ‘Smart Cities: Utopia or Neoliberal Ideology?’, *Cities* 69 (2017), 79–85.

68 Araya, *Smart Cities as Democratic Ecologies*, 3.

with nature. In recent urban planning for the smart city it has been proposed its deconstruction, i.e., the need to explore conditions for citizens' unplugging; this is meant to avoid techno-deterministic conditions and to observe how relevant unplugging dimensions can possibly lead to true communitarian life and a socially equal urban sphere.⁶⁹

This citizen's unplugging is depicted in flash fiction stories as an act of resistance and escape from the various systems of surveillance. The unplugged subject reclaims a symbiotic relation with nature which is either minimized, preserved for the elite or pushed to the outer borders of the city. This is fictionalized from the literal unplugging of Liv who, in Nicole G.'s story entitled 'Let Time Fly',⁷⁰ chooses to exit from the web of the fast-paced city and reconnect with nature at the city's borders to Nayaka's breaking of the law in Lavanya Lakshminarayan's story entitled 'The Ten-Percent Thief' Nayaka lives in Apex City, a hyper-connected smart-city ruled by Bell Corporation ("Apex City is governed by the Bell Curve Algorithm. Her Productivity Points, Social Persona, and Humanitarian Level have determined her percentile").⁷¹ She is issued from the lower social status of the Analogs who have no contact with nature ("Most Analogs have no conception of a tree").⁷² She brings them hope by sneaking into the elite's vertical garden and stealing tree buds to cultivate them in the Analogs' part of the city. She succeeds in her task by using the blind spots of the town that escape the surveilled area scanned by "SecureDrones":

The PanoptiCam scans the grounds. She locates its blind spot – a thick "W" formed by two intertwined trees. [...] She makes for a confluence of alleyways so claustrophobic that the Drones have no visibility there.⁷³

Debra Benita Shaw speaks of the ideology of modern urban space as "cleansed, devoid of 'dark space'; and, more importantly, wholly visible".⁷⁴ "Blind spots" and

69 Calzada, *Smart City Citizenship*, 18.

70 Nicole G., 'Let Time Fly', in *A Flash of Silver-Green. Stories of the Nature of Cities*, ed. by D. Maddox, C. Walker, and M. Lovejoy (n.c.: The Nature of Cities, ArtsEverywhere/Musagetes, and Publication Studio Guelph, 2019).

71 Lavanya Lakshminarayan, 'The Ten-Percent Thief', in *A Flash of Silver-Green. Stories of the Nature of Cities*, ed. by D. Maddox, C. Walker, and M. Lovejoy (n.c.: The Nature of Cities, ArtsEverywhere/Musagetes, and Publication Studio Guelph, 2019), 147.

72 Lakshminarayan, 'The Ten-Percent Thief', 146.

73 Lakshminarayan, 'The Ten-Percent Thief', 147–8.

74 Debra Benita Shaw, *Posthuman Urbanism. Mapping Bodies in Contemporary City Space* (London and New York: Rowman & Littlefield, 2018), 118; see, also, Pramod K. Nayar, 'Posthuman Urban Spaces in Dave Eggers' the Circle', in *Technology, Urban Space and*

“dark spaces” manifestly elude vision while the *conditio sine qua non* of utopian and dystopian political projects is absolute visibility. Scholars have frequently envisioned the city “as embodying in its very means of being the friction between a push toward messiness and strategic attempts at tidiness”.⁷⁵ Dystopias and utopias are usually too neat and cannot maintain messiness. On the contrary, the city as lived material site is, and needs to remain to a certain degree, a “mess”. Fictional warnings underline the need for the citizens to be unplugged from the totalitarian city’s web and to reclaim a symbiotic relationship with Nature as an act of freedom, self-awareness and well-being. It also implied the need for future smart biocities’ urban design to include all sorts of unplugged spaces, unmonitored blind spots, and wildlife corridors as contact zones with nature.⁷⁶

Envisioning Biodiversity and Multispecies Citizenship⁷⁷: Symbiogenesis and Symbiocracy

Speculative fiction proposes more radical options to endorse “symbiotic citizenship” by ensuring biodiversity through “symbiogenesis” and its transformative practices. According to Donna J. Haraway, “symbiogenesis”,⁷⁸ refers to the cobbling together of living entities to make something new in the biological, rather than digital or some other, mode. It results in “compost” kin-making of human and non-human critters,⁷⁹ novel sorts of organization, not just novel critters. It contributes thus to sustaining the ecosystem’s equilibrium and biodiversity, especially concerning the vulnerable and endangered species: few genes or microorganisms of a symbiont plant or animal are added to the human child’s body. This process permits him/her to experience the world as its plant/animal

the Networked Community, ed. by S. Samay Das and A. Roy Pratihari (London: Palgrave Macmillan, 2022), 211–213.

75 Allison M. Schifani, *Urban Ecology and Intervention in the 21st Century Americas. Verticality, Catastrophe, and the Mediated City* (New York and London: Routledge, 2021), 117–118.

76 Jodi A. Hilty, Annika T.H. Keeley, William Z. Lidicker Jr., Adina M. Merenlender, *Corridor Ecology: The Science and Practice of Linking Landscapes for Biodiversity Conservation and Climate Adaptation* (Washington, DC: Island Press, 2019).

77 See also, the concept of “species cosmopolitanism” in Pramod K. Nayar, *Posthumanism* (Cambridge: Polity, 2014), 51, 170–171, 202–210.

78 Haraway, *Staying with the Trouble. Making Kin in the Chthulucene*, 218.

79 Donna J. Haraway, ‘Anthropocene, Capitalocene, Plantationocene, Chthulucene’, *Environmental Humanities* 6.1 (2015), 161.

symbiont, forge a durable bond with it, and adopt a symbiotic culture of survival and flourishing.

Laura Coleman's story entitled 'Roamer', inspired by Haraway's science-fiction short story 'The Camille Stories: Children of Compost',⁸⁰ depicts the Communities after the ravages of the Anthropocene, climate change and continuing high rates of extinction. In her story, the non-anthropocentric narration adopts the focal point of a symbiont roamer, who is both human and animal. The roamer meets a human child in an Outter city, presented as a ruined place. Their whole dialogue conveys the need for bonding and building alliances, networks, pathways, and nodes to heal the ruined places and human and non-human critters. To achieve multispecies partnerships of many kinds, which in their turn will contribute to building a habitable space on a damaged planet, is highlighted the urge to care for maintaining Corridors as "contact zones":

The sky above me is brown, shards of pink blurring around the edges. Reflections off towers catch in my eyes, shining early sunlight in glass and the pitted waterways that swamp this part of Los Angeles. I smell the great ocean behind. It's been a long time since I've come out on this side of the Corridors.⁸¹

Corridors permit travel, exchange and communication which are essential to the human and non-human members of the symbiosis. They assure the conservation of all species, giving space for emerging kinds of being and ways of life.⁸² They are materialized as zones in the borders of the adventurous Outter cities, contrasted with the safety of Inner Cities:

All Outter cities, trapped on the sea-torn sides of the Corridors, smell the same. Inners are different, cities closeted by the interior plains. They have the stink of safety. I like them less for it. Here is clogged, like my own skin, with decay, salt, and ghosts.⁸³

A way to manage and reverse Anthropocene's damages is to consider Nature as an equal part of global politics in the decision-making processes. In the story entitled 'The Third-Party Man', Nature enters into the social contract between the government and the governed as equal, and its laws of self-regulating

80 The science fiction short story is included in *Staying with the Trouble: Making Kin in the Chthulucene*, 134–168.

81 Laura Coleman, 'Roamer', in *A Flash of Silver-Green. Stories of the Nature of Cities*, ed. by D. Maddox, C. Walker, and M. Lovejoy (n.c.: The Nature of Cities, ArtsEverywhere/ Musagetes, and Publication Studio Guelph, 2019), 229.

82 Haraway, *Staying with the Trouble. Making Kin in the Chthulucene*, 140, 218.

83 Coleman, 'Roamer', 229.

ecosystems are applied to humanity through the “Third Party”, an intelligent regulating system maintained by humans that represent “nature’s voice”:

The Third Party was conceived of as a solution to this mess: an intelligent system that regulated our activities through precision technology and artificial intelligence – nature’s voice in global politics. Kind of like natural laws, codified and applied to humanity, just like it applies to weather systems or tectonic plates.⁸⁴

A political rule that regulates the mutual beneficial relationship between all life-forms with equality and social justice would be better described by Albrecht’s concept of “symbiocracy”.⁸⁵ It represents “the process of symbiosis in all of our deliberations on human affairs”⁸⁶ as “the creation of a system of governance that reflects the way life works will be a major task in the transition away from Anthropocentrism”.⁸⁷ Symbiocracy is illustrated in Amanda White’s story entitled ‘Listen’ where all the voices participate in the decision-making. Smart information and communication technologies in the form of BioTranslators allow plants and ants, wolves, and worms to make their voices heard in meetings where state leaders discuss the city’s future : “Sue was knee deep in a mussel pool, talking though Biotranslators to the bivalves and mangrove propagules, understanding their requirements for a new microclimate”.⁸⁸ The symbiosis of human (Sue) and more-than-human world describes a shared living in and a truly “symbiotic citizenship” to achieve a sustainable common habitat (“a new microclimate”).

From the perspective of Bruno Latour’s actor-network-theory (ANT),⁸⁹ any inhabitant – whether human or non-human – is an agent and has an influence on the smart biocity’s metabolism. Hence, all are equally considered sources of data and play a role in the city’s infrastructure.⁹⁰ From the flow of water through a storm drain to the individual or collective transportation habits, different

84 Leworthy, ‘The Third-Party Man’, 161.

85 Albrecht, ‘Exiting the Anthropocene and Entering the Symbiocene’, 15.

86 Albrecht, ‘Negating Solastalgia: An Emotional Revolution from the Anthropocene to the Symbiocene’, 26.

87 Albrecht, ‘Negating Solastalgia: An Emotional Revolution from the Anthropocene to the Symbiocene’, 26.

88 Amanda White, ‘Listen’, in *A Flash of Silver-Green. Stories of the Nature of Cities*, ed. by D. Maddox, C. Walker, and M. Lovejoy (n.c.: The Nature of Cities, ArtsEverywhere/ Musagetes, and Publication Studio Guelph, 2019), 119.

89 Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2005), 10–11.

90 Schahram Dustdar, Stefan Nastić, and Ognjen Šćekić, *Smart Cities. The Internet of Things, People and Systems* (Cham: Springer, 2017), 9.

measures thus combine to provide a means to develop more efficient city's services and infrastructure. One step further, the humans in this smart biocity benefit from information and communication technologies to give voice to all the agents aiming to perceive urban challenges and enhance democratic debates about the kind of city they want.

In this sense, symbiotic citizens through Biotranslators become sensing nodes. Biotranslation, as an intersemiotic articulation of a natural language into another, could be regarded as transmission of meanings between *Umwelten*. The life cycle is the connecting point that ties together humans' and other animals' *Umwelten*.⁹¹ The Biotranslators decode the signs of "interspecies communication" about life's protection:

Nan had led a team to design the first models for interspecies communication, creating an unimaginable transformation as people all over the world learnt how to flourish again. Biomimicry became BioLearning; plants and animals became our teachers. Ancient fossils revealed the secrets of past climate change. Plants happily bore food for us as we learnt how to properly care for them.⁹²

Deep communication enhances biomimicry to BioLearning, a process that starts with observation and research from the part of humans to figure out the functions or processes that are life-preserving and learn how to live in "synergy" with fellow species. The "symbiotic citizenship" ties different life-forms to bio-cooperate, forming 'communities' "that function as ecological systems":

Today, I want to talk to you about the future of communities, of small communities that can live without taking too much from the planet, of communities that function as ecological systems. Communities that can exchange what they need with each other and our fellow species, as we learn more about how to live in synergy with our plant and animal friends, which, as you know, is my passion. But to make this happen, we need to show our fellow species that we're committed to living differently....⁹³

All these flash fiction stories that enact symbiosis with more-than-human world imply that we need a transformation of urban ethos cultivating responsibility, respect, trust, solidarity, sense of justice and equality. Ecoprecarity, seen as the vulnerability of all life-forms, accentuates the need for a more symbiotic relationship with the biosphere and the technosphere as we plan current and future

91 Kadri Tüür, *Semiotics of Nature Representations: On the Example of Nature Writing* (Tartu: University of Tartu Press, 2017), 77–78.

92 White, 'Listen', 120.

93 White, 'Listen', 121.

cities and habitats. The concept of “smart biocity”, a term used to embrace a thoroughly hybrid city to come, acknowledging the interplay of human and more-than-human agencies and providing habitat for humans, non-humans, hybrids and their evolving assemblages, opens a potential common ground for urban planning discourses, posthumanism, environmental humanities and speculative fiction. The proposed exploration of symbiomimicry, symbiogenesis, and symbiocracy in relation with the smart biocities recasts who or what counts as a citizen and tracks how citizenship is articulated symbiotically via communities and urban practices, rather than governable policies. In this sense, “symbiotic citizenship” could be practically understood as procreation of place, originating self in a more-than-human citizens’ world. In conclusion, we suggest that the current scientific research about sustainable, resilient, livable, and democratic smart cities and ecocities might be advanced through the dialogue with critical theory and speculative fiction. It even might become more inventive in modeling our symbiotic planetary futures.

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PART II Symbiotic Posthumanist Ecologies in Literature and Art

Bruce Clarke

Cracking Open: Ecological Communication in Richard Powers' *The Overstory*

Abstract

A sizable body of scholarship has been unfolding the presence and the significance of the vast repertoire of sensory channels and communicative techniques natural processes take up to hold communities of non-human and non-animal organisms together. *The Overstory* observes and creatively voices these recent trends in the biochemistry and community ecology of plant behavior. It threads these themes through a series of human characters to whom the trees themselves are calling out: “*The most wondrous products of four billion years of life need help*” (O, 165). Richard Powers’ novel offers a fictional reflection on new modes of cross-species understanding by placing its human characters at the margins and in milieus where other species share the same medium and invite them to consort with their symbiotic neighbors. Critical responses to *The Overstory* novel have already explored a wide range of recent research in plant cognition and communication. This essay discusses these connections through considerations of animacy, animism, and processes of origination and metamorphosis, as these themes take on form within the narrative. It then draws on Carla Hustak and Natasha Myers’ presentation of “involutionary momentum” as that concept is brought into focus by an episode in the novel’s adaptation of the recent history of forest ecology. In this instance, *The Overstory* retails this scientific discipline’s struggle out of the grip of neo-Darwinist orthodoxy in order to clear ontological space for the natural dynamics of ecological communication across species and kingdoms, culminating in the depiction of a human character receiving arboreal enlightenment.

*For the border between a plant and a human to be crossed,
an entire cosmology and its order of the elements
would need to be upset.*

Anselm Franke

Something is afoot with the forest. The trees, too, are now in league with the microbes and the fungi to upset our ways of thinking about life altogether.¹ For

1 For the microbes, see Lynn Margulis and Dorion Sagan, *What Is Life?* (Berkeley: University of California Press, 2000). For the fungi, see Merlin Sheldrake, *Entangled Life: How Fungi Make Our Worlds, Change Our Minds & Shape Our Futures* (New York: Random House, 2020).

some time, biological theorists such as Lynn Margulis, James Shapiro, and Scott Gilbert among many others have been rethinking the fundamental units of living systems – cells of any description – not as genetic automata but as responsive agents, cognitive entities that observe distinctions and make decisions based on an apprehension of their environments.² Life on Earth comprises what Margulis and Dorion Sagan call a “sentient symphony”, for which, they cautiously suggest, “at even the most primordial level living seems to entail sensation, choosing, mind”.³ Comparable claims have roiled the scientific literature with regard to the cognitive capacities of plants, their abilities to perceive, respond, and communicate with other members of their ecological community, generally in deep symbiotic fusion with mutualistic fungal and bacterial partners. Nonmodern intuitions of natural community now join sophisticated measurements of chemical flows showing, just for one instance, that mature trees in old forests partner with their mycorrhizae to nurture their own offspring with infusions of nutrients that may also extend to their arboreal neighbors of different species.⁴

Moving between experimental and theoretical sciences and anthropology, sociology, philosophy, and the critical humanities, a sizable body of scholarship has been unfolding the presence and the significance of the vast repertoire of sensory channels and communicative techniques natural processes take up to hold communities of non-human and non-animal organisms together. Critical responses to *The Overstory* have already explored a wide range of recent research in plant cognition and communication.⁵ This narrative fiction observes and creatively

2 Lynn Margulis, *Symbiosis in Cell Evolution: Microbial Communities in the Archean and Proterozoic Eons*, 2nd ed. (New York: W. H. Freeman, 1993); James A. Shapiro, *Evolution: A View from the 21st Century* (Upper Saddle River, NJ: FT Press Science, 2011); Scott F. Gilbert, Jan Sapp, and Alfred I. Tauber, ‘A Symbiotic View of Life: We Have Never Been Individuals’, *Quarterly Review of Biology* 87.4 (2012), 325–41.

3 Margulis and Sagan, *What Is Life?*, 220.

4 On the science of this ‘mother tree’ concept put forward by forest ecologist Suzanne Simard, see Monika A. Gorzelak, Amanda K. Asay, Brian J. Pickles, Suzanne W. Simard, ‘Inter-plant Communication through Mycorrhizal Networks Mediates Complex Adaptive Behavior in Plant Communities’, *Annals of Botany Plants* 7 (2015), 1–13. For a personal account, see Suzanne Simard, *Finding the Mother Tree: Discovering the Wisdom of the Forest* (New York: Alfred A. Knopf, 2021). See also Monica Gagliano, John C. Ryan, and Patricia Vieira, eds., *The Language of Plants: Science, Philosophy, Literature* (Minneapolis: University of Minnesota Press, 2019).

5 Richard Powers, *The Overstory: A Novel* (New York: W.W. Norton, 2018) [hereafter O]. Cogent treatments of the novel in relation to plant communication and forest ecology include Birgit Spengler, ‘Arboreal Encounters in Richard Powers’ *The Overstory*, in

voices these recent trends in the biochemistry and community ecology of plant behavior.⁶ It threads these themes through a series of human characters to whom the trees themselves are calling out: “*The most wondrous products of four billion years of life need help*” (O, 165). For instance, at a climactic moment in her story arc, the character Patricia Westerford, a tree scientist or dendrologist loosely modeled on forest ecologist Dr. Suzanne Simard, articulates *The Overstory*'s ecological posthumanism in turning away from the human exceptionalism practiced in popular scientific ideology:

We scientists are taught never to look for ourselves in other species. So we make sure nothing looks like us! Until a short while ago, we didn't even let chimpanzees have consciousness, let alone dogs or dolphins. Only man, you see: only man could know enough to *want* things. But believe me: trees want something from us, just as we've always wanted things from them. This isn't mystical. The “environment” is alive – a fluid, changing web of purposeful lives dependent on each other. (O, 453–54).

The human characters in the foreground of this storyworld begin to hear the utterances of trees, often presented as articulate statements addressed directly to them. There are deep precedents for the depiction of such extreme events. Prior and comparable formulations regarding plant sentience, as well as sober considerations of plants' abilities to sense, respond to, and address their environments, go back at least to Charles and Francis Darwin's 1880 study, *The Power of Movement in Plants*, and break into modern literary depiction with Algernon Blackwood's “The Man Whom the Trees Loved” of 1912.⁷ *The Overstory*'s mobilization

An Eclectic Bestiary: Encounters in a More-than-Human World, ed. by B. Spengler and B. B. Tischleder (Bielefeld: Transcript Verlag, 2019), 65–89; and Shannon Lambert, “Mycorrhizal Multiplicities”: Mapping Collective Agency in Richard Powers' *The Overstory*, in *Nonhuman Agencies in the 21st Century Anglophone Novel*, ed. by B. Burger, Y. Liebermann, and J. Rahn (London: Palgrave Macmillan, forthcoming).

- 6 See František Baluška and Velemir Ninkovic, eds., *Plant Communication from an Ecological Perspective* (Berlin: Springer, 2010); Monica Gagliano, ‘Seeing Green: The Re-Discovery of Plants and Nature’s Wisdom’, *Societies* 3.1 (2013), 147–57; František Baluška, Monica Gagliano, and Guenther Witzany, eds., *Memory and Learning in Plants* (Berlin: Springer, 2018).
- 7 Charles Darwin and Francis Darwin, *The Power of Movement in Plants* (London: John Murray, 1880); Algernon Blackwood, ‘The Man Whom the Trees Loved’, in *Pan's Garden: A Volume of Nature Stories* (London: Macmillan, 1912). The text of Blackwood's tale quotes the conclusion of Francis Darwin's 1908 BAAS address: “It is impossible to know whether or not plants are conscious; but it is consistent with the doctrine of continuity that in all living things there is something psychic, and if we accept this point of view we must believe that in plants there exists a faint copy of what we know

of this lineage is an homage to the minor tradition of scientific and literary representations keeping issues of plant sentience and communication alive. The novel offers a fictional reflection on new modes of cross-species understanding by placing its human characters at the margins and in milieux where other species share the same medium and invite them to consort with their symbiotic neighbors.

Animacy and Animism

Restated in a neighboring idiom, the story of *The Overstory* interrogates the concept of *animacy*. That word does not appear in its text: the closest it comes to that pronunciation is to animacy's sister concept *animism*. And this term occurs only once, in relation to Patricia Westerford, who as a child made dolls out of acorns. However, as she grows older, her "acorn animism turns bit by bit into its offspring, botany" (*O*, 114).⁸ But now, for Westerford in particular, as a mature and controversial scientist, her training in botany is uncannily returning to intimations of animacy.

The concept of animacy was put forward several decades ago as a linguistic term naming how certain grammatical usages involve necessary inflections regarding the 'animate' status of indicated entities, linguistic "obligations to register degrees of animacy, that is, levels of sentience, mobility, personhood or liveness".⁹ Animacy in the abstract now denotes these states of being marked by animate capacities, such as sensation, movement, and self-awareness. However, animacy in linguistic practice takes the form of grammatical demands to specify the status of entities in relation to an "animacy hierarchy" (*A*, 32). Put succinctly,

as consciousness in ourselves". Francis Darwin, "The Address of the President of the British Association for the Advancement of Science," *Science* 28.716 (1908), 362. For a contemporary overview of this minor tradition, see František Baluška, Stefano Mancuso, Dieter Volkman, and Peter W. Barlow, "The "Root-Brain" Hypothesis of Charles and Francis Darwin: Revival after more than 125 Years," *Plant Signaling & Behavior* 4.12 (2009), 1121–27.

8 On varieties of contemporary animism in *The Overstory* and beyond, see Bron Taylor, 'Animism, Tree Consciousness, and the Religion of Life: Reflections on Richard Powers' *The Overstory*', *Minding Nature* 12.1 (2019), 42–47; Thom Van Dooren and Deborah Bird Rose, 'Lively Ethnography: Storying Animist Worlds', *Environmental Humanities* 8.1 (2016), 77–94; and Deborah Bird Rose, 'Val Plumwood's Philosophical Animism: Attentive Inter-actions in the Sentient World', *Environmental Humanities* 3 (2013), 93–109.

9 Mel Y. Chen, 'Animacies', in *Posthuman Glossary*, 32 [hereafter *A*].

until recently, Western grammars have dictated that humans be referred to as “she” or “he”, whereas the tree under which they sit or the bird on its bough must be referred to as “it”.¹⁰ A culturally specific set of hegemonic typifications has suppressed the recognition of animacy, promoting human beings to agential personhood while demoting excluded others to the status of objects devoid of feeling or responsiveness.

Animacy's ‘grammar’ thus extends beyond linguistic coercion to broader strokes of biopolitical governance. I read this animacy hierarchy, treated by linguists as an avowedly conceptual organization of worldly and abstract things with grammatical consequence, as a story of relative agency. Animacy hierarchies are precisely about which things can or cannot affect – or be affected by – which other things within a specific scheme of possible action. (A, 33).

The discourse of posthumanism may be said to ponder the redistribution of animacy beyond the human, beyond the animal. In this activity it revisits and reassesses what got covered over with the invention of ‘animism’ in the later nineteenth century as a general name for modes of belief purportedly abandoned by Western modernity. The concept of animism emerges alongside neighboring Victorian boundary-work policing the borders between materialism, vitalism, and spiritualism. As introduced by the anthropologist E.B. Tylor in 1871, “animism” kept a place open for nonmodern and indigenous ontologies within the pale of the social sciences, as long as they kept their historical and geographical distance from an ‘objective’ construction of knowledge. Following Anselm Franke's characterization, one could say that animism envisions a world of generalized animacies whose liveliness declares or communicates itself by spreading out within a wider milieu of possible relations:

‘Animism’ designates a cosmos in which theoretically everything is alive and communicating, and potentially possesses the qualities of being ‘a person’ or, at the very least, an agent of some kind. It describes a world in which all social and ontological boundaries are porous and can be crossed under specific circumstances, a world of becomings and metamorphoses, in which no entity precedes the sets of relations that bring it into being.¹¹

10 Kimmerer proposes adopting a new set of pronouns to supplement the de-animating “it” in ‘Speaking of Nature: Finding Language that Affirms Our Kinship with the Natural World’, *Orion* (March/April 2017) <<https://orionmagazine.org/article/speaking-of-nature/>> [accessed June 29, 2021].

11 Anselm Franke, ‘Animism’, in *Posthuman Glossary*, 39.

In ‘Learning the Grammar of Animacy’, botanist and plant ecologist Robin Wall Kimmerer fleshes out some of the embodied sense belatedly being recovered from the modern aporias gathered under the name of animism. When learning the grammar of animacy, she intimates, the first lesson is how to listen, how to clear a space within which “wordless being” can affect human experience and take on form within the medium of meanings specific to linguistic expressions, even if only as that “for which we have no language”:

I come here to listen, to nestle in the curve of the roots in a soft hollow of pine needles, to lean my bones against the column of white pine, to turn off the voice in my head until I can hear the voices outside it: the *shhh* of wind in needles, water trickling over rock, nuthatch tapping, chipmunks digging, beechnut falling, mosquito in my ear, and something more – something that is not me, for which we have no language, the wordless being of others in which we are never alone. After the drumbeat of my mother’s heart, *this* was my first language.¹²

Moreover, many indigenous languages preserve grammatical systems that distribute animacy much more widely than Western languages as a rule: “Potawatomi does not divide the world into masculine and feminine. Nouns and verbs both are animate and inanimate” (B, 53). The strangeness of this statement bears repeating: in Potawatomi, verbs – not just nouns – can be inflected to mark the presence or absence of animacy, of sentient existence by and for itself. For instance, in addition to having a noun for the body of water called a ‘bay’, Potawatomi also has the verb form *to be a bay*. Kimmerer relates the moment in which, frustrated in her efforts to grasp the sense bound up in the strange complexity of this indigenous language, the meanings toward which its grammar bends suddenly hit her like an electrical shock:

I swear I heard the zap of synapses firing. An electric current sizzled down my arm and through my finger, and practically scorched the page where that one word lay. In that moment I could smell the water of the bay, watch it rock against the shore and hear it sift onto the sand. A bay is a noun only if water is *dead*. When *bay* is a noun, it is defined by humans, trapped between its shores and contained by the word. But the verb *wiikwegamaa* – *to be a bay* – releases the water from bondage and lets it live. [...] This is the language I hear in the woods; this is the language that lets us speak of what wells up all around us. [...] This is the grammar of animacy. (B, 55).¹³

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- 12 Robin Wall Kimmerer, *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants* (Minneapolis: Milkweed Editions, 2013), 48 [hereafter B].
- 13 For a related approach to Kimmerer on animacy, see Robert Macfarlane, ‘The Understory (Epping Forest, London)’, in *Underland: A Deep Time Journey* (New York: Norton, 2019), 111–12.

The Overture of *The Overstory*

The grammar of animacy is coordinated with processes of origination, the coming to be of the living world that “wells up all around us”. We will call the two pages of *The Overstory*'s original welling up, its first dedicated passage, unmarked by any title, the Overture. It begins the discourse of ‘Roots’ – the major opening section presenting a medley of character biographies as the human sources of the events to unfold – with a cosmogonic formula for the birth of a world: “*First there was nothing. Then there was everything*”, (O, 3).

In this fashion the text requests to be read in relation to epic narratives that couch their accounts of cultural origins in the ultimacy of cosmic beginnings. In *The Overstory*, the primary internal reference to classical epic will be Ovid's *Metamorphoses*. That text opens with a syncretic cosmogony moving from the absence to the presence of forms of distinction. It nicely leaves the identity of the agent of this originary transformation from chaos to order indeterminate between ‘God or Nature’, between transcendental or immanent causation. *The Metamorphoses* read:

Before land was and sea – before air and sky
Arched over all, all Nature was all Chaos,
The rounded body of all things in one,
The living elements at war with lifelessness
[...]

Then God or Nature calmed the elements:
Land fell away from sky and sea from land,
And aether drew away from cloud and rain.¹⁴

The Overstory's first cosmogonic moment restages the story of the origin of the world of the story: first nothing, then everything, including the events to be told. This formula will recur with variations later in the narrative. Each recurrence is a further metamorphosis of the myth of metamorphosis itself: a creative trauma precipitating a world of impermanence, life and death, evolution and extinction. This is neither Platonic humanism nor Neoplatonic transcendentalism. Let us call it classical posthumanism. Insofar as Ovid's tales of metamorphosis largely tell of human characters in the fullness of life who then go beyond the human into some other natural form – often enough, a tree, a laurel, an olive, an

14 Ovid, *The Metamorphoses*, trans. by Horace Gregory (New York: New American Library, 1958), 31.

oak – they suggest the lines of continuity among all Earthly beings cultivated by posthumanist enquiries.¹⁵

In *The Overstory* these accounts include the retelling of universal origins in current scientific cosmology. A late passage treating Earthly origins is loosely transmitted in the vocabulary of primal geological consolidation, origin-of-life scenarios, and the evolutionary arrival of the eukaryotic or complex, nucleated cell-form through the merger of prior prokaryotic precursors. This latter dynamic is what Margulis calls *symbiogenesis*: a serial process inducing literal metamorphoses in prior life forms through the acquisition of new genomes.¹⁶ An educational audio narrated by Patricia Westerford explains:

Say the planet is born at midnight and it runs for one day. First there is nothing. Two hours are lost to lava and meteors. Life doesn't show up until three or four a.m. Even then, it's just the barest self-copying bits and pieces. From dawn to late morning – a million million years of branching – nothing more exists than lean and simple cells. Then there is everything. Something wild happens, not long after noon. One kind of simple cell enslaves a couple of others. Nuclei get membranes. Cells evolve organelles. What was once a solo campsite grows into a town. (O, 475).

The novel's cosmogonic formula moves here from the Big Bang to the emergence of life. First there was nothing devoid of anything – but then there was everything the cosmos needed to begin the subsequent fluxes of matter and energy out of which, with the arrival of selfhood – in autopoietic terms, operational closure within an open environment – living beings would arise.¹⁷ And from that moment of Earthly origin, every living being has come into existence with personal needs, with a burden of self-maintenance that community is usually able to lighten. For individual organisms, the possession of life is an all-or-nothing proposition. But for life altogether as a collective or Gaian phenomenon, these categories are not exclusive. To the fertility of physical formlessness is added the fertility of death. Life, the sum of the biota, constantly rebuilds itself out of Death's release.

15 See for instance Bruce Clarke, *Posthuman Metamorphosis: Narrative and Systems* (New York: Fordham University Press, 2008); Rosi Braidotti, *Posthuman Knowledge* (Cambridge: Polity Press, 2019).

16 Lynn Margulis and Dorion Sagan, *Acquiring Genomes: A Theory of the Origins of Species* (New York: Basic Books, 2002).

17 For an autopoietic account of the origin of the biosphere, see Bruce Clarke, *Gaian Systems: Lynn Margulis, Neocybernetics, and the End of the Anthropocene* (Minneapolis: University of Minnesota Press, 2020), 44–46.

Another literal reiteration of *The Overstory's* origin formula appears in a summary of the character Olivia Vandergriff's frequent retelling of the near-death event that brought about her own transformation from aimless collegiate stoner into a tree-medium on a spiritual mission. The proximate cause of her inner metamorphosis is her accidental electrocution: "as her damp hand pats for the switch on the cheap socket, all the current in the sub-code house enters her limb and pours into her body" (*O*, 152). Here is told the fictive event of a literal bolt of transformative electricity to match the current of new understanding that "sizzled down" Kimmerer's arm when she converted the sense of animacy bound up in Potawatami's verb-forms from potential energy into effective action:

Maidenhair tells that story that the rest of the campfire knows by heart. First she was dead, and there was nothing. Then she came back, and there was everything, with beings of light telling her how the most wondrous products of four billion years of life needed her help. (*O*, 336).

Olivia's retellings of her metamorphosis into Maidenhair situate the cosmogonic formula within an individual becoming, in which her character departs its prior, emblematic state of ecological numbness for a new, dilated but focused state of receptivity. Now the voices of trees coalesce within her experience pronouncing moral imperatives.

However, the event of such a formidable cross-species reception is cryptically foretold in the beginning, with the immediate continuation of the Overture:

Then, in a park above a western city after dusk, the air is raining messages. A woman sits on the ground, leaning against a pine. Its bark presses hard against her back, as hard as life. Its needles scent the air and a force hums in the heart of the wood. (*O*, 3).

In time we understand that this woman is the character Mimi Ma and that the Overture as a unit is an extended prolepsis anticipating a late apex of the narrative arc, a final high note pitched in the root key of the aria, Mimi's eventual enlightenment under a pine tree in a San Francisco park:

[...] She leans back again against the pine's trunk. Some slight change in the atmosphere, the humidity, and her mind becomes a greener thing. At midnight, on this hillside, perched in the dark above this city with her pine standing in for a Bo, Mimi gets enlightened. (*O*, 499).¹⁸

18 Gautama Buddha attained enlightenment (*bodhi*) while meditating underneath a *Ficus religiosa*.

Olivia Vandergriff, Mimi Ma, and Patricia Westerford each enter states of mind that take in new messages arriving by multiple mediations from the biotic signaling that saturates the circumambient atmosphere as well as the soil underfoot. The final message Mimi will take from the trees at the end of the Overture resolves into a leitmotif for the text at large – “If your mind were only a slightly greener thing [...]” – which renovation she herself will fulfill at the conclusion of the story. The trees declare with this plea that the ultimate metamorphic aim of *The Overstory* is the greening of the human.¹⁹

A chorus of living wood sings to the woman: If your mind were only a slightly greener thing, we'd drown you in meaning. (O, 4).

Involuntary Momentums

The story of *The Overstory* builds to such moments of green reception, events that stage the transduction of non-human, non-animal sensory, cognitive, and communicative modalities into the realm of human experience. The Overture announces this fundamental narrative dynamism: “*Her ears tune down to the lowest frequencies. The tree is saying things, in words before words*”. (O, 3). The reception of wordless messages requires a stepping-down of sensory scale in proportion to the massive temporal differentials between the tempos of animal and vegetal processes respectively. Composing *The New Metamorphosis*, the sequel to her breakthrough trade book *The Secret Forest*, forces the elder Patricia, even as a mature tree scientist whose professional credentials have been restored and augmented, to confront the heretical construction of her current scientific convictions. She wavers, mindful of the need to be what Kimmerer calls “bilingual between the lexicon of science and the grammar of animacy” (B, 56). Nevertheless, she hears the voice of her own ecological conscience counseling her to publish the recognition of the profound animacy of trees:

One passage keeps springing back, every time fear or scientific rigor makes her prune it.
Trees know when we're close by. The chemistry of their roots and the perfumes their leaves

19 In this aspect, *The Overstory* anticipates the ethical call that Canadian anthropologist Natasha Myers gives in an interview with Andrés Lomeña: “we should be *vegetalizing our own sensoria* in order to begin to appreciate plants’ lively, expressive, curious, and articulate ways of being” (italics in the original). Andrés Lomeña, ‘Seeding Planthroposcenes: An Interview with Natasha Myers,’ *The Ethnobotanical Assembly* 6 (Autumn 2020), <<https://www.tea-assembly.com/issues/2020/9/22/seeding-plantthroposcenes>> [accessed 28 June 2021].

pump out change when we're near. [. . .]. Trees have long been trying to reach us. But they speak on frequencies too low for people to hear. (O, 424).

These formulations and the trepidation with which Westerford still contemplates them reprise the career crisis that befell her as a young experimentalist in an adjunct faculty position at Wisconsin, when she published an account of her seminal discovery of tree communication through the airborne release and reception of volatile chemicals. As her younger self circled around the implications of her field research,

Only one conclusion makes any sense: The wounded trees send out alarms that other trees smell. Her maples are *signaling*. They're linked together in an airborne network, sharing an immune system across acres of woodland. These brainless, stationary trunks are protecting each other. She can't quite let herself believe. But the data keep confirming. [...] Life is talking to itself, and she has listened in. She writes up the results as soberly as she can. [...] But in her paper's conclusion, she can't resist suggesting what the results spell out: *The biochemical behavior of individual trees may make sense only when we see them as members of a community. (O, 125).*

The fictional Patricia's scientific breakthrough is often taken as a direct borrowing from Suzanne Simard's groundbreaking work on carbon transfer through mycorrhizal networks.²⁰ However, that identification is misplaced. We are assisted to a veritable detection of Powers' source events by a seminal paper, 'Involuntary Momentum,' that carefully tracks the actual lexical wavering induced in the field of chemical ecology by the publication of that same discovery.²¹ That certain plants can 'speak' to each other by producing, perceiving, and responding to volatile emissions of airborne chemicals was first announced in Ian T. Baldwin and Jack C. Schultz's 1983 paper, 'Rapid Changes in Tree Leaf Chemistry Induced by Damage: Evidence for Communication between Plants.'²² Hustak and Myers report that at that moment in the early 1980s the "press picked this up as a

20 For instance, Suzanne W. Simard, 'Mycorrhizal Networks Facilitate Tree Communication, Learning, and Memory,' in *Memory and Learning in Plants*, ed. by F. Baluška, M. Gagliano, and G. Witzany (Berlin: Springer 2018), 191–213.

21 Carla Hustak and Natasha Myers, 'Involuntary Momentum: Affective Ecologies and the Sciences of Plant/Insect Encounters,' *Differences: A Journal of Feminist Cultural Studies* 23.3 (2012), 74–118 [henceforth I].

22 Ian T. Baldwin and Jack C. Schultz, 'Rapid Changes in Tree Leaf Chemistry Induced by Damage: Evidence for Communication between Plants,' *Science* 221.4607 (1983), 277–79.

sensational story and dubbed the phenomenon “talking trees” (I, 101). It is these events that *The Overstory* adapts to Patricia’s story, in this manner:

The press picks up on her findings. She does an interview for a popular science magazine. She struggles to hear the questions over the phone and stumbles with her answers. But the piece runs, and other newspapers pick it up. ‘Trees Talk to One Another’. (O, 126).

The scandalous anthropomorphism broadcast by the popular press on the basis of Baldwin and Schultz’s short paper on plant communication, we learn, provoked specialized debates within the field of chemical ecology to regulate the appropriate language to be used when treating such evidences of animacy, as we now recognize, as objects of scientific investigation. Hustak and Myers track in the aftermath of this episode a subsequent prophylactic development within chemical ecology of a neo-Darwinist apologetics regarding the rhetoric of conferring cognitive agency upon vegetal organisms. Indeed, neo-Darwinism’s impoverished economic approach to the ecology of communication across species and kingdoms employs “reductive, mechanistic, and adaptationist logics” to “ground the ecological sciences” in acceptably materialistic premises (I, 77).²³ Its residual message is: Don’t worry, plants are not persons, after all; they are just clever and successful chemical automatons; we can still treat them with impunity.

With the mention of “units of natural selection”, *The Overstory* nails the neo-Darwinist orientation of Patricia Westerford’s old-boy inquisitors, whose misogynistic take-down drives her out of the profession for two decades and almost to suicide:

Four months later, the journal that ran the piece prints a letter signed by three leading dendrologists. The men say her methods are flawed and her statistics problematic. The defenses of the intact trees could have been activated by other mechanisms. Or these trees might already have been compromised by insects in ways she didn’t notice. The letter mocks the idea that trees send each other chemical warnings: *Patricia Westerford displays an almost embarrassing misunderstanding of the units of natural selection.... Even if a message is in some way “received”, it would in no way imply that any such message has been “sent”.* (O, 126–27).

Several decades after Baldwin and Schultz’s edgy paper, Hustak and Myers report, “Chemical ecologists are careful to qualify what they mean by communication and shy away from the terms “symbol”, “sign”, and “behavior” [...]. They

23 For a related version of this critique, see ‘Replacing Neo-Darwinism,’ in Clarke, *Gaian Systems*, 169–80.

seem to have settled on 'signal' as the basic unit of communication" (I, 103). But of course, the term *signal* just papers over our profound ignorance regarding how the complex sociality of multi-species communications actually works. A plant tissue sends forth a semiochemical that is sensible to the right receptor, but just how it all hangs together at multiple scales is to be determined: "An involutory reading would require us to begin with the assertion that *we don't yet know what a signal is or what it can do*, let alone what constitutes cross-species communication" (I, 104). However, what we can say is that these intricate phenomena are as real as electromagnetism, arise from a medley of animate agencies, and are basic to the ecological survival of living organisms.

Indeed, the term "signal" also reverberates through the text of *The Overstory*, but not in any exclusive resonance with the information-theoretical models of mainstream chemical ecology. Rather, this text could be said to partake in, if not take inspiration directly from, Hustak and Myers' proposal for the alternative framework they term *involutionary momentum*, "the very momentum through which organisms reach toward one another and involve themselves in one another's lives" (I, 96). In the newer symbiotic ecologies, forests are intricately interconnected and inter-communicating communities at both local and planetary scales. No matter how lonely its situation, no tree is ever a loner but ineluctably a multi-species ecosystem, whose integrity arises from the distributed sentience of its living systems, and for which the signals at hand are constituted by their eventful reception.

Cracking Open

Once Mimi attunes herself to the most profound wavelengths of the pine tree, its utterance of "*words before words*" gains voice:

It says: Sun and water are questions endlessly worth answering.

It says: A good answer must be reinvented many times, from scratch.

It says: Every piece of earth needs a new way to grip it. [...].

The woman does exactly that. Signals rain down around her like seeds.

Talk runs far afield tonight. (O, 3).

Powers' prose poetry releases this arboreal utterance in short bursts of Whitmanesque declamation whose very generality bespeaks the planetary equation that each plant being must solve through its ultimately precarious access to both site-specific and circumambient materials and partners. When Mimi's enlightenment is fully consummated at the end of the story, the talk of the trees returns to these arboreal themes of signaling and interrogation, the living conditions

and consequences of rooted beings. Having become at last a somewhat greener thing, like a seed,

she cracks open. [...] Messages hum from out of the bark she leans against. Chemical semaphores home in over the air. Currents rise from the soil-gripping roots, relayed over great distances through fungal synapses linked up in a network the size of the planet. The signals say: *A good answer is worth reinventing from scratch, again and again.* They say: *The air is a mix we must keep making.* They say: *There's as much belowground as above.* (O, 499–500)

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Irene Sanz Alonso

Posthuman Subjects in Rosa Montero's *Los tiempos del odio*

Abstract

In envisioning posthuman subjects and posthuman futures, science fiction offers infinite possibilities with its lack of realistic limitations. An interesting example of how posthumanism may be explored in terms of relationship with the *other* to envision more sustainable realities is Spanish author Rosa Montero's trilogy about Bruna Husky. Inspired by Philip K. Dick's *Do Android Dreams of Electric Sheep?* (1968) Montero portrays a futuristic Earth in which humans and non-human creatures – mainly aliens and androids – coexist. This world imagined by the author shows the consequences of climate change and its resulting problems – mass extinction of non-human animal species and plants, flooded areas, and so on – and explores social differences in terms of wealth and polluted regions. With the setting playing an important role in the novels, the protagonist Bruna Husky, a female android of combat, works as a private detective while trying to establish healthy personal relationships conditioned by her obsession with her expiration date. The purpose of this chapter is then to examine Husky's world and relationships drawing on posthumanist theories by Rosi Braidotti and Donna Haraway, among others. The work will explore how the definition of what we consider as human is challenged by non-human subjects such as Bruna, while offering an analysis of alternative ways of healthily relating with the non-human other in a world that may be interpreted as a cautionary tale regarding climate change.

Cultural and/or scientific advances – such as Charles Darwin's theory of evolution or the discovery of DNA – have continuously questioned the previously established categories that throughout history helped our predecessors organize our reality. As the modern world demands, the boundaries between sexes, genders, human and non-human entities are constantly challenged by the need to understand the world not in terms of fixed structures, but rather as an ongoing network of associations. Therefore, humans are no longer conceived as entities separated from – and placed above – the rest of creatures that dwell the world, but rather as a category in continuous evolution thanks to cultural and scientific developments. For these reasons, it is common to include the term posthuman in contemporary debates the future of our civilization, not as a response to the post- trend but rather, as Braidotti explains, in order to introduce “a qualitative shift in our thinking about what exactly is the basic unit of common reference for our species, our polity and our relationship to the other inhabitants of this

planet”¹ Considering the current situation of the world and the failure of humanity to satisfy its own needs as well as those of the world that surrounds it, it is perhaps necessary to introduce the idea of the posthuman as a way of acknowledging the need for humans to evolve and adapt to a reality in which their role is not more important than that of the other species.

This qualitative shift Braidotti refers to when talking about the posthuman in present in literary works that portray humanity’s possible futures, as it happens in the genre of science fiction. Because of its characteristics – a lack of spatial and time limits – science fiction texts allow writers to envision what humanity may become in the near or far future by presenting alternative reconfigurations of the human. Throughout its history, science fiction has explored what it means to be human by creating a contrast between humans and other non-human entities such as robots or aliens, but the most interesting works are those which precisely question the boundaries between the human and the non-human. Therefore, the characteristics and imagery of the genre open up a world of possibilities to explore the posthuman: “The posthuman predicament is such as to force a displacement of lines of demarcation between structural differences, or ontological categories, for instance between the organic and the inorganic, the born and the manufactured, flesh and metal, electronic circuits and organic nervous systems”² By challenging these boundaries, readers are faced with the idea that humanity is a social construct that can be thus modified in order to create a posthuman subject more adapted to survive in the world to come. Therefore, using Rosi Braidotti’s ideas, among others, this article aims at exploring how the concept of the posthuman is presented in literature, and more particularly in Spanish author Rosa Montero’s *Los tiempos del odio* [*The Times of Contempt*] (2018), the third novel of the trilogy on the detective Bruna Husky.

Rosa Montero (1951) is an acclaimed Spanish writer and journalist whose works have received a vast number of awards. In 2011 she published *Lágrimas en la lluvia* [*Tears in rain*], the first novel in the – so far – Bruna Husky trilogy. The second novel, *El peso del corazón* [*Weight of the heart*] came out in 2015, and the third instalment, *Los tiempos del odio* [*The Times of Contempt*], in 2018. The three novels have been widely recognized with several awards, such as the Violeta Negra Occitanie 2020 award from the Festival Toulouse Polars du Sud in France for the third book of the series.³ Montero’s trilogy follows the life of

1 Rosi Braidotti, *The Posthuman* (Cambridge: Polity Press, 2013), 2.

2 Braidotti, *The Posthuman*, 89.

3 ‘Biografía,’ *Rosa Montero*, <<https://www.rosamontero.es/biografia-rosa-montero.html>> [accessed 15 June 2021].

the techno-human Bruna Husky who, after serving her compulsory service as a combat replicant, decides to become a private detective until her expiration date arrives. Set at the beginning of the 22nd century, the novels explore the conflicts of otherness and posthuman identities in a world that suffers the harsh consequences of climate change. The trilogy presents a mixture of detective and science fiction with a female protagonist whose inner conflicts and ambiguities attract the reader's attention from the beginning.

Montero's Bruna Husky trilogy, and especially the first two novels, has been analysed from different perspectives, being the portrayal of cyborg identities and of the posthuman one of the most common approaches, as in Iana Konstantinova's article 'Posthumanism in Rosa Montero's *Lágrimas en la lluvia* and *El peso del corazón*', which highlights the importance of cyborg natures and the use of technology in ecocritical studies using these novels as an example.⁴ Another perspective is the one offered by Pilar Martínez Quiroga, who focuses on the feminist element in Montero's latest novels, including the first two novels of the trilogy. In particular, this work explores the concept of the cyborg as an essential figure in transfeminism because of its ability to defy established boundaries and categories. However, it is interesting to note that despite the feminist elements in Rosa Montero's works, she rejects applying these labels to her novels: "[...] el hecho de considerarte feminista no implica que tus novelas lo sean. Detesto la narrativa utilitaria y militante, las novelas feministas, ecologistas, pacifistas o cualquier otro -ista que pensarse pueda" [the fact that you consider yourself a feminist does not imply that your novels are. I hate the utilitarian and militant faction, feminist, environmentalist, pacifist or any other -ist that may be thought of].⁵ In a similar way, just as she rejects the idea of referring to her novels as environmentalist, climate change and the subsequent global warming and its consequences are constantly present and affecting the characters in the trilogy, offering a warning about the situation readers may have to face in a not-so-distant future. Being asked about her personal concerns regarding the climate change crisis, Montero highlights that she is worried about the current situation since, although she rejects catastrophism, the problem is "much more serious than we admit [una situación mucho más grave de lo que reconocemos]".⁶ Thus,

4 Iana Konstantinova, 'Posthumanism in Rosa Montero's *Lágrimas en la lluvia* and *El peso del corazón*', *Letras Hispanas* 13 (2017), 185.

5 Pilar Martínez-Quiroga, 'La detective Bruna Husky de Rosa Montero: Feminismo, distopía y conciencia cyborg', *Hispania* 101.2 (2018), 317.

6 Estrella Cibreiro, 'Entrevistas a María Reimóndez, Rosa Montero y Julia Otxoa: El arte de la escritura y el activismo', *Romance Studies* 34.1 (2016), 54.

despite avoiding the use of feminist or environmentalist to refer to the Bruna Husky novels, both gender and ecological issues are extensively addressed. In fact, in her article ‘Ecofeminist Replicants and Aliens: Future Elysiums through an Ethics of Care’, Carmen Flys Junquera explores the first two novels of the series from an ecofeminist lens focusing on issues such as a sexism and environmental degradation, among others. In a similar line, Maryanne L. Leone’s ‘Trans-species Collaborations in Response to Social, Economic, and Environmental Violence in Rosa Montero’s *Lágrimas en la lluvia* and *El peso del corazón*’ analyses how the resulting effects of climate change and environmental degradation especially affect those in the lower levels of the highly hierarchical society portrayed in the books. For example, only those with a higher income have access to non-polluted areas, whereas people from the lower levels of society must survive in areas with dangerous levels of pollution and even of radiation.

As we can see, most of the critical work devoted to the Bruna Husky series has so far been focused on the first two novels, and that is one of the reasons why this chapter will particularly deal with the third novel, *Los tiempos del odio*, which has not yet been translated into English – as opposed to the first ones.⁷ The second reason why the focus of this work is on the third novel is because it is the one that explores the idea of the posthuman in a more detailed way, reflecting on the conflict between the natural and the artificial, the organic and the inorganic. These dichotomies may be seen as central to Montero’s techno-humans since, despite their artificial nature, their physical appearance is that of an ordinary human but for their vertical pupils like those of reptiles or felines (25). Therefore, these androids happen to mix artificiality with human and non-human animals, and in a world with a massive loss of animal species as a consequence of the raising of temperatures due to climate change, it is interesting to highlight that the references to non-human animals in metaphors, analogies and comparisons, are quite numerous throughout the trilogy.⁸ This identification between techno-human and non-human animals is also interesting from the cyborg perspective as described by Donna Haraway in ‘A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century’ since “The cyborg appears in myth precisely where the boundary between human and animal is transgressed.

7 All the quotes taken from the novel have been translated by me.

8 See Irene Sanz, ‘Human and Nonhuman Intersections in Rosa Montero’s BRUNA HUSKY Novels’, *Science Fiction Studies* 44. 2 (2017), 326–333.

Far from signaling a walling off of people from other living beings, cyborgs signal disturbingly and pleasurably tight coupling”.⁹

Then, depending on the model techno-humans may have more specific physical characteristics so that Bruna, being a combat replicant, has a strong body that would fight until death. Montero's techno-humans are more similar to Ridley Scott's replicants than to James Cameron's terminators since they are completely organic. Actually, in *Tears in Rain* there is a direct reference to Scott's film and Montero herself in interviews has acknowledged its influence – and that of the novel by Philip K. Dick's it is based on, *Do Androids Dream of Electric Sheep?* – on her works:

La escena de la muerte del replicante en el tejado, con la liberación de la paloma, me pareció cursi y obvia la primera vez que la vi, y tuve que ir envejeciendo para enamorarme justo de esa escena. Lo que me interesaba de *Blade Runner* y aún más de la nouvelle de Philip K. Dick que la inspiró fueron dos ideas luminosas que tocan unos temas recurrentes en todas mis novelas y que son la obsesión por la muerte, la memoria como construcción de la imaginación y la identidad como realidad mudable y nada fiable.

[The scene of the replicant's death on the roof, with the dove becoming free, seemed corny and obvious to me the first time I saw it, and I had to grow old in order to fall in love with that very scene. What interested me in *Blade Runner*, and even more in Philip K. Dick's novel that inspired it, were two bright ideas that touch on two recurring topics in all my novels and those are the obsession for death, the memory as a construction of the imagination, and identity as a mutable and a totally unreliable reality], (my translation).¹⁰

Montero confirms that one of the topics that appears in most of her works is the obsession for death, something that she feels desperate for since her childhood,¹¹ an anxious feeling clearly perceived in the replicants in *Blade Runner*, who try to find their creator in order to extend their existence.

This obsession for death is a constant element in the trilogy since from the beginning of the first book we find Bruna repeating the number of years, months, and days that she has left before she suffers death by something called ‘Total

9 Donna Haraway, ‘A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century’, in *The International Handbook of Virtual Learning Environments*, ed. by J. Weiss et al. (New York: Springer, 2006), 120.

10 Austin Miller, ‘Lágrimas en la lluvia: Una entrevista con la encantadora Rosa Montero’ (2014), <<http://archive.is/rXiIu#selection-249.0-249.69>> [accessed 4 June 2021].

11 Luis Sánchez-Mellado, ‘Rosa Montero “Creo en la reinención, yo lo estoy intentando”’, *El País* (2011), <https://elpais.com/diario/2011/03/13/eps/1300001213_850215.html> [accessed 4 June 2021].

Techno Tumour' (TTT). The countdown that continuously appears in the trilogy creates a sense of anguish in the reader, who empathizes with Bruna. This identification with the android/replicant/techno-human is also key in Philip K. Dick's *Do Androids Dream of Electric Sheep?* and in *Blade Runner*. In Dick's novel we can see how Deckard identifies with some of the replicants, but this identification is more explicit and heart-breaking in the film adaptation, especially in the scene mentioned above with the monologue by the character interpreted by the actor Rutger Hauer. In this famous scene we see replicant and human face to face, impossible to differentiate one from the other, and it is precisely the replicant who words one of the most disturbing concerns of human beings, the fear of death and of being forgotten when he says: "All those moments will be lost in time, like tears in rain."¹² Similarly, Bruna Husky constantly reminds readers that her end is near, and the more we know her, the more we want her to live. Her obsession makes the reader reflect on how we would behave if we knew the exact moment of our death since that obsession would probably also condition our lives. In her case, and because of the pain she felt when she lost her techno-human lover to TTT, this obsession for death prevents her from developing deep relationships with other creatures, although this changes throughout the trilogy with the adoption of Gabi, her friendship with Yiannis, Mirari and Maio, and especially with her love affair with inspector Paul Lizard.

Bruna's concerns about her brief life and its purpose and her worries about death make her seem human because her vulnerability prevails over her strength as a combat techno-human: "La androide no podía evitar que la obsesiva cuenta atrás zumbara de manera constante en su cabeza como un parásito que hubiera logrado colonizar su cerebelo o un virus que la hubiera infectado fatalmente. Bruna estaba enferma, enferma del miedo y de la rabia de morir." [The android could not avoid the obsessive countdown buzzing constantly in her mind, as a parasite that had managed to colonize her cerebellum or a virus that had infected her fatally. Bruna was sick, sick of the fear and the rage of dying]. (23). Through this self-imposed weakness – since techno-humans could not get sick and accepted their death more or less as a given fact – Montero questions the very concept of humanity, as in many other moments throughout the trilogy in which some humans' cruel behaviours make us reflect on what we understand as humanity. Montero's choice of a techno-human as the protagonist of these novels is really interesting because since the story is told from her point of view, it becomes

12 This line was precisely chosen by Montero as the title for the first novel of the series: *Like tears in rain*.

easier for readers to identify with Bruna. Although there are several examples of techno-humans throughout the novels that illustrate the complexities that underlie such dual creatures, it is through Bruna's eyes, and through her uniqueness within her model – she is the only techno-human with real human memories inserted – that we truly become aware of what posthumanism may involve. For example, in her exploration on the concept of the posthuman Braidotti reflects how “The boundaries between the categories of the natural and the cultural have been displaced and to a large extent blurred by the effects of scientific and technological advances”.¹³ This flexible boundary is exemplified in Montero's techno-humans, and even in their very name since it combines artificial (techno) and organic (human) natures. Montero's techno-humans are presented as organic but artificial organisms whose growth has been accelerated so that they gestate in fourteen months – being gestated the preferred term instead of manufactured, which was considered offensive and was only used by speciesists who despised techno-humans (23). Despite their organic nature, everything in them is artificial, from their production to their memories, which are created by experts as if they were a work of fiction. Besides, depending on the model of technohuman, these creatures present some specific features so, for example, combat techno-humans cannot stop fighting even if that results in their death.

This process of reflection on what being human entails is not casual since Montero acknowledges in an interview that the issue of identity is precisely one of the most significant ones in the first novel: “qué nos hace ser personas, qué nos hace ser humanos, qué nos hace ser lo que cada cual es, una identidad que, por otra parte, cambia todo el rato..Para mí Bruna Husky es más humana que muchos humanos” [what makes us people, what makes us humans, what makes us be whatever each person is, an identity that, on the other hand, changes all the time. For me, Bruna is more human than many humans].¹⁴ Bruna's identity is in constant shaping since she does not see herself as a human being, nor as a complete techno-human either. Her identity conflict arises from the fact that her memories are not artificial as those of other techno-humans, hers are those of her memorist who, in an egocentric act of rebellion, inserted his personal – and traumatic – experiences in Bruna's memory, creating a unique techno-human. For this reason, she finds it especially difficult to find her place, and her outsider's position is one of the features that most attracts readers. This confusion makes her think of herself as some kind of monster – “un monstruo entre los

13 Braidotti, *The Posthuman*, 3.

14 Miller, ‘Lágrimas en la lluvia: Una entrevista con la encantadora Rosa Montero’.

monstrous” [a monster among monsters] (33) – and this sense of monstrosity increases, as Juan Carlos and Martín Galván points out, “por la dificultad de la tecnohumana a la hora de lidiar adecuadamente con unas emociones humanas” [due to the technohuman’s difficulty when it comes to deal with human emotions] (my translation).¹⁵

Bruna was born a techno-human and was programmed as such, but her real memories and some of the feelings they create in her make her closer to humans. This complex debate around identity is not casual since identity, and its connection to our memory is a recurrent topic in Montero’s writing: “Y hasta qué punto esa memoria es un resultado de una construcción narrativa, hasta qué punto la memoria no es fiable y por lo tanto la identidad tampoco” [And to what extent that memory is a result of a narrative construction, to what extent memory is not reliable, and thus neither is identity].¹⁶ This fluid nature, which as some points results problematic to Bruna since she does not fit completely in the human or techno-human categories, matches the description of the posthuman offered by Serenella Iovino:

In fact, it moves, relentlessly shifting the boundaries of being and things, of ontology, epistemology, and even politics. And these boundaries, especially those between human and nonhuman, are not only shifting but also porous: based on the – biological, cultural, structural – combination of agencies flowing from, through, and alongside the human, the posthuman discloses a dimension in which “we” and “they” are caught together in an ontological dance whose choreography follows patterns of irredeemable hybridization and stubborn entanglement.¹⁷

Bruna’s dual identity represents this hybridization Iovino talks about when referring to posthuman subjects. We see how her identity evolves throughout the trilogy incorporating to her memories – which are not really her own, or at least not only her own – all the experiences that make her closer to humans: her concerns towards those who surround her despite her apparent lack of interest in others, her empathy towards extinct non-human animals, her worries about the inequalities in the world around her, and so on.

15 Martín Galván, Juan Carlos. ‘Narración, monstruosidad y la condición poshumana en *El peso del corazón*: la segunda novela de Bruna Husky’, *Hispanófila* 176 (2016), 106.

16 Cibreiro, ‘Entrevistas a María Reimóndez, Rosa Montero y Julia Otxoa: El arte de la escritura y el activismo’, 51.

17 Serenella Iovino, ‘Posthumanism in Literature and Ecocriticism. Introduction’, *Relations* 4.1 (2016), 11.

She strongly criticizes the abusive politics regarding the production of techno-humans, like the rumour of an anti-suicidal chip inserted so that they cannot take their own lives, since they are considered expensive products. Bruna sees this as a “completa falta de respeto, la manipulación a la que los sometían los humanos” [total lack of respect, the manipulation to which they were subjected by humans] since “al robarles la mayor Libertad a la que podía aspirar un ser vivo, que era la de gobernar su propia muerte” [the greatest freedom to which living beings could aspire to had been taken from them, that of managing your own death] (60). Her vindication is a human one, that of managing your own life and death, a right that she considers all sentient beings should be entitled to – after the Robot Wars techno-humans entered the category of sentient beings together with some non-human animal species such as great apes or cetaceans. She is also quite critical of how techno-humans are conceived as machines while at the same time given feelings and the capacity of reflecting on their own existence, thus creating in some of them – as Bruna – a deep sense of anxiety: “De haber sido manipulada, alterada genéticamente para aumentar su rendimiento comercial y condenada a esta breve vida de mariposa y a una muerte cruel a fecha fija que equivalía a una ejecución” [Of having been manipulated, genetically altered to enhance her commercial performance and doomed to this brief butterfly life and a cruel death at a fixed date that was equivalent to an execution] (85). Nevertheless, and although she despises some humans because of their speciesist attitudes towards technohumans, she also empathizes with some of their problems such as the high unemployment rate in contrast to the almost non-existent one in the case of technohumans (87).

The fluid and entangled nature of the posthuman is also present in other aspects in the novel. Mutations are quite common among human beings, in many cases as a side effect of an abusive number of teleportations. As a consequence, we find characters with alterations in their appearance, and even the loss of limbs, as in the case of the violinist Mirari. There are also references to polymorphic individuals with their sexuality in continual change, as the case of Natvel, the tattoo artist also specialised in alternative medicines (53). However, the most interesting aspect regarding posthuman subjects in *Los tiempos del odio* is related to the use of artificial limbs and organs as a way of enhancing and lengthening human life. It is common in Bruna Husky's world to find humans altering their physical appearance to hide the ravages of time, although there are some exceptions, such as the archivist Yiannis. Despite his rejection of alterations as a narcissistic measure, he has modified his body with the insertion of an endorphin pump that functions whenever his psychic balance collapses because of melancholy or depression (42). In his case, and after consulting a medical

committee, he was allowed to have that pump inserted, but other humans decide to start using artificial limbs and organs not for medical purposes but in order to become cyborgs.

In this sense, the novel lays out one of the debates that may arise in the future with regards to enhancing human attributes: “Había un debate social en marcha desde hacía décadas en torno a los límites de la utilización de órganos e implantes robóticos en los seres humanos” [There has been an ongoing social debate since decades ago about the limits to the use of robotic organs and implants in human beings] (162). The author acknowledges the possible future use of artificial hearts, livers, kidneys, and other organs, as a medical achievement in the near future, but the controversy appears when we do not talk about organs or artificial limbs for medical reasons but about questionable procedures such as replacing some parts of the brain with robotic components (162). To approach a possible posthuman future in terms of understanding life as a mixture of organic and artificial elements, which may become part of our reality in upcoming decades, Montero invites the reader to reflect on this through a series of questions:

¿Hasta qué punto un ser humano podía ser reemplazado por piezas artificiales sin perder su humanidad esencial? ¿Era un problema de cantidad, del porcentaje de sustitución del organismo, o más bien de calidad, es decir, de qué piezas habían sido robotizadas? ¿Un corazón metálico te hacía menos humano que una pierna de titanio? [To which extent could a human being be replaced with artificial pieces without losing their essential humanity? Was it a question of quantity, of the percentage of substitution of the organism, or rather of quality, that is, of which pieces had been replaced by robotic ones? Did a metal heart make you less human than a titanium leg?] (162)

Montero’s approach to this controversy also includes an answer to the questions presented above since she refers to a restrictive law called “Law of Human Integrity” which establishes “una complicada tabla de porcentajes de humanidad medidos en puntos Bio, dependiendo del órgano a sustituir” [a complex table of percentages of humanity measures in Bio points, depending on the organ to be replaced] (162). Following this law, every individual has a thousand Bio points and the limit between being considered human or not is reaching four hundred points (162). This limit seems to have been criticized both by those conservationists that consider it too permissive, while those defending cyborg natures see it as despotic (163).

To illustrate the social conflict around the posthuman subject understood as a more or less roboticized version of the human being in the novel, we can find examples of the different levels of artificiality: firstly, human characters – with or without surgical interventions to hide the passing of time – with no metallic

components, as exemplified by detective Paul Lizard or his sister; secondly, some humans with robotic components because of medical reasons, such as Yiannis with his endorphins pump to prevent depression, or the violinist Mirari and her robotic arm to replace the one lost because of teleportation; thirdly, humans who defend the replacement of organs and limbs, or parts of them, because they defend cyborg natures; and, finally, androids or techno-humans of different types, as combat reps like Bruna herself, although they are organic. Therefore, the main conflict appears in those humans who reject the law and who propose the abolition of the Law of Human Integrity arguing that whatever happens with their bodies is their decision: “Nadie nos va a poner límites a lo que queremos hacer con nuestros cuerpos y nuestras vidas” [No one is going to set limits to what they want to do with our bodies and our lives] (167). Actually, they separate themselves from the rest of society and refer to themselves as transhumans. Therefore, what we find is a rather polarized society characterized by very opposing views regarding artificiality in the human body. Besides, it is interesting to notice that the aversion towards robotization by the most conservationist sectors of society contrasts with the dependence of this same society on replicants as a kind of slave workforce.

Montero also makes readers reflect on our growing dependence on electronic devices, not as a cautionary tale, but mainly as a reality we are not usually aware of. In third novel a terrorist attack provokes that anything with a chip stops working on Earth. This affects telephones, all types of devices or means of transport, but also humans with artificial components that help them live. Curiously, techno-humans, since they are organic, do not suffer the consequences of the blackout – except as in those cases, as Bruna's, of having artificial organs or limbs. Bruna reflects on how the blackout may have fatal results for disabled humans, but mainly for “los diabéticos [que] morirían sin sus páncreas artificiales” [the diabetics [who] would die without their artificial pancreas] (303). The use of artificial limbs and organs for survival reasons may be considered one of the possible and desirable medical advances of the near future, but the misuse of these devices for other purposes – enhancement of physical attributes, for example – raises ethical debates. In health issues sometimes wealth becomes a determining element, as when rich citizens have access to benefits and medicines unaffordable to most of the population. This unequal access to health may be observed nowadays in the vaccination campaign against COVID-19, with a serious contrast between the number of doses administered in wealthy countries and those in most developing countries. This hierarchization of health is commented on by Montero through her protagonist when she reflects as follows: “Por otro lado, el apagón democratizó de manera radical la sanidad y

devolvía a los ricos al mismo lugar de dolor y de precariedad en el que vivían los pobres, que nunca dejaron de ser ciegos, cojos o epilépticos” [On the other hand, the blackout democratized health in a radical way and returned the wealthy to the same place of pain and scarcity where the poor – who never stopped being blind, cripple or epileptic – lived] (303).

The access to mechanical implants out of whim is limited to those who can afford it, always bearing in mind that if they overpass the number of Bio points they may be seen as no longer human. This is what happens with one of the villains of the novel, Jan Lago, who has managed to escape death by progressively turning his body into a machine. Bruna refers to him as a “cyboradical”, an illegal creature. He laughs at Bruna’s words since he finds it ironic that she criticizes him being herself a technohuman: “¿Yo soy ilegal? ¿Soy artificial? ¿Y tú? Tú eres orgánica, sí, pero estás tan manipulada, tan alterada por los ingenieros genéticos que por eso nos llaman los androides [...]. En fin, por eso y porque así a la gente le cuesta más veros como humanos” [Am I illegal? Am I artificial? And you? You are organic, yes, but you are so manipulated, so altered by genetic engineers that this is why we call you *androids* [...]. All in all, for that reason and because that way it takes more for people to see you as humans] (362; emphasis in original). Despite this apparent disdain for techno-humans, Lago sees Bruna as an equal: “Somos semidioses y hemos mejorado la especie” [We are demigods and we have improved the species] (362). Nevertheless, he later affirms that he is the best example of human evolution since techno-humans have the limitation of their ten years of life.

Jan Lago represents the dangers of an overuse of artificial technologies to enhance the human body, and his non-human appearance is also supported by an inhumane behaviour with a total lack of empathy. Therefore, he cannot be seen as an example of what the posthuman may aspire to. On the other hand we find Bruna, whose human/non-human nature evolves until she becomes something else shaped by the real memories inserted into her brain and by her own personal experiences, thus creating a unique identity. The final stage in Bruna’s evolution as a posthuman subject comes with her death, which ironically is produced not by the dreaded TTT but by a mechanic spider carrying an artificial poison that slowly kills Bruna’s body (381). However, the death she had been obsessed for since her birth is just the beginning of another life since, as we have been told at different points in the novel, there is an experimental technology that allows techno-humans to live new lives by transferring all the memories and experiences into a silica base:

No se trataba solo de datos convencionales de memoria: como le había dicho el viejo archivero, además se buscaban los recuerdos no conscientes sensoriales, el pasado emocional, los levisimos trazos que la vida iba dejando en nuestros organismos. La cuestión era atrapar la identidad, si es que eso era posible, y traspasarla a otro cuerpo.

[It was not only about memory conventional data: as the old archivist had told her, also sensory subconscious memories were searched for, the emotional past, the slightest traces that life was leaving in our organisms. The question was to capture identity, if that was possible, and to transfer it into another body.] (382)

The idea of transferring the identity, which in the case of this novel is only possible for techno-humans, poses serious religious and ethical debates when we think about similar possibilities for human beings. For example, in Peter Dickinson's *Eva* (1988) we find how the memories of a small girl that suffers an accident are transferred into a chimpanzee, resulting in an internal conflict between the two natures. This issue has also been approached in different ways in TV series such as *Years and Years* (2019) and *Altered Carbon* (2018–2020). In *Years and Years* we can see how experimental technologies allow for the memories and the identity of an individual to be transferred into an electronic device. In *Altered Carbon*, based on Richard K. Morgan's books, the transfer becomes much more complex because people – especially those who can afford it – can live eternally by transferring their identity into organic bodies once and again. Although the technology that makes this identity transfer possible still belongs to the science fiction world, Montero's novel at least makes us reflect on the fluid nature of identity in a posthuman world.

This chapter has explored how science fiction can help readers reconcile themselves with the future through charismatic subjects that represent the fluidity of the posthuman. Humanity will need to evolve and transform itself – considering both ethical and environmental needs – in order to adapt to new advances in science and technology. As Montero Mattos exposes, “la posthumanidad como avance tecnológico creado por el ser humano, nos lleva a cuestionarnos cada vez más sobre la noción del individuo y lo que necesita para su progreso” [post-humanity as a technological advance created by the human leads us to question more and more the notion of the individual and what it needs for its progress] (my translation).¹⁸ The future portrayed in Montero's trilogy is a harsh one: a hierarchical society fighting for its survival in a world suffering the devastating

18 Elizabeth Montero Mattos, ‘Las lágrimas y el corazón de mi identidad: Bruna Husky, la posthumana de Rosa Montero’, *All Theses and Dissertations*. 6642. (2017), <<https://scholarsarchive.byu.edu/etd/6642>> [accessed 25 June 2021], 17.

consequences of climate change such as the disappearance of cities under the sea or the mass extinction of non-human animal species. Martín Galván highlights that this universe opposes the optimistic view of the posthuman future envisioned by authors such as Katherine Hayles, and is closer to the more pessimistic approach of Francis Fukuyama.¹⁹ Nevertheless, I think in these novels technological progress should be understood not as a danger itself – although we should be aware of its potential misuse – but as Haraway explains, a tool that may help us reconfigure the world we live in: “Cyborg imagery can suggest a way out of the maze of dualisms in which we have explained our bodies and our tools to ourselves”.²⁰

Although some pessimism pervades Montero’s novels and Bruna Husky’s view of her world, we can also find some rays of light in such a dark future. Despite the hierarchical arrangement of society, the environmental degradation and the massive loss of species, readers can still perceive hope. Bruna’s evolution throughout the trilogy, accepting her complex dual nature, comes to a climactic point when she realizes that, even though she has tried to reject caring relationships because of the pain her fixed death date would cause those around her, it is precisely love which can save her: “¿No buscábamos todas las criaturas lo mismo? ¿Los humanos, los tecnohumanos, seguramente también, a su modo, los alienígenas y los primates, e incluso Bartolo? Un amor sin sombras, sin barreras, una complicidad total, la entrega hasta el abismo” [Were not all creatures searching for the same thing? Humans, techno-humans, probably also, in their own way, aliens and primates, and even Bartolo? A love without shadows, without boundaries, a total understanding, dedication to the abyss] (254). It is through these loving relationships with friends, her adopted daughter, her pet and her sexual partner that Bruna reconciles her two natures, “llegando a su plenitud como individuo” [reaching her plenitude as an individual] (my translation).²¹ It is interesting to notice how a non-human protagonist is able to awaken in the reader more empathic feelings than most of the human characters in the novels, some of whom show quite cruel attitudes towards others. This fact echoes Haraway’s word regarding the cyborg and our technology-dominated future: “Our machines are

19 Martín Galván. ‘Narración, monstruosidad y la condición poshumana en El peso del corazón: la segunda novela de Bruna Husky’, 113.

20 Haraway, ‘A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century’, 147.

21 Elizabeth Montero Mattos, ‘Las lágrimas y el corazón de mi identidad: Bruna Husky, la poshumana de Rosa Montero’, 58.

disturbingly lively, and we ourselves frighteningly inert".²² We can see Montero's trilogy as a cautionary tale about the dangers of human progress and the dangers it can pose to our planet and to our identity as humans, but we can also see how scientific advances may be used correctly in order to create a fairer society. In that sense, science fiction helps us reflect on the present because the decisions we make nowadays shape the future that will come. Although advances in artificial limbs and artificial intelligence are still in their first stages, we should start realizing that is a not-so-distant future in which these devices and creatures will be part of our everyday lives. For this reason, it is now when we should consider the ethical value we will give them and what posthuman future we want to create.

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Aleksandra Łukaszewicz

Cyber body as Medium of Art. The Case of Neil Harbisson and Moon Ribas

Abstract

Contemporary experiments with broadening the borders of sensibility lead to cyborgization of the body, connecting it not only mechanically but essentially with new technological organs implanted in tissues, and transforming the range of perceived data in reality. Two pioneers of the cyborg era – Neil Harbisson, with an antenna implemented into his brain which allows him to hear color frequencies through bone conduction, and Moon Ribas, with implants in her elbows allowing her to feel all earthquakes over 1.0 on the Richter scale as well as movements of the moon – are the case studies I analyze, in order to show how the mode of our embodiment influences the system of our beliefs and self-consciousness, as well as our orientation in living spaces in social practice and in a context of interspecies relations. These first cyborg persons exploit their new senses in creation of original artworks, such as Neil Harbisson's sound portraits of famous persons or images of sounds (politicians' speeches, or fragments of classic and popular music, like in the series 'Colour Scores'), and Moon Ribas' choreographed dance-performances (from which the most famous is 'Waiting for the Earthquake'). The medium of these artistic realizations is upgraded technological sensibility, which is grounded in a person's body, and which is experienced aesthetically.

Introduction

Art provides an aesthetic experience, but this is not its only function. Accompanying human persons since their early history, art accomplishes many functions that might be explained in an evolutionary fashion, nowadays researched by many scholars such as Dennis Dutton¹ who is prominent in the field of evolutionary aesthetics, and Ellen Dissanayake² from the field of evolutionary theory of art. Both present a Darwinian turn in humanities, denying neither cultural and historic differences, nor the importance of cultural and historic analysis, but pointing at the fact that (despite some variables) there exist some evolutionary

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- 1 Denis Dutton, *The Art Instinct: Beauty, Pleasure & Human Evolution* (New York: Bloomsbury Press, 2009).
 - 2 Ellen Dissanayake, *Homo Aestheticus: Where Art Comes from and Why* (Seattle: University of Washington Press, 1995).

universals to be investigated from the point of view of empirical sciences. Ellen Dissanayake interprets art as adaptive behavior oriented towards ensuring well-being and relieving tension in the face of uncertainty.³ Dennis Dutton proposed his universalist interpretation of art, creating twelve descriptive “cluster criteria”⁴ and stressing that – apart from showing off talent or possession of rare goods, and providing aesthetic pleasure – art has since the beginning of human history been an area of experimentation, imagination, and intellectual challenge, driving development. These considerations do not just apply to human persons: if we note the evolutionary changes in perception, cognition, and communication⁵ from human persons to cyborg persons, based on the influence of functional implants inserted into *homo sapiens* bodies, we may apply them also to the art created by contemporary cyborg persons such as Neil Harbisson and Moon Ribas.

Art is the preferred experimental field for probing new solutions and finding new methods, which may be introduced later into broader practice. Contemporary Arts & Science is not the only area focused on the hype of new technologies used in art practice: this relationship can be seen as well in Renaissance experiments in optics and photography, though in a different manner.⁶ In each historical moment, the analysis of art allows deeper reflection on the current stage of (each) culture and where it is heading, because art practices and scientific practices both are often future-oriented. The current culture could be called technoculture, that is, according to Piotr Zawojski,⁷ “zjawiska charakteryzowanego przez wszystko to, co odwołuje się do wszechstronnych i różnorodnych sposobów hybrydyzowania rzeczywistości” [a phenomenon characterized by everything that refers to versatile and diverse ways of hybridizing reality].

Artists active in such a type of culture do not focus only on the expressive and aesthetic dimension of their work, though they do not forsake these aspects, but

- 3 Ellen Dissanayake, *What Is Art For?* (Seattle: University of Washington Press, 1990).
- 4 The “cluster criteria” for art listed by Dutton are: direct pleasure, skill and virtuosity, style, novelty and creativity, criticism, representation, special focus, expressive individuality, emotional saturation, intellectual challenge, art traditions and institution, imaginative experience – Dutton, *The Art Instinct*, 52–60.
- 5 Aleksandra Łukaszewicz Alcaraz, *Are Cyborgs Persons? An Account on Futurist Ethics* (Cham, Switzerland: Palgrave Macmillan, 2021).
- 6 Ryszard Kluszczyński, ‘Sztuka w poszukiwaniu tożsamości. Wstęp do rozważań na temat związków sztuki, nauki i technologii’, *Annales Universitatis Mariae Curie-Skłodowska, Lublin – Polonia* 15.2 (2017), 9–19.
- 7 Piotr Zawojski, *Technokultura i jej manifestacje artystyczne. Medialny świat hybryd i hybrydyzacji* (Katowice: Wydawnictwo Uniwersytetu Śląskiego, 2016), 12.

they treat their practice as a cognitive, experimental endeavor. Acting in a technological environment they can absorb technologies into their own bodies, modifying its performance to create new perceptions, ideas, images, sounds, dances, etc. In absorbing these technologies they expose their bodies to unknown risks, exploring new possibilities. They act then in accordance with the proactionary principle,⁸ liberating science for the sake of evolution from human persons to post- or transhuman persons, offering themselves on the altar of transformation (not withdrawing their activity in the face of risks or possibility of negative influence, as compared to posthumanism acting according to precautionary principles).

To speak about art then we must think about creativity and experimentation, crucial also for science. This is taken up in an interesting manner by Arthur I. Miller in his recent book *Artist in Machine. The World of AI-Powered Creativity*,⁹ with parallel analysis of hallmarks of creativity and genius across artists and scientists' works. Although Miller's aim is to argue for recognizing robots as able to create art – not my objective in this paper – in analyzing introspection, consciousness of one's strengths, perseverance, collaboration and competition, using others' ideas, the importance of everyday experience to problem solving, mapping connections, and imagining unpredictable solutions,¹⁰ his considerations illuminate the understanding that creativity and art may not apply only to *homo sapiens* individuals, but possibly to various agents.

The fact that humans are not the only entities who can create art is recognized, though there is a discussion on the value and meaning of art created by animals (as for ex. Chimpanzee Lucy), by programs (as for ex. Emily Howell) or by robots (as for ex. eDavid or Ai-Da).¹¹ Art is also created by cyborg persons, such as Harbisson and Ribas. However, in each case, if we think of a human person, a cyborg person, a robot, an animal, or a program, we deal with specific experience,

8 Steve Fuller and Veronika Lipińska, *The Proactionary Imperative: A Foundation for Transhumanism* (Basingstoke, UK; New York: Palgrave Macmillan, 2014).

9 Arthur I. Miller, *Artist in Machine. The World of AI-Powered Creativity* (Cambridge, MA: The MIT Press, 2019).

10 Miller, *Artist in Machine*, 33–54.

11 The research conducted with Pawel Fortuna from University in Lublin shows the approach of human persons to various agents creating art such as Ai-Da, Emily Howell, Lucy, Harbisson, and Ken Feingold, based on recognition of their moral capacities, agency, and experience – this research is to be published in the upcoming book by Springer, ed. by G. Theiner and A. Malapi-Nelson, *Technologies of the Future Self: An Ethics for Transhuman Flourishing*.

embodied in a specific body, that gives basis for the art activity. For this reason it is worth scrutinizing various experiences, within them the cyborg one, not universalizing experiences of representative 'base model' *homo sapiens* individuals, but on the contrary forging new paths of research in cyborg art. This leads us to the proposed case studies.

Neil Harbisson

Since 2004, Neil Harbisson (born 1982) has had an antenna implemented into his brain which allows him to hear via bone conduction the frequencies of colors, including infrared and ultraviolet (invisible to the human eye), and to receive transmission of colors via satellites.¹² Harbisson, who was born with achromatopsia (that is, total color blindness – seeing only in grayscale) started work on his antenna in 2003 together with Adam Montandon, and has perfected it in cooperation with many others, including Peter Kese and Matias Lizana. The antenna, called “the eyeborg”, scans colors in range and perceives light radiation, conducts their translation into electromagnetic waves, and passes information directly to the brain about the light perceived by transforming it into sounds, which Harbisson feels due to bone conduction (characteristic, for example, to the hearing of whales).¹³ After the insertion of the implant he heard noise, and after some time he started to differentiate it into a record of specific colors and their combinations. The process of experience has led to integration of his brain and software for Harbisson, as he often personally emphasizes: in learning to differentiate the sound signal of specific colors (for ex. yellow), he started referencing

12 Harbisson is known around the world not only due to the implant in his brain and his art, but also because he is the first person in the world officially recognized as a cyborg; since 2004 he has carried a British passport with a photograph including his antenna. UK law bans the use of technical devices on passport photographs, but Harbisson – after the rejection of his passport application – successfully convinced (over long correspondence spanning a few weeks) the British passport office that his antenna is not an external device, but an integral body part and should be treated as such also by the State.

13 Harbisson has developed two audial scales, which he differentiates: sonochromatic music scale and pure sonochromatic scale. Sonochromatic music scale is microtonal and logarithmic, containing 360 notes in one octave where each note corresponds to a specific point at the color circle. Pure sonochromatic scale is non-logarithmic, and based on transposition of light frequency to sound frequency. This scale also contains ultraviolet and infrared, neither being comparable to the perceivable color circle, ignoring musical perception – in this, it surpasses the limitations of human perception.

this color to a specific tone, perceived visually by him only in grayscale. Then, the reverse integration between the auditory and visual data causes association of specific colors to corresponding tones.¹⁴

The possibility to receive color as sound allows Harbisson unique perspective in the centuries-long discussion on “synesthesia”. Formerly believed to be either ailment or imagination, synesthesia had been investigated with methods of introspection and description, but gains due to the cyborg body a clear figure – recoding visual data into sound, by means and media of digital code received within the living organism. Harbisson’s mode of perception explicitly uncovers poly-sensory perception and its synesthetic character.¹⁵ In Harbisson’s case, we deal with synesthesia which is technologically assisted, ensuing from the technological support and transformation of functions of the organism, revealing the common ontological plane of sight (visual) and sound (audial) data as electromagnetic waves of a certain frequency. However, the reverse reference – of sound data to colors seen in a monochromatic way by Harbisson – cannot be so easily qualified as acts of direct perception, rather the acts of associating certain perceived data (audial) with others (visual). Nevertheless, it must be mentioned that approaching synesthesia as the effect of association and not of natural perception has its own history too, and that from these various approaches different types of synesthesia are defined. Izabela Sidorowska in the paper *Kognitywne implikacje synestezji* [Cognitive implications of synesthesia] distinguishes linguistic

14 Much interesting information is to be found in various public presentations by Neil Harbisson, as for example his speech at TED Ideas Worth Spreading: (2012) <https://www.ted.com/talks/neil_harbisson_i_listen_to_color> [accessed 11/09/2021]. Information referring to his reflexive grasp on his technologically augmented perception comes from the interview which I had the pleasure to conduct with him on 14th of October 2016 in Ace Hotel in New York, which is to be found in the article Aleksandra Łukaszewicz Alcaraz, ‘Cyborgs; Perception, Cognition, Society, Environment, and Ethics: Interview with Neil Harbisson and Moon Ribas, [14 October 2016], Ace Hotel, New York City’, *Journal of Posthuman Studies*, 3.1 (2019), 60–73; and in my recent book *Are Cyborgs Persons? An Account on Futurist Ethics*.

15 Theories of infant synesthesia assume that in their early childhood all people are synesthetes, with certain connections being severed later for the majority – Daphne Maurer, Laura C. Gibson, Ferrinne Spector, ‘Infant Synaesthesia. New Insights into the Development of Multisensory Perception’, in *Multisensory Development*, ed. by A.J. Bremner, D.J. Lewkiewicz, and C. Spence (Oxford Scholarship Online: September 2012).

synesthesia, musical synesthesia, and audio motoric synesthesia.¹⁶ Aleksandra Rogowska, in the book *Synestezja [Synesthesia]*¹⁷ points out developmental synesthesia (constitutional) and pseudo synesthesia, into which she includes: acquired synesthesia, drug synesthesia, metaphor, or association. She also explains the differences between acquired synesthesia and phantom synesthesia, virtual synesthesia, artificial synesthesia, or literary synesthesia.

It is not surprising then that synesthesia has long been used in the arts, and Harbisson is a musician educated in the field of experimental music from Dartington College of Art in Devon, Great Britain. He naturally started to use his new sense to create original artworks, such as: the series of 'Sound Portraits' of famous persons (like Prince Charles, James Cameron, Nicole Kidman, and others) and the series 'Color Scores' (containing sound paintings of politicians' speeches, as well as pieces of classical and popular music), and concerts composed on the basis of surrounding colors or faces in public (like Color Concert in Barcelona Palau de la Musica in 2014). Hearing colors, he composes the music piece based on the existing color set. Translation of electromagnetic signals from visual to sound and back gives Harbisson insight into dependencies and relationships previously unexplored, which he now notices in everyday life and explores in his artworks.

In the 'Color Scores' series, very intriguing are images representing Martin Luther King Jr's. 'I Have a Dream' speech and a speech by Adolf Hitler. Two squares of equal size are divided in concentric color lines in different combinations. The image of the speech by Martin Luther King combines various tones of yellow, green, blue, and a few stronger lines of red, orange, pink, and violet, predominantly on the edge of the image; the image of the speech by Hitler is pink-violet-blue, strongly attracting attention and seeming more joyful. In this case, the transfer of auditory data into visuals reveals on the level of perception the power of influence in the speakers' voices and conversational styles, independent of their preached content. For this reason, Harbisson willingly shows these images together, not immediately revealing which image represents whose speech, and observes the public's reaction.

16 Izabela Sidorowska, 'Kognitywne implikacje synestezji', *Annales AMS: Neurokognitywistyka w patologii i zdrowiu* (Szczecin: Pomorski Uniwersytet Medyczny w Szczecinie, 2009–2011), 171–175.

17 Aleksandra Rogowska, *Synestezja* (Opole: Oficyna Wydawnicza PO, 2007).

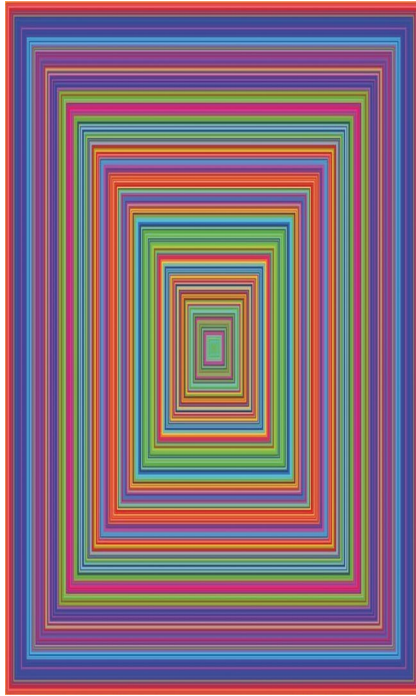


Image 1: Neil Harbisson painting of the speech by Martin Luther King Jr. *I Have a Dream* from Washington in 1963, © Cyborg Foundation.



Image 2: Neil Harbisson painting of the speech by Adolf Hitler, © Cyborg Foundation.

In the same manner, Harbisson combines image representations of ‘Für Elise’ by Ludwig van Beethoven and ‘Rehab’ by Amy Winehouse. While the song from the English singer/songwriter is expressed in tones of dark blue and violet with addition of sharp yellow, the melodic piano piece from the German composer is mostly pink and yellow. This distribution of colors aptly captures the type of emotionality of the two pieces, where Winehouse’s blue and violet express deep sorrow within the contralto voice’s velvety sadness, while Beethoven’s pink with accents of yellow speak to the free, girlish joy of the piece’s namesake.

Harbisson notices different kinds of relationships when he reverses his creative method, while composing live pieces using the existing colors in a certain space and/or faces’ colors. The sound portrait itself is a chord consisting of the sounds of the colors of eyes, lips, cheeks, and hair, which is not always resonant nor pleasant to the ear, even if the person seems to be good-looking. Individual sounds and chords obtained from scanning the faces of persons present in a

room are used to create larger compositions, which are usually improvisational, but not always harmonic, as Harbisson explains – the type and tone of found sounds determine the outcome, with no lack of composing skills. This was the case for the concert in Palau de la Musica in Barcelona in 2014: Harbisson, in cooperation with Vodafone, created a software capturing characteristic colors of the palace's interior, and on the basis of these colors as transformed into sounds he composed a score that was performed during the concert by the youth choir of Barcelona Palau de la Música and Catalan String Quartet.

Harbisson has created compositions in cooperation with other artists as well, including Moon Ribas, who has the first electromagnetic implant within her elbow (since 2013), which allows her to feel all earthquakes over 1.0 on the Richter scale via online connection with seismographic stations; in 2017 additional sensors were added to allow her to feel movements of the Moon. In recent years, Harbisson has also widened his senses with “time sense”,¹⁸ as well as developing his communication modes with Ribas by enabling interdental communication via Bluetooth signal.¹⁹

The art created by Harbisson and Ribas is cyborg art, using to a large extent digital technologies. It connects with cyborg-activism too, represented by them both, promoting human transformation into cyborgs within the Cyborg Foundation established in 2010.²⁰ The connection of art, science, and activism in Harbisson and Ribas' methods is characteristic for the Arts & Science practices, of which three types can be distinguished according to Ryszard Kluszczyński: one focused on using scientific achievements in art, another analyzing socio-cultural orders and aiming at their transformations, and the last one artistically carrying out scientific experiments. These types rarely appear exclusively, as in the case of

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- 18 Harbisson feels the time lapse with his Solar Crown, a point of heat rotating around his head: when the point is in the middle of the forehead it represents midday in London on the prime meridian; when at his right ear, it is midday in New Orleans on the meridian 90 degrees. In this way Harbisson wants to verify Einstein's statements on relativity of time and to try to control perception of time lapsing. Presumably once Harbisson's mind and the new sense integrates, it can be used to create new artworks.
 - 19 Within the project Transdental Communication: Bluetooth Tooth, Harbisson and Ribas have inserted Bluetooth signal implants into their teeth, through which they can communicate to one another using Morse code.
 - 20 The Cyborg Foundation is an international organization based in New York, oriented towards support for humans in their endeavor to become cyborgs, and promoting cyborgism as an artistic movement.

Harbisson and Ribas we may recognize a combination of the second and third types.²¹

Moon Ribas

Moon Ribas (born 1985) studied along with Neil Harbisson at Dartington College of Art in Devon, Great Britain, where she specialized in choreography. She also studied at the Theatre School of Amsterdam SNDO (School for New Dance Development). They started their experiments with cyborgization of the body at school together; it was Harbisson who was the first to realize the insertion of a technological sense, while Ribas experimented with technological devices worn on the body like the 'Speedborg', constructed in 2008 together with a group of scientists – a glove, and later earrings, capable of measuring the precise speed of objects moving around her and transmitting the information by intervals of vibrations. She travelled around Europe wearing the earrings, measuring the average speed of pedestrians in various cities. These permitted her to notice, for example, that inhabitants of Stockholm and London walk at an average speed of 6,1 kilometers per hour, compared to inhabitants of Rome and Oslo at 4 kilometers per hour. As the product of her research, she created a dance and a video, 'Speeds of Europe' and 'Speeds and Colors of Europe', respectively. The video connects the cyborg duo's hues, captured as dominant colors from a visual layer of each city by Neil Harbisson while scanning these cities with his antenna, and by kaleidoscopic glasses (worn by Ribas for a few months within the artistic experiment 'Kaleidoscopic Vision' in 2007, the glasses distort images kaleidoscopically to allow perception of moving color rather than the linear form, which disintegrates), set to the corresponding sounds at the pace of the observed speed in each city.

21 Ryszard Kluszczyński, *Sztuka w poszukiwaniu tożsamości*, 13–17.

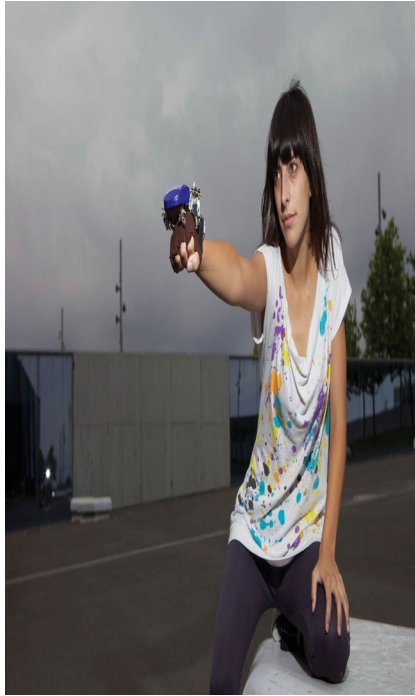


Image 3: Moon Ribas, *Speedborg*, © Cyborg Foundation.

Together with Harbisson in 2011 Ribas also created a video performance called 'Walking Colors' in which she dances to a melody based on the sounds he translates from colorful objects shown in front of her, such as bananas or a package of household chemicals. In this way compositions by Harbisson and by Ribas overlap, because Harbisson's sound composition is dependent on the colors of the objects shown, while Ribas' pace and expression of movement is dependent on the sounds received from Harbisson.

However, her best known and most compelling aesthetic experiences are performative dances where Ribas uses her sensor implant allowing her to feel earthquakes (weak earthquakes occur once every 10 minutes, on average) and uses the data to guide her. 'Waiting for the Earthquake' was performed for the first time on the 28th of March 2013, in Nau Ivanow in Barcelona. The dancer, perceiving the movements of the Earth in her body, transforms them into her own movements. This basic experience and artwork is an ongoing performance

by Ribas – for example, her dance during the improvised concert on colors of faces, earthquakes, and internal sounds of the human body, which I had the opportunity to witness on the 8th of October 2016 in Queens Museum (New York). During this performance by Neil Harbisson, Moon Ribas, and two persons from their team, one team member put into her vagina a microphone transmitting the sounds of her organism while another acted as DJ arranging rhythms from the sounds of public faces as scanned by Harbisson.

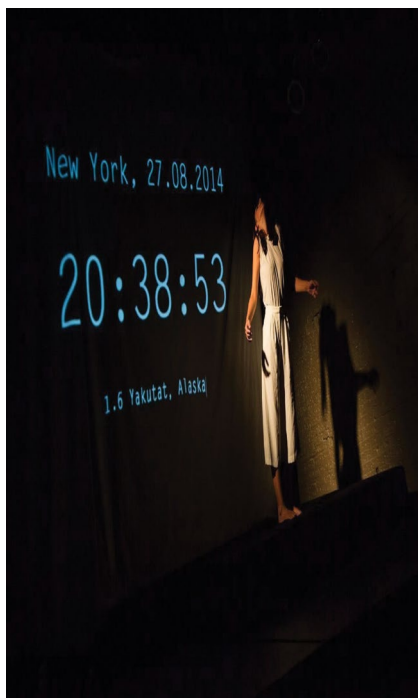


Image 4: Moon Ribas, *Waiting For Earthquakes*, © Cyborg Foundation.

The artistic realizations recalled above have as their medium technologically augmented sensibility. New senses obtained by cyborgs, which occur in the animal world (e.g. perception of infrared or ultraviolet radiation, as in the case of Neil Harbisson) allow one to feel interspecies connectivity; a cat, for instance, can detect wavelengths closer to infrared, while human persons, apart from Harbisson, will not. These senses permit as well a new closeness with the

Earth and other cosmic objects (like in the case of Moon Ribas), expanding the limits of relationships possible in present reality. They also set an example of how the mode of our embodiment influences the system of our knowledge and self-knowledge (consciousness), as well as our orientation in living spaces, in social practices, and in interspecies contexts, because the passage from ‘natural’ organism to cyborg form requires the capacity to receive new stimuli from one’s surroundings, changing the forms of cognition and communication with other agents.

Nevertheless, despite surprising artistic propositions realized by the cyborg duo, it is worth noting that the medium they use has not undergone any essential redefinition, and is still a sensorily, aesthetically experiencing body – though not just the human body anymore, but a technologically augmented body, the cyborg body, which transports us from the human person to the cyborg person.²²

Medium of Cyborg Art – Cyborg Body: Postmedial Body

The medium of artworks created by Harbisson and Ribas is digital graphic, electric music, video, and dance. It is necessary to underline the digital medium of their artistic realizations along with the importance of their positioning in the specific bodies of their creators. Artworks are realized, called into life, and manifested by their creators. A body is a tool to create all types of art works: images, sculptures, musical compositions, dance, and more. This is well recognized in performance studies (which became paradigmatic in understanding art and culture as such, starting from analyses by Richard Schecher²³ and Jon McKenzie).²⁴ Art works are born in bodies, which are their “places” from which they are extrapolated and transmitted to the audience in the form of music, visual art, or dance. For this reason, it is important to pay attention to the technological augmentation of these artists’ bodies and their technological senses, as Harbisson or Ribas create specific artworks, defining in a new way the relationship of the

22 More on the idea of a cyborg person can be found in my book, *Are Cyborgs Persons*.

23 Richard Schechner, ‘What is Performance Studies Anyway’, in *The ends of performance*, ed. by P. Phelan and J. Lane (New York: New York University Press, 1998).

24 “The concept of performance as the embodied enactment of cultural forces has not only informed many disciplines of study, it has also given rise to its own paradigm of knowledge, called in the United States and other English-speaking countries ‘Performance Studies’, in Jon McKenzie, *Perform or Else: From Discipline to Performance* (London and New York: Routledge, 2001), 8.

person – the individual who is not human anymore, but posthuman, or better, cyborg – with other elements of the biotechnosphere.²⁵

The technological augmentation is ultimately relevant because, with the use of technological senses inserted and integrated into their bodies, Harbisson and Ribas can create sound portraits, or choreography conditioned by the movements of the Earth. In this way it is more theoretically fertile to state that the medium of art created by a cyborg artist is the technologically augmented body. These bodies can be called post-bodies, pointing to their ‘unnatural’ character (in the sense of non-biological provenance). Post-bodies are not part of any traditional identity, as the technology that has allowed this opening to new relations with other species, plants, and with technology itself, not only boosts corporality, but becomes an aspect of the new post-human identity. This post-human identity is not given, but is to be performed, as underlined differentially from various sides by such posthuman theorists as Rosi Braidotti in writing about posthuman nomadic subjectivity,²⁶ or by Performance Studies theorists like McKenzie who emphasize that the contemporary subject of biopolitics is a performative subject “constructed as fragmented rather than unified, decentered rather than centered, virtual as well as actual.”²⁷

In regards to discussing the figures of Neil Harbisson and Moon Ribas, another prominent figure should be mentioned: Stelarc, who differs in that his technological implement is a robotic or biotechnological prosthesis – like in ‘Third Hand’ (1980) or ‘Ear on Arm’ (2006) – or even an exoskeleton (‘Exoskeleton’, 1999); while in the case of Harbisson and Ribas there is a deeper connection in the integration of human with technology, on the level of material and symbolic interaction in everyday life. This kind of connection influences not only metaphoric identification, but a real transformation of sensibility, perception, cognition, and consciousness, showing how “technology connected to cultural, institutional and technological performance”²⁸ permeates and transforms the present-day person. Stelarc, in his performative actions, expresses an idea of “the synthesis between the biological and the technological, a combination of meat and metal, wetware and hardware, organized in his art into a new hybrid

25 Ryszard Kluszczyński, *Sztuka w poszukiwaniu tożsamości*, 10.

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

27 Jon McKenzie, *Perform or else*, 18.

28 Aneta Stojnić, ‘The Performance Studies Paradigm’, *TheMA. Open Access Research Journal for Theatre, Music, Arts*, 6.1–2 (2017), 8.

network order using digital element: the code".²⁹ Neil Harbisson and Moon Ribas are in some ways the realization of Stelarc's dreams of connection between human and machine, although their artistic activity has different character because it is based on the use, in a creative way, of new forms of experienced sensibility as the medium of their art.

The specificity of this medium is based on their technologically augmented bodies, on the insertion of digital technologies into their bodies with Bluetooth and Internet connectivity. It is digitality that changes Harbisson and Ribas' bodies, causing them to hear new sounds in new ways, to feel movements of the Earth and the time lapse. This digitality lacks image, being based on numeric combinations, algorithms, and applications: it is devoid of (traditional, Newtonian) physical materiality and is – in accordance with the understanding of Piotr Celiński³⁰ – a postmedial condition.

Postmedialność narasta jednocześnie: w sferze techniki, gdzie wspiera się na takich procesach, jak konwergencja, wirtualizacja, obecność software, interfejsów i protokołów; w polu społecznym, gdzie ma miejsce socjalizowanie technologii medialnych wyrwanych systemowi kultury masowej i wynikające z tego procesu sieciowanie, emancypacja użytkowników oraz powstawanie społeczeństwa informacyjnego i sieciowego; oraz w polu antropologicznym, gdzie przekształceniom podlega zbiorowa wyobraźnia komunikacyjna wraz z zakorzenionymi w niej kompetencjami medialnymi i objawiają się nowe postawy i logiki komunikacyjne. [...] Przenikają i rekonstruują [się] wówczas dopiero najważniejsze relacje władzy i systemy ideologiczne, zakorzeniają się w porządkach semantycznych i aksjologicznych, poddają się sile ich oddziaływania, redefiniowaniu, instrumentalizowaniu i dostrajaniu wobec różnych oczekiwań, wrażliwości i konfiguracji systemowych.

[Postmedia is growing simultaneously: in the area of technology, where it is based on such processes as convergence, virtualization, the presence of software, interfaces, and protocols; in the social field, where the socialization of media technologies torn from the mass culture system takes place and the resulting networking, emancipation of users and the emergence of an information and network society; and in the anthropological field, where the collective communicative imagination is transformed with media competences rooted in it, and they display new fundamentals and communicative logics. [...] Only then the major relations of power and ideological systems permeate and reconstitute, they root in semantic and axiological orders, they submit themselves to the

29 Ryszard Kluszczyński, *Meat, Metal / Code / Contestable Chimeras* (Mirotki: Laznia Centre for Contemporary Art, 2014), 11.

30 Piotr Celiński, *Postmedia. Cyfrowy kod i bazy danych* (Lublin: Wydawnictwo Uniwersytetu Marii Curie- Skłodowskiej, 2013), 15.

power of influence of these orders, to redefine, instrumentalize, and tune in to various expectations, sensibilities, and system configurations].

Celiński defines the postmedial condition following the considerations of a post-medial situation from Peter Weibel, deriving the condition from the crisis of traditional representation by means of various media inventions (newspapers, photography, cinema, etc.) which have resulted in a culture absorbed in media – which makes it impossible to talk about “media art” as a separate form.³¹ This has caused a perdition of uniqueness, in the very identity of various media, because they became integrated with the culture and the human body within it. Weibel³² writes that: “Tajnym kodem wszystkich owych [postmedialnych] form sztuki jest binarny kod komputerów, tajną estetyką są algorytmiczne reguły i programy”. [The secret code of all these [postmedia] forms of art is a binary code of computers, the secret aesthetics is formed with algorithmic rules and programs].

This is the case for the aforementioned cyborg artists because media integrated with bodies and senses characterizes the medium of their art, but is not conflated with the medium itself. The medium of their art is (traditionally) their body, though this is a body integrated with digitality, which we may call – *per analogiam* to post-medium condition and art – a postmedial body. Nevertheless, it is still our body, though there is a change of our identification – carrying us from human person to cyborg person, from medium to post-medium, and from body to post- body or postmedial body.

Conclusions. Neuroscience in Cyborg Artistic Practice

The novelty in Harbisson and Ribas’ approach is that they make visible the connections previously unnoticed by humans in their everyday life, and they build new connections with their surrounding environments. They raise new questions related to visual, audial, and performative representations of what was not represented until now, pointing at new discernible and experimental connections possible via their upgraded senses. They put into practice what David Eagleman wrote in his recent book *Livewired. The Inside Story of the Ever-Changing Brain*,³³

31 Weibel, Peter, *Od mediów mechanicznych do mediów społecznych*, trans. by Wieńczysław Niemirowski, in *Mindware. Technologie dialogu*, ed. by Piotr Celiński (Lublin: Warsztaty Kultury – Filia Centrum Kultury w Lublinie, Wyższa Szkoła Przedsiębiorczości i Administracji w Lublinie, 2012), 24–27.

32 Weibel, *Od mediów mechanicznych do mediów społecznych*, 27.

33 David Eagleman, *Livewired. The Inside Story of the Ever-Changing Brain* (Toronto: Doubleday Canada, 2020).

showing how their brains, or more accurately their neural systems, are reconfiguring due to new sensory input obtained through technologically upgraded senses. As Eagleman³⁴ writes: “The brain is a dynamic system, constantly altering its own circuitry to match the demands of the environment and the capabilities of the body” and

We are only partial products of genetics and the basic preprogramming of our brains, [t]he rest of the story involves the rich details of your experiences and your environment, all of which sculpt the vast, microscopic tapestry of your brain cells and their connections [...]. You imbibe your local culture and technology through your senses.³⁵

The concept that the brain is not fully programmed, but malleable, first appeared in the notion of “plasticity” introduced by American psychologist William James, and is used in the form “brain plasticity” (also called neuroplasticity), connoting the possibility to change as well as to retain that change. Based on current research, Eagleman proposes in its place the notion of “livewire to grasp this dynamic, adaptable, information-seeking system”,³⁶ which is in constant transformation, adapting itself to its conditions, environment, and bodily possibilities.

Moon Ribas and Neil Harbisson show through their own bodies the interconnections between their neural systems and bodily senses, systems of knowledge, social relationships (opening the social order to more cross-species relations too), technology and environment – these interconnections are in a process of constant flux and transformation. They are not fixed (though staying in one place without any movement is impossible as such), but they consciously search for new ways of reconfiguring their nervous systems, adjusting their bodies, minds, and functionalities to the new technological reality, and also to the natural reality – to our biotechnosphere.

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34 Eagleman, *Livewired. The Inside Story of the Ever-Changing Brain*, 14.

35 Eagleman, *Livewired. The Inside Story of the Ever-Changing Brain*, 16.

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Dimitris Angelatos

Folded Tactility: Tracing Metabolic Artistic Practices in Contemporary Sculpture

Abstract

The chapter aims to critically analyze some metabolic artistic practices that shape contemporary sculpture's constituent axes and their ethical and political impact. Our approach is based on methodologies in the field of comparative intermedial and interart studies and hermeneutic approaches on sculpture's distinctive effect on the perceiver's bodily and spatial awareness. More broadly oriented to the issues of posthumanism regarding radical ways of understanding the *human* in relationship to the natural world, we will focus on papier mâché and textile sculptures of two contemporary artists, namely Yiannis Markantonakis (Greece) and Tahir Karmali (Kenya). The chapter explores the transformational *energy* of their sculptural polymorphic strata, made of material fragments of the natural world or/and objects and goods discarded, left by de-industrialization and material wear. In the emerging visual and narrative interface are investigated the ways in which the two artists create unexpected plastic relationships between space and living participants, resisting the toxic conditions of human and environmental exploitation.

Considering the process of the artistic shaping of the form as an open field connected to a grid of complex human and environmental bio-semiotic relations (Hoffmeyer, 2008), where "all living things exist within worlds of signification, within a *semiosphere* where the production and interpretation of signs are fundamental to life",¹ we are particularly interested here in the special effect of sculpture on the physical and spatial awareness of the perceiver (due to the way we perceive sculpture, through three-dimensional and kinaesthetic properties). This effect creates a dense network of tensions between art and environmental life, which, coordinated with the post-humanist perspective –and the posthuman condition in Rosi Braidotti's terms²–, challenges established interpretative and academic conceptual tools and practices of the humanities related to art and the teaching of art. We focus our hermeneutic analysis on two contemporary artists, Yiannis Markantonakis (Greece) and Tahir Carl Karmali (Kenya) and in

1 Adam Dickinson, 'Energy Humanities and Metabolic Poetics,' *Reviews in Cultural Theory* 6.3 (2016), 18.

2 Rosi Braidotti, *Posthuman Knowledge* (Cambridge: Polity, 2019), 6–39.

particular on two of their works: *Sans titre* (Markantonakis, 2019a) and *Three children stand and lay in the soil* (Karmali, 2018) from the series of eight textile sculptures, entitled *Strata* (Karmali, 2017–2019)³ respectively.

The aforementioned artists' sculptural work unfolds its *metabolic energy* (Dickinson, 2016; Bakke, 2017) within the modern urban and non-urban space, to compose instantaneously *emerging*⁴ stratified, *folded* (Deleuze, 1993)⁵ plastic volumes. The sculptural and narrative (*metabolic*) power of these plastic volumes radically challenges the current political, social, economic and cultural regularities, their ethics and the resulting hierarchical systems, based on the dialectic trajectory between the culture of the discarded, consumed and abandoned industrial materials and the capitalistic perpetuation of the violent and catastrophic exploitation of human and environmental resources.

This plastic volume, endowed with visual and narrative impact and its metabolic *energy* impede the duration of the aforementioned regularities, cause cracks in their systemic consistency and reverse all relations that thrive in these conditions. In this way, the *emerging* visual and narrative interface, *folded* in the polymorphic material strata of papier mâché (Markantonakis, 2019a) and textile (Karmali, 2018) sculptures, and coordinated with the wider context of posthuman modalities (Bourriaud, 1998) create unexpected plastic relationships between space and living participants through the effect of intensity and the force of *tactility* (Herder, 2002), re-engaging diverse forms of materiality in the sense

3 Tahir Carl Karmali, *Strata* (2017–2019), <<http://tahirk.com/strata/>> [accessed 16/01/2022].

4 Maurice Merleau-Ponty, 'Eye and Mind' (1964), in *The Merleau-Ponty Reader*, ed. by T. Toadvine and L. Lawlor (Evanston, Illinois: Northwestern University Press, 2007), 369–370, 372: "Cézanne already knew [...] that the external form, the envelope, is secondary and derived, that it is not what makes a thing take form, that that shell of space must be shattered – the fruit bowl must be broken. But then what should be painted instead? Cubes, spheres, and cones – as he said once? Pure forms having the solidity of what could be defined by an internal law of construction, forms which taken together, as traces or cross-sections of the thing, let it appear between them like a face in the reeds? [...] And Henri Michaux said that sometimes Klee's colors seem to have been born slowly upon the canvas, to have emanated from some primordial ground, "exhaled at the right spot" like a patina or a mold. [...] For henceforth, as Klee said, the line no longer imitates the visible, it "renders visible," it is the sketch of a genesis of things."

5 For the concept of deleuzian *fold*, see the useful overview: Conley Tom: "Foucault + Fold", in *The Deleuze Dictionary*, ed. by A. Parr (Edinburgh: Edinburgh University Press, 2010 [1st: 2005]), 114–117.

of *remediation* (Bolter and Grusin, 2000). Thus, it is moving beyond the conventional orthodoxies concerning the structural organization in sculpture, while at the same time defines the terms of a conflictual *dialogic* (Bakhtin, 1982) intensity against the general and catalytic conditions of *simulation* (Baudrillard, 1988 and 1994),⁶ which has assumed the role of *dominant* (Tynianov, 2019) in the current conditions of human and environmental toxic life, in all its aspects.

The artistic outcome of the sculptural stratification of the material used in the works of the two artists indicates the ways through which they perceive the resistance of the particular volume and the density of this material against its impending, in both cases, plastic configuration. It also implies how they adopt artistic strategies appropriate for this resistance, the ‘Art in the Anthropocene’ (Davis, 2018)⁷ range of which sharply expands as the above material is culturally folded by a network of protocols, with hierarchically structured discourses of power over human and environmental conditions of existence and over biodiversity imposing on them a simulation regime of life, and related ongoing processes of increasing toxification.

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- 6 Jean Baudrillard, ‘The Precession of Simulacra’, in *Simulacra and Simulation* (1981), trans. by S. Faria Glaser (Ann Arbor: The University of Michigan Press, 1994), 6–7: “Such is simulation, insofar as it is opposed to representation. Representation stems from the principle of the equivalence of the sign and of the real (even if this equivalence is Utopian, it is a fundamental axiom). Simulation, on the contrary, stems from the Utopia of the principle of equivalence, from the radical negation of the sign as value, from the sign as the reversion and death sentence of every reference. Whereas representation attempts to absorb simulation by interpreting it as a false representation, simulation envelops the whole edifice of representation itself as a simulacrum. [...] Escalation of the true, of lived experience, resurrection of the figurative where the object and substance have disappeared. Panic-stricken production of the real and of the referential, parallel to and greater than the panic of material production: this is how simulation appears in the phase that concerns us – a strategy of the real, of the neoreal and the hyperreal that everywhere is the double of a strategy of deterrence.”
- 7 Art in the *Anthropocene* becomes as Davis notes, a “polyarchic site of experimentation for living in a damaged world, offering a range of discursive, visual and sensual strategies that are not confined by the regimes of scientific objectivity, political moralism or psychological depression” [...] [so] “it can hold together contradictions” [...] [and] “expose modes of expression for the collective loss through and venues to express the emotional toll of living in a diminished world.” More see Heather Davis, ‘Art in the Anthropocene’, in *Posthuman Glossary*, ed. by Rosi Braidotti and Maria Hlavajova (New York and London: Bloomsbury, 2018), 64–65.

The two artists transform this (double) resistance of the material and its compact monophonic character, articulated according to the logic of commodity, production and consumption, into sculptural compositions of metabolic energy, which are able to narrate the dynamic fluctuations of real life -as radically opposed to its “genetic miniaturization that is the dimension of simulation”⁸ - embedded in the depths of both pulp of paper (Markantonakis, 2019a) and textiles dyed with copper, cobalt oxide, and lithium extracted from dismantled rechargeable cell phones’ batteries (Karmali, 2018).

Situated in the horizon of the issues raised by artists regarding the plastic processing of various everyday materials, especially in the 1960s (Krauss, 1999; Potts, 2004), as found mainly in the work of Joseph Beuys (Beuys, 2001) and Eva Hesse (Sussman, 2002), Markantonakis and Karmali’s artworks provoke strong visual reactions to the viewers, as they come to realize that the projected tactile character of the used materials does not end in one dimension. On the contrary, their plastic configuration creates a dynamic field of bio-semiotic and cultural connotations, claiming to suppress the factually easy access to these materials and the understanding of their kind of tactility, based on the simulation regime. In this sense, everything that “comes out” through these artworks – “obeying,” as Rodin emphasized in his *Testament*, to a “powerful interior impulsion” [“une puissante impulsion intérieure”]⁹- indicates their disengagement from various kinds of fixation to the exclusivity of their tactility, that is, finally a resistance to their *reification*, to becoming a “voiceless thing” in Bakhtinian terms¹⁰ and consequently to the “liquidation of all

8 Jean Baudrillard, ‘The Precession of Simulacra’, 2: “The real is produced from miniaturized cells, matrices, and memory banks, models of control- and can be reproduced an indefinite number of times of these. It no longer needs to be rational, because it no longer measures itself against either an ideal or negative instance. It is no longer anything but operational. In fact it is no longer really the real, because no imaginary envelops it anymore. It is hyperreal, produced from a radiating synthesis of combinatory models in a hyperspace without atmosphere.”

9 Auguste Rodin, ‘Testament’ (1911), in *L’Art. Entretiens réunis par Paul Gsell*, ed. by Auguste Rodin (Paris: Grasset, 1924), ix; ‘Figurez-vous les formes comme pointées vers vous. Toute vie surgit d’un centre, elle germe et s’épanouit du dedans au dehors. De meme, dans la belle sculpture, on devine toujours une puissante impulsion intérieure. C’est le secret de l’art antique.’

10 Cf.: Mikhail Mikhailovich Bakhtin, “Towards a Methodology for the Human Sciences’ (1974), in *Speech Genres and Other Late Essays*, ed. by C. Emerson and M. Holquist, trans. by V.W. McGee (Austin: University of Texas Press, 1986), 161: ‘Various ways of *being active* in cognitive activity. The activity of the one who acknowledges a voiceless

referentials.”¹¹

Thus, pulps of papers, textiles and batteries deny by the architectonics of their folded tactility “organized along two vectors, a deepening toward the bottom, and a thrust toward the upper regions,”¹² the obviousness of their materiality and their inclusion within an irreversible cycle of production, consumption, uselessness and toxic dispersion, in order to give birth to the *aura* (Benjamin, 1969) of new, original conditions of artistic being by questioning the finality of the obsolescence / throwaway regime (Armiero, 2021) of industrial materiality, breaking up and transforming its consistency. Under these conditions, the audience of Markantonakis and Karmali’s works is intrigued by the materials, the plastic configuration of which conveys metabolic, transformative processes, as they have been developed within *personified*¹³ sculptures. Subsequently, these folded sculptures can narrate with real dramatic intensity the bidirectional, deeply *dialogic* trajectory leading unceasingly from the systemic, institutionalized, visible or subcutaneous violence imposed on human and environmental life, to a critical liberating reversal.

In the above context of reference, both the treatment –via liquid adhesive– of the hard and inert material of the pulp from printed material, mainly popular illustrated consumer magazines thrown in private and public spaces (Markantonakis, 2019a) and the processing of raffia (an organic cloth from the Congo) stained with chemical components extracted from dead lithium-ion batteries of cell phones (Karmali, 2018), create an extended intensity of folds, which runs through the two sculptures’ plastic volume.

The dynamics developed by these folds define the sculptural volumes as zones of bio-semiotic, metabolic fluidity, thus forming a *folded tactility*, capable of

thing and the activity of one who acknowledges another subject, that is, the *dialogic* activity of the acknowledger. The dialogic activity of the acknowledged subject, and the degrees of this activity. The thing and the personality (subject) as *limits* of cognition. Degrees of thing-ness and personality-ness.”

- 11 Baudrillard, ‘The Precession of Simulacra’, 2.
- 12 Gilles Deleuze, *The Fold. Leibniz and the Baroque* (1988), trans. by T. Conley (London: The Athlone Press, 1993), 29.
- 13 Cf.: Bakhtin, ‘Towards a Methodology for the Human Sciences’, 168: “Our *thought* and our *practice*, not technical but *moral* (that is, our responsible deeds), are accomplished between two limits: attitudes toward the *thing* and attitudes toward the *personality*. *Reification* and *personification*. Some of our acts (cognitive and moral) strive toward the limit of reification, but never reach it; other acts strive toward the limit of personification, and never reach it completely.”

freeing the works from interpretations that have a limited understanding of the meaning and the function of the materials used. At the same time, they are also capable of connecting in a catalytically critical way, these materials with cultural codes of authoritarianism, power and exploitation, developing subversive narratives about the obsolescence/throwaway edifice and the strategy of “*radical negation of the sign as value*”¹⁴. In other words, they are able to overcome the double resistance of the materials and the discourse protocols that accompany them.

The metabolic trajectories of this folded tactility, which plays a dominant role throughout the work of Markantonakis (Markantonakis, 2019b), are shaped in his aforementioned papier mâché sculpture (Markantonakis, 2019a), in a composition where the plastic formation of the pulp from printed material is developed by following an upward scale of solid volumes of different sizes, arranged in a wavy rhythm that suggests an opening to infinite expansion. At the same time, the multiple color folds that plastically compose these overlapping volumes counteract the tactile gravity of their shapes, as they move in various waves of uneven formations in all directions, pressing the parts of the whole and diffusing the pulsating fluctuations of vital metabolic intensities. In doing so they create the dynamics of folded plastic / artistic reality, that is the curvilinear permeability of “hardness” and “fluidity”¹⁵:

14 Baudrillard, ‘The Precession of Simulacra’, 6.

15 Deleuze, *The Fold. Leibniz and the Baroque*, 6: ‘Thus it must be stated that a body has a degree of hardness as well as a degree of fluidity, or that it is essentially elastic. The elastic force of bodies being the expression of the active compressive force exerted on matter. When a boat reaches a certain speed a wave becomes as hard as a wall of marble.’



Image 1: *Sans titre*, 2019 © Dimitris Angelatos

The escalation of the eight volumes that compose the sculpture starts from its spherically shaped base. On this base rests a double circular band, the epicenter of the upper emphatically protruding side of which is occupied by a homologous of the base spherical form, to be followed by four superimposed volumes, geometrically differentiated from the first four spherical configurations: a polyhedral truncated pyramid which is structurally dominant in the sculpture's center, two truncated cones of different dimensions (the largest under the smaller one) and finally a cylinder with two side reliefs, one of which creates an entrance crack at the top of the sculpture. A colorful strip of pulp paper inside a used glass bottle that is applied upside down within a small hole in the surface of the sculpture's top, underscores the inner continuity of the outer colored folds, and thus the overall metabolic impregnation of the sculpture.

The coarse texture of raffia and its solid, overlapping folds, resulting from the separately sewn and pleated textiles of the same material on the body of each

of the three figures of Karmali's sculptural composition entitled *Three children stand and lay in the soil* (2018) can create extremely dense strata. The intensity of these strata is emphasized due to their color impregnation by the chemical materials of lithium-ion batteries. The earthy color of raffia and its texture carved by mineral, organic forces, mainly those of copper and cobalt oxide, display the open metabolic field of dynamic interaction between naturally layered materials (: mineral strata) and their intensive artistic processing.

Karmali's shaping of volumes is driven by a plastic need concerning the molding of human form in order to cancel its unexamined and improvised appropriation by hasty viewers. This can be achieved by establishing a conflictual dimension in the artwork's structural composition, reinforced through its narratively eloquent but ambiguous title, as the folded tactility of the three children's figures moves away from the standard posture requirements (*stand and lay*) at the horizontal axis of the geodesy (*soil*), for to be found hanging as a wall volume, aspiring to dramatize an ontological, metabolic depth (Marion, 1991).

The shaping of the limbs and trunks of these figures exposes the *presentness* (Angelatos, 2017)¹⁶ of an instantaneous moment, as the children are spatially captured in performing a simultaneous but differently fluctuating movement. In each of these movements a particular plastic quality can be identified, just as has been shaped by the tactility of the undisciplined in their –horizontal– installation, folds. Thus, the shoulders, arms –arms and forearms– and elbows define configurations and contractions which are either centripetal, as they can be identified at the chest's height in the first form from the left (right versus left arm), or approximately centrifugal as in the two other forms. The upper limbs are tending downwards towards the torso's center (in the middle form) and upwards in the third form, with the corresponding bending of the elbows:

16 The concept of *presentness* designates the fourth element of a hermeneutical scheme as proposed for the interart approach (literature and painting) of the aesthetic category of (*re*)presentation, in Dimitris Angelatos, *Literature and Painting. Towards an Interpretation of Interartistic (Re)presentation* (Athens: Gutenberg, 2017), 463–575. *Presentness* refers to the modalities of the modernity, while the other three aesthetic concepts of the aforementioned scheme are related to *similarity* (Archaic period), *mimesis* (Classical antiquity, Renaissance and Neoclassicism) and the *absolute* (Romanticism). According to our approach each of these concepts are articulated in examples of interartistic formations at the center of which we explore specific modes of (*re*)presentation of Time, following the line of the Aristotelian premise about the great difference whether any given event is a case “of propter hoc or post hoc” (“διαφέρει γὰρ πολὺ τὸ γίνεσθαι τὰδε διὰ τὰδε ἢ μετὰ τὰδε,” Aristotle, 1968, 1452a 21).



Image 2: *Three children stand and lay in the soil*, 2018 © Tahir Carl Karmali

At the same time, the legs -thighs and shins- and knees differ in their performing movement, either by slightly bending and releasing the left foot in front of the right (as in the first form from the left), or by projecting the two legs on equal visual terms (as in the middle form), or, finally, by an absolute merging of the legs, which transforms them into a compact, undifferentiated whole (in the third form).

Along with their above-mentioned strong sculptural impact, the *folded* plastic volumes of material have in both cases of Markantonakis and Karmali a powerfully drastic narrative function as they disrupt through their organic, metabolic energy the strategy of dense cultural discursive protocols and their pursuit to impose the solid one-dimensional logic of simulation in human life and the environment.

Thus, the various 'high' standards of life are directed in heaps through illustration consumer magazines and are able to create illusions to their readers about

things and situations that they can –at low cost– see, but not become part of. According to their strategically organized and oriented purpose, they inactivate the vital conditions of human understanding as a living consciousness and deliver it savagely exploited, truncated and dehydrated to the laws of the market and industrial consumption. Scattered all over the place, these useless magazines expose through the transmission of their toxic lump to the environment, the multicolored accumulation of wounds they perpetually cause in real life: the amorphous mass of bodies mutilated by real desires.

The dispersed members of the mutilated life will be Markantonakis' reference point since he undertakes to artistically deconstruct the imposition of mutilation as a dominant condition of existence. Opposite to the discourse protocols of mutilation and its bearing pulp paper materials, the artist will denote the metabolic transformation of the latter, shaping a folded work pulsating with vital vibrations that counteracts the simulation regime and artistically represents mutilation and wounds not as a programmatic vacuum of presence but as carriers of a radical critical –and for this reason, liberating– real-life vision.

In a parallel axis, but in a different historical and cultural context, Karmali shapes his work's plastic volumes in such a way as to capture the wounds left deep inside the human bodies by the modern colonial exploitation of their dangerous labor in the Congo mines, where the materials of rechargeable batteries are exported, mainly those of cell-phones. The violent industrially enforced deprivation of human rights defines the conditions of a generalized 'mutilation' of existence. The detrimental effects of this mutilation are expressed by the work of the sculptor in their sharpest form, as they infuse childhood, carving it with the mineral materials of exploitation.

Thanks to the dynamics developed by the folded tactility of volumes and their vital plastic undulations, Karmali's three mutilated childish figures and Markantonakis' pulp paper material call the viewers to a critical vigilance against human and environmental mutilation so as to release the tension that characterizes the true critical consciousness and its vigilant resistance to generalized degeneration.

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David Fancy

Geomancy vs Technomancy: Resonance, Divination and Gilbert Simondon's Thought

Abstract

This chapter posits geomancy – the art of engaging magically with the earth – to be a divinatory and resonative genre, both in its practice, but also in the way in which it thinks. The figure of the geomancer – the one who harnesses the complex relationalities between themselves and the earth's many energetic bodies and forces – is intuitive rather than psychic. The geomancer is therefore not concerned with discerning the future, focusing instead on the ability to access and crystalize the complex availabilities and relationalities of any particular present moment. This chapter invokes Gilbert Simondon's work on resonance to provide a framework within which to understand the work of the geomancer, as well as to contrast the work of the geomancer with that of the technomancer, one alienated from resonative transindividuality and bound up largely in the accelerated electromagnetic rhythms of technocapital deleterious to biological systems. The chapter posits an entire field of philosophical study, echealogy, as one that can deal with speculation, consideration, and critique of anything having to do with rhythm and onto-genesis. The figure of the geomancer is proposed as a central conceptual persona involved in non-supremacist geophilosophical and geoartistic transindividual resonative activities that can help imagine futures outside and beyond the Anthropocene.

Geomancy is a divinatory and resonative genre, both in its practice, but also in the way in which it thinks. Although presenting characteristically in the Economic North in its vestigial form as a dowser holding a Y-shaped piece of wood to seek a previously undetected underground water source,¹ the geomancer, etymologically anchored in the “geo” as well as “mantea” – or magic, has taken many different forms over human history. As geomancers, the Chinese feng shui master seeking to avoid ‘dragon lines’ of unbeneficial energy in the placement of housing;² the Celtic druid co-creating ley lines of energy beneficial to

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- 1 See image provided by the U.S. Geological Survey, <https://www.usgs.gov/special-topic/water-science-school/science/water-dowsing?qt-science_center_objects=0#qt-science_center_objects> [accessed 15/05/2021].
 - 2 Aihe Wang, *Cosmology and Political Culture in Early China* (Cambridge: Cambridge University Press, 2000).

living systems;³ the Arab geomancer using the “science of sand” to intuit information pertaining to living and physical systems alike;⁴ not to mention the energy workers or ‘shamans’ from practically every Indigenous heritage;⁵ are each part of “the oldest continually practiced scholarly geographic practice in the world.”⁶ The geomancer’s mode of divination⁷ is intuitive rather than psychic, and is therefore less concerned with discerning the future focusing instead on the ability to access and crystalize the complex availabilities and relationalities of any particular present moment. As such, the geomancer can be described, following Gilles Deleuze, as proceeding via “an apprenticeship to signs”;⁸ using prostheses such as sticks of wood, metal rods, or other objects to amplify and render visible information available in the multiple energetic realms constituting perceived material reality.⁹ Proceeding gnoseologically rather than epistemologically, the geomancer resonates or feels their way through the world in order to bring events and arrangements, seemingly unknowable from the perspective of classical empiricism and its scientist descendants, into awareness and into the world. This work of divination recalls Deleuze’s affirmation that “we must be Egyptologists”¹⁰ in our reading of signs, an important invitation especially in the context of the Anthropocene where, as a species, we struggle to read, discern and engage with the complex ecologies of which we find ourselves part. From an ontological perspective in which, as Deleuze emphasizes, “everything is implicated, everything is complicated, everything is sign, meaning, essence”, the geomancer is well positioned to decipher as well as generate new patterns and connections

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- 3 Ronald Hutton, *Blood and Mistletoe: The History of the Druids in Britain* (New Haven: Yale University Press, 2009).
 - 4 Matthew de Melvin-Koushki, ‘Geomancy in the Islamic World’, in *Prognostication in the Medieval World: A Handbook*, vol. 2, ed. by H.C. Lehner, K. Herbers, M. Heiduk (Berlin: de Gruyter, 2020), 788–93.
 - 5 Mircea Eliade, *Shamanism: Archaic Techniques of Ecstasy* (New York: Pantheon Books, 1964).
 - 6 David Nemeth, ‘Geomancy’, in *Encyclopedia of Geography*, ed. by B. Warf (California: Sage Publications, 2010), 1238–39.
 - 7 For contemporary methodological questions around divination see Maggie Maclure, ‘Inquiry as Divination’, *Qualitative Inquiry* 27.5 (2021), 502–511.
 - 8 Gilles Deleuze, *Proust and Signs*, trans. by Richard Howard (Minneapolis: University of Minnesota Press, 2000), 5.
 - 9 Alessandro Palazzo, ‘New Perspectives on Geomancy: Introductory Remarks’, in *Micrologus Library* 87 (Firenze: Edizioni del Galluzzo, 2018), i–xxx.
 - 10 Deleuze, *Proust and Signs*, 92.

that can counter humanist logics of supremacy (and all of its manifestations in colonialism, patriarchy, etc.) to help stimulate more complex ecological relationalities in response to a planet, as a result of human actions, becoming increasingly inhospitable to human life.

These years, geomancers find themselves in an interesting world-historical moment. Technomancy¹¹ reigns supreme as a practice of capitalist dissemblance via the conceptual fusion of technology as magic, either in the necromantic mode of capitalism as a kind of sorcery¹² or its doubly fabulated form across a range of popular fictional expressions, such as in video games, role playing games, TV shows, fiction, and films.¹³ Many technomantic expressions are complicit in the mystification and fetishization of the allegedly unlimited potentials of technocapital,¹⁴ when these alleged potentials are instead simply an anxiously limited set of established possibilities bound by the dual logics of binary code on one hand and the extraction of value (in the form of affect, attention, immaterial labour, personal data, etc.) on the other. The figure of the geomancer, not simply disavowing technology via a Romantic gesture, intuits digital technology's deep imbrication with capital. Instead of proceeding via resonative capture and exploitation, the figure of the geomancer attempts to find ways of connecting more broadly, and without a mobilizing logic of dominance or supremacy, with the earth and all of its inhabitants. In this way the geomancer is both a "geophilosopher" in the Deleuzo-Guattarian sense¹⁵ who invokes concepts via a "politics of sorcery",¹⁶ as well as a "geoartist"¹⁷ who brings new realities into the world proceeding via speculative and quasi-causal gestures of artistry and divination.

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- 11 Peter Carroll, 'What Is technomancy?' (2018), <<https://technomancy101.com/technomancy/>> [accessed 23/05/2021]; Steve Martindale, 'Technomancy', *Aboriginal Science Fiction* 4.2 (1990), n.p.
 - 12 Phillippe Pignarre and Isabelle Stengers, *Capitalist Sorcery: Breaking the Spell* (London and New York: Palgrave McMillan, 2007).
 - 13 Carrol, 'What Is Technomancy', n.p.
 - 14 Luis Suarez-Villa, *Globalization and Technocapitalism: The Political Economy of Corporate Power and Technological Domination* (London: Ashgate, 2012).
 - 15 Gilles Deleuze and Félix Guattari, *What Is Philosophy?*, trans. by Hugh Tomlinson and Graham Burchell (London: Verso, 1994).
 - 16 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. by Brian Massumi (Minneapolis: University of Minnesota Press, 1987), 247.
 - 17 David Fancy, 'Geoartistry: Invoking the Postanthropocene Via Other-Than-Human Art', in *Interrogating the Anthropocene, Ecology, Aesthetics, Pedagogy, and The Future in Question*, ed. by J. Jagodinski (London: Palgrave, 2018), 217–36.

Given that the geomancer oscillates in a complex symbiotic resonance with potentially a whole host of intersecting ecologies, I begin here below by introducing a field of thought dealing entirely with matters of resonance with which the geomancer engages. I then discuss resonance as onto-genesis, unpack some of the complicities of the figure of the technomancer with capital and finish with the figure of the geomancer's resistant and divinatory gestures in pursuit of a more complex, ethical world in which the vibratory expression of thinking itself remains full of potential.

Echealogy

Philosophy is inflected with an *echeological* disposition, by *echealogy*, by *echealogies*: recurring interest in concepts, logics, and relationalities of resonance (synchó), as well as notions reverberative of resonance such as vibration or modulation. Echea or echeia (literally: *echoer*), were sounding vases, purported to have been used in ancient Greek and then Roman theatres to amplify the voice of performers via what has come to be known from an orthodox Newtonian perspective as “sympathetic resonance”.¹⁸ According to Vitruvius in his *Ten Books on Architecture*, echea were constructed either out of bronze or earthenware depending on the resources available to each theatre.¹⁹ The vessels were placed in spaces between rows of theatre seating in such a way that no persons or other objects would come into contact with them. Except for their connection to the ground, the echea were free to vibrate unimpeded, enhancing specific frequencies of the performers' voices and perhaps even dampening the sounds of the audience. While little archeological evidence exists for echea in the ancient world, similar devices have been found in the ceiling of the Strasbourg cathedral and in various mosques dating to the eleventh century. Given the relative absence in the archeological record, one skeptical recent observer has noted that, “it is possible that Vitruvius, following the teachings on harmony by Aristotle, took speculation for reality”²⁰ and invented the existence of the resonating devices. This observation, suggesting as it does that the only relationship available between speculation and the (reductively material) ‘real’ as afforded

18 T. Brandon Evans, ‘A Sympathetic Resonance: Sound, the Listener and Affect Theory’, *Leonardo Music Journal* 23 (2013), 88–89.

19 Vitruvius Pollio, *The Ten Books on Architecture*, trans. by Morris Hicky Morgan and William Dendy (New York: Dover, 1960).

20 *Brill's New Pauly. Encyclopaedia of the Ancient World. Antiquity*, vol. 4, ed. by H. Cancik and H. Schneider (Leiden: Brill, 2004), 782.

by classical empiricism is both unidirectional and characterized by fantasy, inadvertently presents a hasty conclusion to questions integral to lines of contemporary echealogical inquiry. These latter considerations focus on causal and quasi-causal relations between causal relata (phenomena) that are not reducible to relationships between pre-existing and identitarian objects: Steve Goodman's work on sonic warfare, Deleuze and Guattari's discussion of the refrain, Claire Colebrook's work on fast violence, and many others.²¹ An example of the superannuated model being surpassed in this literature would be the effect of the nail being hit by the hammer – the cause – is that the nail goes into the wood. In contradistinction, contemporary echealogical thought in a philosophical vein is not impeded by the classical empiricism and its focus on the identitarian central to much scientific discourse, and might instead focus on the rhythmical or vibratory constitution and individuation of events and phenomena that occurs simultaneous to these realities' interactions with one another.

Instead of focusing solely on the sonic as Vitruvius did, these thinkers might instead invite focus on how to understand the resonative capacity of the echea to constitute and intensify a complex assemblage or refrain between human voices, the bronze or earthenware resonators, spectators, the architectural milieu, the geographical milieu, the political milieu, the conceptual milieu, the local cosmic milieu, and so forth. More traditional and explicitly political/ethical questions arise when considering the dynamics of rhythmical entrainment at work when human populations, reverberatively engaged in cadences of change or rhythms of revolution (possibly initiated in the case of the echea by voices amplified and intensified in their non-human potentials via the echea's resonances), arrive at insight, pursue political actions, and so forth. Coming back to Vitruvius, to *echealogy*, and to the generation of concepts, even if Vitruvius had fabricated the existence of echea in a speculative gesture of acoustic architectural aspirationism, a kind of archaic sonic sci-fi of his time, does the fact that echea are found to have actually been used in later centuries not also suggest some form of generative "resonance" between his potentially anticipatory descriptions and the echea's later confirmed existence? Or, put another way, and to simply repeat the admittedly vernacular use of the term as a point of departure in order

21 Steve Goodman, *Sonic Warfare: Sound, Affect, and the Ecology of Fear* (Cambridge: MIT Press, 2012); Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. by Brian Massumi (Minneapolis: University of Minnesota Press, 1987); Claire Colebrook, 'Fast Violence, Revolutionary Violence: Black Lives Matter and the 2020 Pandemic', *Journal of Bioethical Inquiry* 17.4 (2020), 495–499.

to outline the broader ontological stakes here with echeological inflection: how might we conceive of the “resonance” between the ‘speculative’ and the ‘real’, between a philosophy unburdened by scientism on one hand, and scientific discourses determined by it on the other? These questions are central to my ability to understand the figure of the geomancer as a divinatory practitioner pursuing strategies and tactics of potential resistance to capture by the cadences of advanced technocapital.

I suggest *echealogy* with its specific etymological source to determine a field of inquiry (echea, rather than the more apparent *synichology*, or *synology* from *synichó* or resonance) as a strategically placed anthropological artifact to remind myself that, while I may want to think geomantically beyond the human, for those of us who are human, we are necessarily moored here. I find it useful to be reminded of my anthropological positionality as an alienating prompt to attempt, impossibly, to think beyond it in a geomantic mode, to imagine thinking resonance with resonance, from resonance, or via resonance. *Resoduction*: the vibration that invents, constitutes, and precipitates thought while simultaneously generating and carrying (*ductere*) the concept. *Resoductive thought*: like the echea themselves, serving as a conduit for the concept to be uttered, intelligible, and engaged with before returning to the state of achronic rhythmicity that inheres within it. As the geomancer knows intimately, *echealogy* as resonative thought engages reverberatively with a whole range of energetic and vibratory phenomena, modulatory behaviors, and rhythmic singularities.

Echealogy and Technocapital

Echeological inquiry of the current moment is pressed into service to understand, resonate with, and perhaps counter (or offer counter-cadences to) the ways in which advanced technocapital has pushed and literalized accelerationism to utilitarian and deresonating ends. Not only is speed fetishized within production and computer processing, but so are all of the related and commodified technological objects (from smartphones, to tablets, to laptops, to game consoles) of advanced technocapital. In our new era of wireless cloud computing, however, where non-locality is a major nexus of mystification of capital, we can also usefully turn our echeological interest to spaces occupied by contemporary technological *fields* within bodies, in between bodies, or within larger aggregate bodies. It is the frequencies and signals that comprise these fields – the *resonances* and *modulations* of the electromagnetic spectrum – that drive and permit the activity of post-industrial capital that must be understood if we are to more fully apprehend their effects on bodies, on a body’s self-conception, and on any body’s

freedom. Influential post-thermodynamic theorizations of the body – such as for example Deleuze’s rereading of Serres and atomic “flows” taken up in turn by Parisi and Terranova’s discussion of the role of fluids and the *turbulent* body²² – help provide ways of further refining the role of *flows* of affect and capital in current post-industrial economic arrangements. However, it is what I am calling the *field body*,²³ with its operations of vibrations, oscillations and resonance that are constitutionally different than the logic of fluid or flows as they move beyond the conceptually empirical paradigm of quantifiable and discernable fluid, remains to be theorized with respect to its echeological constitution, as well as to its ontological and political applications.

Consider the following representative brief summary of evolutive energetic autopoiesis, an indication of the role that resonant and vibratory wave energy forms play in developing and sustaining life on the planet:

In the natural environment, there are ‘oscillating’ electromagnetic fields of many orders of magnitude and with frequencies ranging over a virtually unlimited spectrum covering many frequency decades. They manifest themselves as a continuous and enormous hiss – like an unlimited ocean, the surface of which is agitated by waves of an unimaginable amplitude and extent. Nature has created senses that filter out very specific frequencies and intensities from this ocean of waves, analyse[d] them, and convert[ed] them to forces. These filtered frequencies identify a specific sphere of life for specific life forms. Only those energies that are important to the life of an animal are transformed. The forces generated from these energies control nerve cell membranes and protein structures such as enzymes – creating patterns, images and impressions that we call experience.²⁴

The field, first thoroughly conceptualized in physics by Faraday, by Maxwell, and then Einstein, can possess momentum and energy: “a particle makes a field, and a field acts on another particle, and the field has such familiar properties as energy content and momentum, just as particles can have.”²⁵ From a perspective

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- 22 Luciana Parisi and Tiziana Terranova, ‘Heat Death: Emergence and Control in Genetic Engineering and Artificial Life’, *ctheory.net*, ed. by A. Kroker and M. Kroker (2000), 1–24.
 - 23 David Fancy, ‘I Scream the Body Electric: Performance, the Field Body, and Zombies in Societies of Entrainment’, in *Performance, Identity, and the Neo-Political Subject*, ed. by M. Causey and F. Walsh (London and New York: Routledge, 2013), 63–83.
 - 24 Ulrich Warnke, ‘Bees Birds and Mankind: Destroying Nature by Electrosmog’, trans. by Marlies von Lüttichau (Kempten: Competence Initiative for the Protection of Humanity, Environment and Democracy, 2007), 7.
 - 25 Richard Feynman, *Feynman’s Lectures on Physics*, vol. 1 (Pasadena: Caltech Press, 1963), 2–4.

informed by field dynamics, inhering within the “dividuality” or governmentally segmented components of the human body Deleuze invokes in 1992 in ‘Postscript on societies of control’,²⁶ is a complex multi-modal, multi-frequency, metastable system of the field body. This echeological system is the ground at which the pre-individual intensity of vibratory affects manifest themselves and are then translated, as the account above suggests, into the sensory and emotive experiences of everyday life.

Nevertheless, Deleuze’s notion of societies of control presents a useful baseline understanding of what, in echeologically-inflected social/political terms, can be described as an entrained form of resonant control of cadence and modulation. Whereas the common language for Foucauldian spaces of discipline means that the disciplinary mode operates by analogy, Deleuze stresses that ‘the different control mechanisms are inseparable variations’ with the result being that the more rhythmically refined ‘control’ operates via *modulation* as compared to *modular* disciplinary enclosures – the *molds* of the Foucauldian paradigm. Echoing the immanentist tenets of his Simondonian-inflected onto-genetic philosophical positions developed in key early texts such as *Difference and Repetition*,²⁷ Deleuze affirms that modulation is “like a self-deforming cast that will continuously change from one moment to the other, or like a sieve whose mesh will transmute from point to point”.²⁸ His then contemporary example of humans being modularly controlled by key card access and networked devices is central to his argument. And yet, restricting ourselves to the discussion of the computer-as-object, as any avid contemporary technologist will tell you, is once again limiting given that such a discourse revolves around a device, regardless of its networking capacities, marked by a fixed location in space and time that in some way metonymically echoes the bound and restricted human organism with empirically discernable parameters of a previous age. In fact, the dividuality integral to *control*’s influence over human bodies theorized by Deleuze to be extractable components used to regulate circulation in populations is only a portion of the influence that contemporary modes of telecommunications have over the human and other field bodies. Research from the past seventy years has demonstrated that the field body is affected by any other field bodies adjacent to

26 Gilles Deleuze, ‘Postscript on the Societies of Control’, *October* 52 (1992), 3–7.

27 Gilles Deleuze, *Difference and Repetition*, trans. by Paul Patton (New York: Columbia University Press, 1994).

28 Deleuze, ‘Postscript on the Societies of Control’, 4.

it, coterminous with it, or penetrated by it.²⁹ It was Fröhlich who suggested, influentially and in contradistinction to the orthodox view of the 1950s scientific community in which he was working, the possibility of the existence of non-thermal excitations of modes of oscillation of biological systems affected by millimeter waves (radiofrequency and microwaves), previously understood to only generate thermal changes, and even then under circumstances of high exposure (such as what you would expect to find in a microwave oven).³⁰ Fröhlich hypothesized, extending on the work done by Faraday, Maxwell and others before him, that energy in human and other cells was not thermalized but instead stored in vibratory modes at a molecular level.

It follows from Fröhlich's work that the major process by which much of the interaction between human-harnessed and generated fields on one hand, and the human field body on the other, is the process of sympathetic *resonance* no different that the classical resonance animating Vitruvius' *echea*, and with more subtle energies the work of the geomancer to energetically palpate the world around them. This phenomenon can be understood as the tendency for two oscillating bodies to lock into phase and begin to vibrate in step with one another, or as the synchronization of two or more rhythmic cycles. The classic biological example of resonance is when two heart muscle tissues are brought together and invariably begin beating at the same time within a small number of pulsations. Generally speaking, in such instances the more powerful force will cause the lesser force to vibrate or resonate with it, a kind of oscillatory colonialism described as the process of *entrainment*, with the weaker resonating field being *entrained* by the stronger. As per Fröhlich's hypothesis, it has become conclusively evident to the wider scientific community that the human field body – comprised of many trillions of cell bodies, each with its own field body – is entrained in a variety of deleterious ways by technocapital's contemporary communications devices and their delivery networks in a way that leads to the deterritorialization – or perhaps more appropriately, in view of the primarily vibratory field body rather than it Deleuzo-Guattarian geological conceptual antecedents – the *deresonance* of the field coherence of the human field body.

29 See for example: <<http://international-emf-alliance.org/>> [accessed 15/05/2021], <<http://www.bioinitiative.org/>> [accessed 15/09/2021] and <http://www.microwavenews.com/> [accessed 15/05/2021].

30 Hebert Fröhlich, 'Bose Condensation of Strongly Excited Longitudinal Electric Modes', *Physics Letters* 26 (1968), 402–403.

Technocapital, Technomancy, Geomancy

Being careful not to rehearse simplistic anti-technological arguments, I will proceed by simply suggesting that the mythologization of the energies that permit technocapital's proliferation have continued unabated in theoretical and philosophical discussions since their mystification by Haraway in the 'Cyborg Manifesto'.³¹ If we are to take Haraway's word at the time at its face value, the signals and frequencies of advanced technocapital should not affect biological systems, nor should they be part of the biopolitical. She notes that,

our best machines are made of sunshine; they are all light and clean because they are nothing but signals, electromagnetic waves, a section of spectrum [...]. Cyborgs are ether, quintessence.³²

Clearly, her evocation of a fundamental difference between the physical and the non-physical in her statements about the etheric and non-invasive nature of our advanced machines made of sunlight, regardless if she qualifies it with being imprecise, rehearses a set of transcendent ontological assumptions that places contemporary technology on the non-physical, 'etheric' and 'quintessential' side of the fuzzy divide, relegating electromagnetic waves to the status of 'just' signals, in other words: harmless. Given what is known about the interactions between non-ionizing radiation and biological systems, we might revisit Haraway's statements. Whereas Haraway states that, "The cyborg is not subject to Foucault's biopolitics; the cyborg simulates politics, a much more potent field of operations",³³ we might instead assert that, at this moment in its technological development that: *the cyborg nears the degree zero of Foucault's biopolitics; the cyborg evidences a highly stimulated politics, entrained as it is in a potent field of operations.*

The contemporary figure of the technomancer generally adopts such approaches by mystifying and occluding of the *resoductive* means of energizing and enabling technocapital's devices of vibratory capture and entrainment. In other words, in such accounts we are not privy to understanding the signals that allow the technology to work because they are magical. Various technomantic views and themes are evident in recent creative and media production in both science fiction, contemporary fantasy fiction, and role-playing games. Across

31 Donna J. Haraway, 'A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century', in *Simians, Cyborgs and Women: The Reinvention of Nature* (New York: Routledge, 1991), 150.

32 Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature*, 153.

33 Haraway, *Simians, Cyborgs and Women: The Reinvention of Nature*, 163.

these genres, *technomancy*, a term that first appeared in Steve Martindale's 1990 short story 'Technomancy', refers to "an imaginary or fictional category of magical abilities that affect technology, or to magical powers that are gained through the use of technology".³⁴ In the role-playing game *Revelation*, a game "about larger than life characters fighting the supernatural and generally winning" in the "modern day superheroic horror" genre,³⁵ technomancy is a power available to characters, including the ability to cause devices to malfunction or to transport the character to cyber worlds. In a similar role-playing game called *Urban Arcana* entire character classes such as the Techno Mage and the Shadow Jack proceed via technomantic abilities.³⁶ Popular fantasy by Kelly McCullough in books such as *Webmage* and *Cybermancy* tells the stories of Greek deities from the ancient world who now engage in magical pursuits in the present via the creation of the 'mWeb' or 'magic Web'.³⁷ In the influential *Babylon 5* series, technomages, living in the twenty third century of our era, "are an order to beings from many races who use advanced science to create the illusion of magic' as a result of having had 'bio-technological implants'".³⁸ Of his group of fellow techno-mages, central figure and Technomage Elric observes about their abilities that: "We are dreamers, shapers, singers, and makers. We study the mysteries of laser and circuit, crystal and scanner, holographic demons and invocations of equations. These are the tools we employ and we know many things".³⁹ These skills include the ability to the use of "electron incantation' to 'establish communication with another techno-mage regardless of distance", as well as to download information from dead brains.⁴⁰

Technomantics generally risk perpetuating the mystification of technocapital capital as the representations of technomancy here generally ignore the ways that technocapital's cadences rhythms are ubiquitous and penetrative and entraining of living systems. The coherence of these fictional universes is contingent on the

34 Wiki Shadowrun, 'Technomancy', <<https://shadowrun.fandom.com/pl/wiki/Technomancy>> (2021) [accessed 1/06/2021].

35 Russell Bailey, 'Review of Revelation', <https://www.rpg.net/reviews/archive/classic/rev_7501.phtml> (2017) [accessed 1/06/2021].

36 Shadowrun, 'Technomancy', n.p.

37 Kelly McCullough, *Cybermancy* (New York: Penguin, 2007); Kelly McCullough, *Webmage* (New York: Penguin, 2006).

38 Babylon 5 Fandom, 'The Babylon Project', <https://babylon5.fandom.com/wiki/The_Geometry_of_Shadows> (2021) [accessed 25/05/2021].

39 Babylon 5 Fandom, 'The Babylon Project', n.p.

40 Ibidem.

understanding that the signals that allow for communication are, in Haraway's terms, the quintessence of ether, that they are harmless and potentiating rather than interrupt and deresonate living system's constitutive membranes. In fact, technomancy mobilizes resonance in a magicalized version of its classical form for the purposes of continued exploitation and hiding its effects from view. The technomancer's relationship with resonance is scientific at the same time that it is mystifying, constructing via occluded zones in which certain bandwidths of the vibratory are posited as externalities that remain objectified by means of prestidigitation into inscrutable mystical fields. The technomancer is the emblematic figure *du jour* of Pignarre and Stengers, in their articulation of the many means by which capitalism *ensorcels* a population, as described in their *Capitalist Sorcery: Breaking the spell*.⁴¹

I would like to posit the figure of the geomancer as both a conceptual form as well as a mode of practice that seeks to evade and counter the cadence of advanced technocapital as captured in the electromagnetic fields and frequencies. The geomancer harnesses resonance differently than via the necromantics of the technomancer, not by constructing divination as a process of projective inscrutable magic. Instead, the figure of the geomancer proceeds by divining all of these repressed frequencies in a way that turns divination into a form of rendering intelligible, or reading, or bringing forth at least momentarily of patterns and events, via quasi-causal means. This is a different magic and divination than that projective magic of aspirational control and supremacy than the technomancer irrevocably marked by its monstrous and metastatic familiar – capitalism, and as such is a very different politics. The question remains, however: how? If the geomancer does, according to scientific empiricism, claim to be engaging with realities not necessarily intelligible to traditional common sense, five-sense based ways of knowing, how does geomancer participate via resonance with ontological processes of individuation and becoming of events and phenomena? What is the echeological mechanism by which we can speculate such interactions to be occurring? How can we understand that figure of the dowser to be resonating and co-creating with these realities? Gilbert Simondon's notion of resonance provides us with a means of beginning the exploration.

41 Philippe Pignarre and Isabelle Stengers, *Capitalist Sorcery: Breaking the Spell*.

Simondon's Articulation of the Problem

The reader of Simondon will be aware that his work affords a useful articulation of the role of resonance in ontogenicity, one very influential for Deleuze and Guattari, and for a host of thinkers who have then taken up and extended these positions since. Like many of the thinkers who have engaged his thought, by foregrounding ontogenesis and individuation rather than beginning from the individual, Simondon necessarily pays attention to the dynamics of architecturality and structuration that results in the point in a process that is the recognized in identitarian terms to be the epiphenomenal entity known as the individual. Simondon asserts that the related histories of ontology and individuation have generally been characterized by a number of key and unfortunate reversals. Such approaches are usually marked by “an attempt to step back’ from the starting point of the ‘constituted and given individual’⁴² in order to explain its coming into existence. Instead, he asserts that the principle of individuation cannot be retrospectively extracted and introjected to then be understood as preceding the process of individuation. This kind of principle can only be understood in operative terms as occurring inherently within the process. Any shortcuts to the contrary that posit reductive ways “of posing the problem of individuation” simultaneously presuppose and naturalize the fact that, “it is the individual, as constituted individual, that is the interesting reality, the reality that must be explained.”⁴³ Such a limited fascination necessarily results in a straightjacketed research perspective founded on a, “*reversed ontogenesis*” that “*gives an ontological privilege to the constituted individual*”⁴⁴ (emphasis Simondon’s), thereby reducing potentials of describing phenomena outside of or beyond that of the individual. In the context of such reversals, notions of energy, movement, dynamism, are sublimated into the individual rather than understood to play a constitutive and profoundly relational role in the emergence of phenomena, while simultaneously being evacuated towards a logos or principle unmarked by energetic potential, but instead: primordial, originary, fixed, final.

Rather than such separation and alienation, Simondon proposes an intimacy between process the concept that would allow us, “*to know the individual through individuation, rather than the individuation through the individual*”⁴⁵ (emphasis

42 Gilbert Simondon, ‘The Position of the Problem of Ontogenesis’, *Parrhesia* 7 (2009), 4.

43 Simondon, ‘The Position of the Problem of Ontogenesis’, 4.

44 Simondon, ‘The Position of the Problem of Ontogenesis’, 4.

45 Simondon, ‘The Position of the Problem of Ontogenesis’, 5.

Simondon's). Such intimacy also provides the opportunity to understand the processual nature of the individual,

grasped as a relative reality, a certain phase of being that supposes a preindividual reality, and that, even after individuation, does not exist on its own, because individuation does not exhaust with one stroke the potentials of preindividual reality.⁴⁶

Individual-as-*phase* then becomes a *portion* of the ontogenetic pathway and process with the important nuance that the pre-individual is "*being in which there is no phase*"⁴⁷ (Simondon's emphasis). The lack of phase is understood as a lack of discernable energetic patterning that is only partially resolved through becoming, with *becoming* itself acting as a dimension of being that serves as "a mode of resolution of an initial incompatibility that is rich in potentials."⁴⁸ This resolution is significant as it provides the basis for discussing moments of structuration, or resonance, in the context of the swarming dynamism of these incompatible energies available within the pre-individual materials.

The continuous system-wide individuation leads to what Simondon describes, with echeological flair, as "a more complete regime of *internal resonance*, one that requires permanent communication and that maintains a metastability that is a condition of life."⁴⁹ This metastability is not simply characterized by a complex interconnected series of equilibria and intersecting constitutive dynamics, but instead "the living is also the being that is the result of an initial individuation and that amplifies this individuation."⁵⁰ This "*individuation by the individual*" (emphasis in original) is different, he notes at this juncture, than that of the technical or cybernetic object. Instead, "the living resolves problems, not only by adapting itself, that is to say by modifying its relation to the environment (which a machine can do), but by modifying itself, by inventing new internal structures and by completely introducing itself into the axiomatic of vital problems."⁵¹ Resonance is the process of quasi-causal architectural shaping that is able to hold some of these tensions in a resonant coherence or 'phase' for a specific duration thereby constituting the 'individual', a 'partial resolution' of the tensions.

In this model resonance is understood as a mode of architectural reflexivity which appears to provide at least three simultaneous dynamics. The first is "the

46 Simondon, 'The Position of the Problem of Ontogenesis', 5.

47 Simondon, 'The Position of the Problem of Ontogenesis', 6.

48 Simondon, 'The Position of the Problem of Ontogenesis', 6.

49 Simondon, 'The Position of the Problem of Ontogenesis', 7.

50 Simondon, 'The Position of the Problem of Ontogenesis', 7.

51 Simondon, 'The Position of the Problem of Ontogenesis', 7.

resonance of being in relation to itself”, which is the notion of architecturality via a form of reflexive interference, one that provides the patterning possibilities interruptive of intensive chaosmosis given the fixities that emerge from their constative collision. The second dynamic that resonance appears to provide is the connection between the individuated being and the pre-individual reality that is linked to it.⁵² These first two represent a particularly useful dual articulation of resonance, as it simultaneously operates on an extensive axis as well as on the interpenetrative extensive/intense axis of inherence. The third dynamic consists of the relations between different levels of extensivity, the collective or the transindividual, and their ongoing inferences with an undepleted, and therefore continuously generative, intensivity. It is via this third transindividual resonance by which the geomancer pursues relationalities with all phenomena.

There are ways of ‘proving’ the geomancer’s work by detecting subtle earth energies or the subtle energy signatures of living and physical entities as the geomancer interacts with them and this is an interesting line of research.⁵³ Unfortunately, such pathways risk moving away from the significance of philosophical speculation towards an anxious attempt at legitimation via the adoption of scientific means. What is interesting for me here instead is the figure of the geomancer. The most popular contemporary representation of the geomancer is the person in super-hero films who controls nature with a representative example being Storm from the Mutants series of X-Men who invokes, engages, and redirects natural forces.⁵⁴ This figure is the adolescent fantasy of power projected onto the world, and in fact most such popular forms of the geomancer echo the ‘command-and-control’ methodology of the technomancer. Under scrutiny they reveal themselves to be a greenwashed technomancer who import logics of reductive and supremacist scientism to their relations of dominance with the ‘natural’ sphere. Such figures are often simply expressions of the necromancer, ever so many supremacist Prosperos with their political ambition and need to minoritize, render abject, and thwart (not to mention racialize) everything in the world in the face of their will. While the technomancer’s divinatory engagements are prestidigatory and illusionist, the geomancer’s are palpatory and fabulist. Indeed, the intimacy between the geomancer and technomancer erodes

52 Simondon, ‘The Position of the Problem of Ontogenesis’, 9.

53 Paul Stevens, ‘Techno-Dowsing: Developing a Physiological Response System to Improve PSI Training’, *Journal of Scientific Exploration* 12.4 (1998), 551–567.

54 *X-Men Origins*. Blu-ray format (Beverly Hills, CA: 20th Century Fox Home Entertainment, 2009) DVD.

any perception of a distinct binary between the two, with the technomancer ultimately being a geomancer who has found their way to the 'dark side' of an identitarian, capitalized, and ultimately captured version of the more expansive 'technologies' of the geomancer. As such, the work of the geomancer involves the pursuit of the ability to mobilize connective and affective relationships of different speeds, modulations, and intensities with other bodies, such as the body of the earth, bodies of water – whatever one is seeking to connect with – while simultaneously and actively dis-identifying with the identitarian premise, supremacy logics, and related corporal practices of traditional colonially-inflected humanism. We can draw on the history and representations of subtle geomancies in order to emphasize potencies across transindividual resonative fields – and not simply the deresonating ones offered by technocapital – to imagine and eventuate complex relationalities that amplify potentials across transindividual subtle energy systems. As such, the geomancer needs to continue to think ecologically and symbiotically from the middle, from the place of a non-supremacy. In fact, technically speaking these co-constituted relationalities and ecologies are pre-symbiotic from the Simondonian perspective of resonative ontogenesis that does not subscribe to an identitarian premise that would first posit the foundational existence of individuated entities that would then interact symbiotically. In other words for Simondon, for those such as Deleuze and Guattari, Braidotti, Massumi and others he has influenced, and for geomancers: the world is always already symbiotic, and what we generally recognize to be symbiotic within identitarian regimes of thought are instead simply expressions of epiphenomenal symbiosis, or symbiosis after the fact. In this milieu, the figure of the geomancer seeks, via echeological means, to simultaneously actualize and render intelligible complex relationalities underlying and constituting all phenomena. As such the conceptual persona of the geomancer fulfills a kind of expanded capacity, as Deleuze and Guattari describe it in their writing on geophilosophy, for engaging “possibilities of movements and intensities, so as to once again give birth to new modes of existence, closer to animals and rocks” and in so doing “summon forth a new Earth, a new people”.⁵⁵

55 Gilles Deleuze and Félix Guattari, *What Is Philosophy?*, trans. by Hugh Tomlinson and Graham Burchell (London: Verso, 1994), 75, 99.

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**PART III Symbiotic Posthumanist Ecologies
in Continental Philosophy**

Nicole Anderson

Animal-Human Differences: The Deconstructive Force of Posthumanism

Abstract

While Posthumanism is a term that arguably assumes fluid, fragmented, flexible subjectivities that expose the constructed and anthropocentric boundaries between human and nonhuman, this chapter attempts to demonstrate the various ways the term contributes to solidifying the boundaries with which it wants to break. More than this, the chapter also argues that increasingly, some posthumanists of varying stripes, are bypassing its deconstructive force by reducing deconstruction to a method, analysis, and application. As I argue in this chapter, the critical force of deconstruction works to undermine our anthropocentrism that founds our current and historical notions of what it means to be human, by radicalizing, and holding accountable, the differences between the human and nonhuman. It is for this reason that the chapter provides an example by way of a discussion of a true long-term relationship between a human (myself) and a wild animal; one in which anthropocentric boundaries are challenged (while still retaining difference).

Posthumanism vs Deconstruction?

What *is* Posthumanism? Since the turn of the twenty-first century there have been myriad articles and books addressing this question, but it's not a new one.¹ The same question, 'What *is...*?', had been asked of the then emerging fields of research in the twentieth century: postmodernism, poststructuralism, and deconstruction². Defined as the 'third person singular present indicative of be', the word 'is', presupposes that something, in this instance 'Posthumanism', occupies

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- 1 There are too many books on posthumanism to list, however titles such as: *The Bloomsbury Handbook to Posthumanism* (2020), or *The Cambridge Companion to Literature and the Posthuman* (2016) is evidence of the *establishment* of the field. There are also endless 'introductions': *Posthumanism: A Guide for the Perplexed* (2017), or *Posthuman Glossary* (2018), or *What Is Posthumanism?* (2010), to name just a few, suggesting that Posthumanism as a field is being taught to students, thus establishing itself as a serious discipline (despite, or precisely because of, the debates and contestations around posthumanism).
 - 2 Christopher Norris and Andrew Benjamin, *What Is Deconstruction?* (London and New York: Academy Editions / St. Martin's Press, 1988).

a *zeitgeist*, because its existence is a singular present, in the *here and now*: its position is the ‘prominent place or position in the current “presence of the present” and the “present of the presence”’. That is, it is unified by a particular scientific and philosophical notion of time and space, cause and effect. Consequently, the question not only suggests that Posthumanism is a unified field, but that it can be classified, taxonomized, historicized, and as a result defined, bounded, and understood as a periodizing concept. ‘Posthumanism’, then, is founded on what Jacques Derrida calls a “taxonomic objectivization” which works to “put before our very eyes, in front of our faces [...] theorems, theorizations, theories which share or postulate a field”.³ Yet, as we will explore shortly, despite buying into the institutionalisation, sedimentation, and thus totalization of Posthumanism as a concept and field to which the proliferation of books, articles and journals on the topic attest, Derrida insists that a field “surely isn’t common and unifiable, indeed identifiable”.⁴

Given this, then arguably the question, ‘What is ...?’, contributes to the anthropocentrism with which Posthumanism wants to challenge. It makes this contribution by preserving and protecting what is considered, argues Derrida, to be proper to ‘man’: human sovereignty and *ipseity*. To put it another way, ‘naming’ a field (such as, Posthumanism), and then defining and consolidating that name by answering the question ‘What is ...?’, not only institutionalises and sediments that field as a dominant form of research, but it is also an essentializing, and thus metaphysical, gesture that works to define and circumscribe the human, and the human individual, in opposition to the nonhuman animal. For Derrida, then, the “proper name”, or naming in general, has come to exemplify the “presence of the present”, precisely because the proper name as a noun is a result of ascribing characteristics such as unity and constancy, and thereby ‘fixing’ the human through this type of nominal representation.⁵ Thus, the essentializing characteristics (what Derrida calls “ipseity”) that the proper name defines, in this

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- 3 Jacques Derrida, ‘Some Statements and Truisms About Neologisms, Newisms, Postisms, Parasitisms, and Other Small Seismisms’, trans. by Anna Tomiche, in *The States of ‘Theory’: History, Art, and Critical Discourse*, ed. by D. Carroll (New York: Columbia University Press, 1990), 64–65.
 - 4 Derrida, ‘Some Statements and Truisms About Neologisms, Newisms, Postisms, Parasitisms, and Other Small Seismisms’, 65.
 - 5 Jacques Derrida, *The Ear of the Other: Otobiography, Transference, Translation*, ed. by C. McDonald, trans. by Peggy Kamuf (University of Nebraska Press: Bison Books, 1988), 107; for more on Derrida’s notion of naming, see Andrew Benjamin, ‘Indefinite Play and “The Name of Man”’, *Derrida Today* 1.1 (2008), 1–18.

instance the ‘human,’ include: reason, rationality, autonomy, auto-affection, intelligence, sentience, self-presence, autobiography, transcendentalism, and so on. It is these essentializing humanist characteristics that in the history of western philosophy and metaphysics has worked in contradistinction to the nonhuman and nonhuman animal. Ironically, posthumanism as a proper name and periodizing concept establishes an escha-teleological process, which is encapsulated by the referential ‘post-’. Rather than a clean break between the human and posthuman, which would mean that the ‘post’ human would be unrecognizably “other”, the teleological progression for some dominant versions of posthumanism justifies a belief that humans will both transcend themselves while remaining the same.⁶ This belief results in not only perpetuating the humanist values and ideals of ipseity, but what I have called elsewhere, an “ultra-humanism”: that is, humanism pushed ‘to an extreme degree’ (OED). To put it another way, ipseity is perpetuated into the future to an extreme or heightened degree: “The posthuman is therefore the medium by which these ultrahumanistic values and beliefs are privileged [...], thus projecting the human beyond how it is currently defined and experienced”.⁷ Inevitably, the word ‘posthumanism’ embodies this ipseity and its attendant humanistic dichotomous consequences.

To try and answer this question, ‘What is...?’, then, works to circumscribe a field by incorporating, and thus reducing the differences of other movements and forces with perhaps similar but also contrasting aims and goals, namely poststructuralism, and above all, deconstruction: as if deconstruction was simply a method that could be simply reduced!⁸ Hasn’t Derrida warned us of the danger of reduction? Have we forgotten the consequences of ‘naming’ and the fact that deconstruction cannot be a unified field? As Derrida explains in ‘Letter to a Japanese Friend’ deconstruction is not a method, analysis, application, act

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- 6 Michael Hauskeller, ‘Utopia in Trans- and Posthumanism’, Research Gate <<https://www.researchgate.net/publication/232771099>> [accessed 10/09/2021].
- 7 Nicole Anderson, ‘Pre- and Post-Human Animals: The Limits and Possibilities of Animal-Human Relations’, in *Posthumous Life: Theorizing Beyond the Posthuman*, ed. by J. Weinstein and C. Colebrook (New York: Columbia University Press, 2017), 38, note 3.
- 8 Lucy Niall, *Postmodern Literary Theory: An Introduction* (Oxford and Massachusetts: Wiley-Blackwell, 1997), 97, who argued that in the 1980s and 1990s poststructuralism and postmodernism were conflated with deconstruction. This conflation was for different reasons: it was a result of the word ‘play’ as Derrida used in his essay ‘Structure Sign and Play in the Discourse of the Human Sciences’, which was misinterpreted as ‘freeplay’ or ‘anything goes’.

or operation therefore there can only be “deconstructions in the plural”,⁹ or what Derrida calls the “irreducible plurality” of deconstruction.¹⁰ Furthermore, long before the term posthumanism came into effect, and in response to the various ‘post-isms’ of the time, in ‘Statements and Truisms’ Derrida argues,

instead of treating pseudo-identities, labels, or slogans as little wooden horses in a merry-go-round where New Criticism, structuralism, poststructuralism, new socio-historicism, and then again formalism, nonformalism, and so on would follow one another [let’s add here posthumanism], instead of these merry-go-round effects, it would be much more urgent, interesting, and exciting too, at least less boring, to *read* and to *elaborate* theoretical configurations whose structure, writing, conceptual and institutional modes and social and historical inscriptions were irreducible [...] to the merry-go-round of the parody of dialectics in “post” and in “new”. [...] it is urgent to take interest in what, in the most inventive “theoretical” work, cannot be confined to these boxing rings, merry-go-rounds, and round-tables.¹¹

Deconstruction, or more aptly ‘deconstructions’, are irreducible, unhomogenizable, and constantly transformed in and through multiple and heterogeneous *contexts*. And Derrida’s neologisms and paleonyms are evidence of its irreducibility precisely because of the way in which deconstruction moves across and becomes different in multiple contexts:

The word “deconstruction”, like all other words, acquires its value only from its inscription in a chain of possible substitutions, in what is too blithely called a “context”. [...] the word has interest only within a certain context, where it replaces and lets itself be determined by such other words as “écriture”, “trace”, “différance”, “supplément”, “hymen”, “pharmakon”, “marge”, “entame”, “parergon”, etc. By definition, the list can never be closed, and I have cited only names, which is inadequate and done only for reasons of economy.¹²

Even though deconstruction cannot be permanently fixed, and is thus ‘different from one context to another’, at the same time, deconstruction is ‘absolutely

9 Jacques Derrida, ‘Letter to a Japanese Friend’, in *Derrida and Différance*, ed. by D. Wood and R. Bernasconi, trans. by David Wood and Andrew Benjamin (Evaston: Northwestern University Press, 1988), 3; Jacques Derrida and Christopher Norris, ‘Jacques Derrida: In Discussion with Christopher Norris’, in *Deconstruction: Omnibus Volume*, ed. by A. Papadakis, C. Cooke and A. Benjamin (New York: Rizzoli Press, 1989), 73.

10 Jacques Derrida, ‘Psyche: Inventions of the Other’, in *Acts of Literature*, ed. by D. Attridge (New York and London: Routledge, 1992), 56.

11 Derrida, ‘Some Statements and Truisms About Neologisms, Newisms, Postisms, Paraitisms, and Other Small Seismisms’, 78.

12 Derrida, ‘Letter to a Japanese Friend’, 5.

responsible' because it "takes the singularity of every context into account",¹³ and every context is different. As Derrida argues in *The Animal That Therefore I Am*, there is only the "heterogenous multiplicity of the living, or more precisely [...], a multiplicity of organizations of relations between living and dead".¹⁴

However, while the word 'posthumanism' might in some respects be an essentializing and metaphysical concept, nevertheless like deconstruction, but for differing contextual reasons, it is impossible to totalise, confine, unify and identify. This is because despite incorporating and subsuming other multiple movements and forces, it is, at the same time, precisely this incorporation that hinders posthumanism from corresponding "to a linear and temporal order of succession", and "to the order of a juxtaposing simultaneity".¹⁵ Every so-called 'newism' or 'post-ism', or rising field, is riven (within and without) by paradoxes, contestations, contradictions, and competitions. Thus, the theoretical, critical and philosophical approaches to posthumanism are multiple and varied, encompassing several different disciplines across the sciences, social sciences and humanities, making its lineage somewhat divergent and complicated, and certainly not linear. Again, as Derrida has shown us, there is always already *différance* (that endless movement of differing and deferral) at play within any movement, field or discourse.¹⁶ The 'post' of posthumanism is then perhaps a misnomer. Thus, even if I wanted to define posthumanism, it would be impossible.¹⁷

Having pointed out the totalizing and unified discourse inherent in the attempted definitions of the posthumanism, my aim in what follows is not to claim that the concept or word 'posthumanism' is unproductive as a result. This is because the most inventive theoretical work that has come out of what

13 Derrida and Norris, 'Jacques Derrida: In Discussion with Christopher Norris', 73.

14 Jacques Derrida, *The Animal That Therefore I Am*, ed. by M.-L. Mallet, trans. by David Wills (New York: Fordham University Press, 2008), 31.

15 Derrida, 'Some Statements and Truisms About Neologisms, Newisms, Postisms, Parasitisms, and Other Small Seismisms', 69.

16 First articulated in *Of Grammatology* and then in his essay 'Différance', the notion of *différance* pervades Derrida's oeuvre. "Presence" or "presence to self", for Derrida, can only be a result of a differing and deferring movement that replaces autonomy with heteronomy, and ontology with hauntology. As Derrida argues, "[t]he relation to self [...] can only be *différance*, that is to say alterity, or trace". (Derrida and Nancy, 1991, 100).

17 If one had to keep the post of humanism, then perhaps pluralizing the word might be more apt. And if it's not impossible to define posthumanism, it might perhaps be irresponsible?

is called “critical posthumanism” has been, and still is, an important movement in exposing anthro- and andro-centrism in order to rethink the era in which we currently live (what has been labelled the Anthropocene) and the destructive effects the human has had on plants, animals, geology, and climate. Some of the most critically inventive work in this area successfully avoids the humanist escha-teleological characteristics of posthumanism and instead fosters a “liberationist ideal”, which broadly attempts a “redistribution of difference and identity” by “undermining existing structures of domination” and thus enabling a “redistribution of power”.¹⁸ Evidenced by a plethora of books and articles on the subject,¹⁹ my aim is, first, to attempt to argue that within some instances of posthumanism deconstruction has been reduced to a method, analysis, and application; to “a deconstructionist theory, or unlikely set of ‘deconstructionist’ theorems”.²⁰ Consequently, what has been missed is the radical force of Derrida’s deconstruction, which works to undermine our anthropocentrism by radicalizing, and holding accountable without rejecting, the differences between the human and nonhuman. Moreover, because deconstruction is not a method or analysis, it would be inaccurate to apply deconstruction, as many posthumanist theorists do, as a means of simply overturning or blurring or dissolving the dichotomies or boundaries between the human and nonhuman. Therefore, and second, I want to propose that if there is a deconstructive force to posthumanism it would be in acknowledging rather than reducing the differences between humans and nonhumans. And to this end, later in the chapter I will provide an example of a true long-term relationship between a human (myself) and a wild animal; one in which anthropocentric boundaries are challenged (while still retaining difference). But before this, I want to turn to the first aim and elaborate on the way in which deconstruction has unfortunately been reduced and simplified to the blurring of boundaries and overturning of established hierarchies.

18 Hauskeller, ‘Utopia Trans- and Posthumanism’ (online); Cary Wolfe’s (2010) and Katherine N. Hayles’ (1999) work in this area is truly critical and inventive, and subscribes to what Hauskeller calls the “liberationist ideal” critical posthumanism.

19 Many of the books listed in note 1 (above), not all, claim that they are attempting to decenter the human in favour of a concern for the nonhuman, or call attention to the inseparability between or the “porous continuum” between the human and nonhuman (as examples see *The Nonhuman Turn*, 2015, and *The Human and Animal Boundary*, 2018).

20 Derrida, ‘Some Statements and Truisms About Neologisms, Newisms, Postisms, Parasitisms, and Other Small Seismisms’, 72.

The Reduction of Deconstruction

Derrida has warned that deconstruction is not about “passing from one concept to another”, and it does not just practice an “overturning” of classical oppositions, rather

an opposition of metaphysical concepts (for example, speech/writing, presence/absence, etc.) is never the face-to-face of two terms, but a hierarchy and an order of subordination. Deconstruction [...] must, by means of a double gesture, a double science, a double writing, practice an *overturning* of the classical opposition *and* a general *displacement* of the system.²¹

But this displacement is neither a reversal of binary oppositions, nor is it a dissolution of the boundary or dichotomy that marks the essentializing difference between oppositions. Rather for Derrida, “[t]he movements of deconstruction do not destroy structures from the outside. They are not possible and effective, nor can they take accurate aim, except by inhabiting those structures. Inhabiting them in a *certain way*, because one always inhabits, and all the more when one does not suspect it”²² Inhabiting structures, discourses, texts, relations, inhabiting anything, involves context, and thus awareness of difference. Inhabiting is to affect and be affected by the other (for better or worse), and therefore requires engagement in acts of hospitality and responsibility in the face of violence that potentially results from difference. It is in this way that deconstruction disrupts, intervenes, displaces and thus opens a system, structure, or subject, to the other, and to its ‘other’ within itself. This is why Derrida argues that while the ‘effects of subjectivity’ (which are characterised by ipseity) are real, the subject in and of itself (as that which is ‘self-present’) is a fable, because “[t]he relation to self [...] can only be *différance*, that is to say alterity, or trace” and not only self-presence.²³ And it is through this displacement resulting from habitation that deconstruction is ‘absolutely responsible’, because it “takes the singularity [thus difference] of every context into account”²⁴ (and I will come back to this in relation to the nonhuman animal shortly).

21 Jacques Derrida, *Margins of Philosophy*, trans. by Alan Bass (Chicago: University of Chicago Press, 1986), 329.

22 Derrida, Jacques, *Of Grammatology*, trans. by Gayatri C. Spivak (Baltimore, MD: John Hopkins University Press, 1976), 24.

23 Jacques Derrida and Jean-Luc Nancy, “Eating Well”, or the Calculation of the Subject: An Interview with Jacques Derrida, in *Who Comes After the Subject?*, ed. by E. Cadava, P. Connor and J.-L. Nancy (New York and London: Routledge, 1991), 100

24 Derrida and Norris, ‘Jacques Derrida: In Discussion with Christopher Norris’, 73.

When Derrida says that the effects of subjectivity are real, what he means is that we can't easily abandon, all we can do is disrupt and dislocate, the humanist "subject".²⁵ Undermining anthropocentrism by abandoning the notion of the humanist subject by attempting to dissolve and blur the oppositional boundary between human and nonhuman animal, only serves to subsume or cannibalise the multiple differences of animals (and humans) through a form of "biological continuum" and thus anthropomorphism. However, Derrida is not interested in eliminating this opposition (as if that were possible), nor does he suggest that we can simply abandon the notion of the humanist subject. As I have indicated above, this is not because he believes in the values founding this subject, it is because he subscribes to the notion of *différance*. Acknowledging difference is what enables an acceptance of the other as absolute alterity and safeguards against the cannibalization of the other to the same.

Likewise, it is one thing for deconstruction to inhabit posthumanism, quite another to be reductively cannibalised. And yet, this reduction of deconstruction is evident when posthumanism pursues the dissolution of the boundaries between human and nonhuman in order to overturn the hierarchy to challenge anthropocentrism. But for Derrida a simple overturning is not enough. There is a subtle difference between undermining humanistic thought by questioning the politics and ideologies that form the constructed boundaries between human and nonhuman, on the one hand, and attempting or arguing for the dissolution of boundaries without care for the complexity of difference in order to pursue a political cause, on the other hand. In regard to the former stance, its deconstructive force comes with revealing (not necessarily dissolving) the boundaries in order to expose the hierarchical and hence political consequences for the marginalised other. In regard to the latter, dissolving the boundary between human and nonhuman *does not*, I would argue, undermine the marginalizing politics the boundary fosters, or dissolve anthropocentrism. Rather the move solidifies ipseity (hence humanism) and anthropocentrism. Derrida makes this clear in *The Animal That Therefore I Am*, when he insists:

I shan't for a single moment venture to contest [...] the rupture or abyss between this "I-we" and what we *call* animals. [...] [Because] it would mean forgetting all the signs that I have managed to give, tirelessly, of my attention to difference, to differences, to heterogeneities and abyssal ruptures as against the homogenous and continuous. I have

25 Derrida and Nancy, "Eating Well", or the Calculation of the Subject: An Interview with Jacques Derrida, 99.

thus never believed in some homogenous continuity between what calls *itself* man and what *he* calls the animal. I am not about to begin to do so now.²⁶

For Derrida, arguments or movements that push for the “homogenous and continuous” (such as the dissolution or blurring of boundaries) harbour the “sinister connotations” of failing to understand, first, that “[t]his abyssal rupture doesn’t describe two edges, a unilinear and indivisible line having two edges, Man and the Animal in general”,²⁷ and second, that there is a “heterogenous multiplicity of the living”.²⁸ The perpetuation of the history of anthropocentrism, instantiated by the constructed single indivisible line between Human and Animal, is sinister because, ironically, it serves to not only endorse a form of anthropomorphism that reduces the animal as other to the same, but perpetuates “ultra-humanism”. So, in the same way that deconstruction becomes subsumed within posthumanism, so too does the nonhuman other become subsumed and reduced to the same, in and through the homogenisation of the differences between the human and nonhuman other.

Multiple Differences: A Human and Animal Relation

What would it look like to acknowledge the difference, the absolute otherness, of an animal without anthropomorphising, and reducing the animal to the human-same? And what would taking account of multiple differences entail? In my attempt to answer this I want to now recount a true story, one that I hope provides an example of the way in which anthropocentrism can be undermined while retaining at the same time the differences between human and nonhuman animal. In this way I also hope to be able to contextualize the way in which differences between animal and human might be accepted and respected, while also doing justice to the ways in which deconstruction takes the “singularity of every context into account”.²⁹ As Vinciane Despret argues, it is from our “situated histories, situated stories”³⁰ that we can start to think otherwise; start to acknowledge and respect the multiple differences that organise life.

26 Derrida, *The Animal That Therefore I Am*, 30.

27 Derrida, *The Animal That Therefore I Am*, 31.

28 Derrida, *The Animal That Therefore I Am*, 31.

29 Derrida and Norris, ‘Jacques Derrida: In Discussion with Christopher Norris’, 73.

30 Vinciane Despret, ‘Why “I Had Not Read Derrida”: Often Too Close, Always Too Far Away’, in *French Thinking about Animals*, ed. by L. Mackenzie and S. Posthumus (East Lansing, Michigan: Michigan State University Press, 2015), 6.

I encountered Edna when she was just a baby the size of a kitten seven years ago. She was sitting on the low wall that separates my apartment's terraced veranda from the densely knotted trees that hang over the wall, and which are situated in a very small park. She is a wild Australian brushtail possum. Possums have opposable thumbs and large very long and lush furry prehensile tails that enable them to grip the tree branches they travel by and live in (although to the chagrin of most humans, city possums if they can will move into the roofs of people's houses. They have adapted to the urban environment more than any other native marsupial in Australia). Since first meeting her she has visited every night, and I have hand fed her with her favourites: grapes, kiwi fruit, and bananas. It is through her touch and smell that Edna has given me access to another world in a language that is not my own. In the first year of our relationship she would sometimes accidentally bite my fingers, looking for grapes in my hand. It seemed she was unable to distinguish between my hand, which smelled of fruit, and the fruit itself. When she did this, I would make a noise in pain and jerk my hand away. She would run to the wall. I would coax her, call her, and she would respond by slowly making her way back to me. After a few accidental bites she eventually started to sniff around my hand to locate the fruit rather than bite randomly. Even now, seven years and four baby possums later, she sometimes inadvertently puts her mouth around my finger, but she is now aware of my body; the texture and shape of my fingers, and quickly withdraws her mouth before biting down. Since those few accidental bites she has never bitten me. She has learnt to be gentle with me, and has established my trust, just as I have established hers by being gentle in return and by taking care to notice, to be 'attuned' as Donna Haraway (2008) would say, and sensing and respecting her differing moods through her touch and smell.

Having known Edna for a long time now, there are many stories I could tell at length: from leaving some of her babies with me to babysit for hours on end; how she has mothered her various babies and the differences in personalities; how the TV and the lights signal to her that I am home, to how we together have put in place rituals that change from time to time: from touching my nose with hers before she eats. The most enduring ritual has been her placing her hand on mine as she eats. My hand is held out flat with fruit on it, and with the other I feed her, offering various fruits with my fingers that she gently takes with her mouth or hand. All the while, her left hand (she is right handed) is either gripped around one of my fingers, or placed palm down on my palm. Through Edna's touch I can sense and feel her responding to a world that is not mine and that I in my difference can never experience. And yet I have come to 'know' and associate certain touches with certain responses.

Edna much prefers to sit on the doorframe that separates the loungeroom and the terraced balcony. This way she is able to listen and smell for other possums; other things that might be going on in her possum world, while being hand fed by me. There are so many things about her and her world that I don't understand, can never understand or experience; things of which I can only guess and dream. Over the years she has created a track or path from the garden wall to the door: the soil is worn from her comings and goings, and from her constant body movement back and forth the groundcover gardenias won't grow over the path she has made. I often press my nose into her very thick and dense speckled grey, black and white fur, which sometimes smells of bark and sometimes of flowers, so I get a sense of the types of trees in the park opposite the door that she may have been travelling through. Edna and I live our separate lives mostly unknown to each other (she in her group of trees and me in my home) except in our encounters each night that takes place in our particular space (and which acts as a doorway between both worlds). It is a space we have carved out for each other, and where despite our differences, our otherness, we have become friends based on mutual trust. And while Edna comes and goes (it is her choice), the doorway in which she sits between the outside (her night world) and the inside (my home world) enables our encounters. In other words, because it is a space that is neither inside (where the nonhuman animal becomes tamed and domesticated) nor outside (where the human might fully understand and experience the possum world), it represents the coming together of both our differences and our similarities.

One could argue that these similarities are a result of a biological continuum (that is, it is just a matter of scale in our mammalian biology: we both feel physical pain, we both taste, touch, smell, have voice in varying degrees), but taking my cue from Derrida I want to underplay this seeming homogenous continuity between "what calls itself man and what he calls the animal", for the reasons outlined earlier: there is a danger of subsuming the animal's difference to the human-same. Instead I want to argue that any similarities between Edna and I are constructed and marked in and through this co-constituted shared space where, as I mentioned earlier, we have our mutually recognised rituals that we repeatedly, and with familiarity, take up each night. And it is a result of our rituals that we have created expectations between us and around what happens in our space. These expectations have developed through a shared demand: a responsibility to maintain and protect the space we have co-constituted through our daily rituals. In other words, what has been constituted is not dictated or created by me alone, it is an affective, responsive, singular, and above all contextual, cultural formation in which we acknowledge and respect each other's differences.

Through Edna's touch and through mine, through smell, through our body gestures and eye contact, we have a language in which my human subjectivity, the 'I Am' (ipseity) that defines me, becomes secondary, but without losing my human-ness. There is no blurring of the animal and human (between Edna and I) where our differences cease to be evident. Rather, it is precisely in my relation to, and my being with, Edna that the difference between her possum-ness and my human-ness becomes emphasized. One story in particular highlights this.

One day when I was feeding Edna she suddenly sat on her haunches so that our faces were at the same level (I always lay on the floor to feed her with my head supported by my hand and my elbow on the floor or door frame). Our eyes lock, and at first I didn't notice the light brown colour of her eyes, instead I saw her pondering me, and I saw that she saw me looking back at her. In that moment I felt totally exposed, and not in control. I felt uncertainty and a little fear that comes with absolute wonder, and this was because I had been confronted by the absolute other that sensed me not as some 'I Am', but as a 'presence' different to hers. Who is this 'me' Edna apprehends in this moment of looking? In that moment I didn't know who I was, because she didn't perceive me as 'I Am' in the humanistic sense, and so at that moment I seemed to become, or be, something different. Or more aptly I sensed my own otherness, and therefore sensed my heteronomy rather than autonomy. In this moment as I am held by her gaze, by the gaze of the absolute other, I recognise not only the 'I Am' as that which becomes secondary in our relationship, but the other (Edna) that defines me. I also sense the animal other within me; the animal that I am; the animal Edna recognises.

When I say that Edna didn't perceive me as 'I Am' in the humanistic sense, this is because it seems that while we have formed a singular, unique relationship where our responses to each other are co-entwined and co-constituted in and through our moments together each night, Edna does not appeal to my rationality or rational judgement. Rather, in a non-declarative style her presence demands from me trust and responsibility; a responsibility that requires giving myself over to her. In other words, despite our differences there is a knowledge 'of sorts' of Edna, it is not the knowledge of categorization or animal behavioural theory and scientific observation applied to a species of animal, rather it is a 'giving over' or 'surrendering' to her so that when I am with Edna I do not resist being directed and shaped by her touch, smell, and gaze. It is Edna who redefines me when I am with her, in ways that entail in part highlighting the animal that I am but without losing the fact that as a human I have also been constituted by a long history of logocentrism that forms my human-ness, and there is no getting

away from this, just as Edna cannot cease to be a 'possum' (whatever that really is, because how can I know when I can't entirely experience her world).

What my encounter with the other that is Edna exposes, is something other than only this humanistic 'I Am' as all humanistic prescriptive rules and regulations are abandoned and reformulated. That is, if the metaphysical constructs founded by our own anthropocentrism and anthropomorphism of the human which constitutes the 'I Am', and if during my encounters with Edna 'I' partly disappear because the 'I Am' of humanistic metaphysics is not acknowledged or not recognised by Edna as such (precisely because I am not entirely accessible and understandable to her, and vice-versa), then any responsibility that occurs between Edna and I is absolutely singular, unique and always in a process of co-constitution: it is a responsibility that is not anthropocentric. Derrida articulates this beautifully when in his interview 'Eating Well' (1991) he suggests that being rational and autonomous does not necessarily mean this is the only way of being responsible. Instead the self (subject) answers the call of the other before

[...] even being able to formulate a question, that is responsible without autonomy, before and in view of all possible autonomy of the who-subject, etc. [...]. Not only is the obligation not lessened in this situation, but, on the contrary, it finds in it its only possibility, which is neither subjective nor human. Which doesn't mean that it is inhuman or without subject [...].³¹

And yet, at the very same time, my relationship with Edna has taught me what it feels to be something else that exists perhaps outside the reach of any kind of anthropocentric human when I am with her, because I come to partly (but not fully) understand and experience her not through reason, but by being-with in immanence. But this does not mean the borders or the boundaries between us are blurred or dissolved; but what is dissolved is the centrality of my own existence as a humanistic 'I Am'.

A Deconstructive Neologism

In the end I want to suggest that it is this focus on, and responsibility for, the other (in this case the animal other) that perhaps enables us to move away from our anthropocentrism. It is a move that results not in the dissolution of ontology or difference by blurring boundaries, but one that instantiates a care for the *difference* of the other. Consequently, I want to propose that given the radical force

31 Derrida and Nancy, "Eating Well", or the Calculation of the Subject: An Interview with Jacques Derrida, 100.

of deconstruction is in its responsibility to absolute alterity, to difference, then what potentially *inhabits* critical posthumanism is precisely this deconstructive force. And it inhabits it especially when posthumanism partakes of proliferating the differences between humans; between nonhumans, and between humans and animals, and thus emphasizing not the human (self) but the absolute other (nonhuman) and the way in which both co-constitute each other without obliterating differences. In this way, rather than deconstruction being reduced to a bad application of overthrowing and blurring boundaries, *perhaps*, posthumanism could be thought of as one of Derrida's many deconstructive neologisms at work in the particular context of the Anthropocene.

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Fred Evans

Deleuzian Cosmopolitanism: From the Capitalist Axiomatic to the “Chaosmocene”

Abstract

Deleuze and Guattari hold that being is the endless differentiation of itself into new events, a “chaosmos.” How does this cosmology contribute to the political ethics of contemporary cosmopolitanism? The answer is complicated because Deleuze and Guattari claim that subjects today are interpellated by a “capitalist axiomatic.” Although they suggest that this axiomatic can be disrupted, they do not clarify sufficiently the role that we, as already interpellated, can play in that disruption and what positive meaning it might have for us. I argue that a promising solution is obtainable by utilizing their comments on “voices” in conjunction with an appeal to Michel Foucault’s treatment of political cosmopolitanism through his reference to the ancient Greek notion of *parrhesia*. I refer to this solution as “parrhesiastic cosmopolitanism” and argue that it can be both the condition and continual result of its absolute deterritorialization. I also show how this form of cosmopolitanism includes opening up all the voices in the cosmos – human and non-human – to a parrhesiastic form of mutual audibility, a “Chaosmocene,” that replaces the geological epoch of the Anthropocene and supports the “unnatural participations” and “becoming-everybody/everything” of which Deleuze and Guattari speak. Such a becoming also requires resisting and always deterritorializing once more the reterritorializing efforts of the capitalist axiomatic and the Anthropocene.

The last decade has seen a torrent of publications on cosmopolitanism and its response to globalized capital. This includes at least one volume, *After Cosmopolitanism*, that supports the philosophical work of Gilles Deleuze and Félix Guattari.¹ Most of these publications understand cosmopolitanism as an ethico-political desire for world-togetherness. They also see cosmopolitanism as facing two major issues. The first is rooted in the growing recognition that cultural, ethnic, and other forms of diversity constitute an ethico-political value and not just the factual reality they have always had. This recognition of diversity’s value inspires cosmopolitanism to relinquish its traditional search for a homogeneous form of unity and to embrace heterogeneity as well as solidarity. To obtain this

1 Rossi Braidotti, Patrick Hanafin, Bolette Blaagaard, eds., *After Cosmopolitanism* (New York: Routledge, 2013).

result, it must resolve what I call the “dilemma of diversity”.² According to this dilemma, the wish for solidarity threatens to diminish or eliminate heterogeneity; but emphasis on heterogeneity can divide a polity into incommensurable or even antagonistic fragments. In short, unity and diversity threaten to cancel one another.

The second major issue is how to resist the current form of globalization and its voracious appetite for accumulating capital as well as exploiting natural and human resources. This sort of market fundamentalism has generated an intolerable level of socioeconomic inequality between and within states³ and has also contributed to the destruction of the environment that sustains us all. Due to the threatening imprint this tendency has left on the globe, many commentators have placed blame on the human species and labeled this worrisome geological epoch the “Anthropocene”.⁴

A formal response to the dilemma of diversity and the dominance of capital can appeal to a unity *composed of* difference rather than one *imposed on* it. This differential form of unity valorizes the political virtues of solidarity and heterogeneity and prohibits sacrificing either of them on the altar of the other. It also affirms a third virtue – fecundity, that is, the production of new differences through the creative interplay among the other forces in the same domain.⁵ This differential form of unity therefore promises to escape the dilemma of diversity. As we will see later, it also suggests a basis for resisting capitalism and for replacing the Anthropocene with a geological epoch whose name will treat the cosmos universally.

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- 2 Fred Evans, *The Multivoiced Body: Society and Communication in the Age of Diversity* (New York: Columbia University Press 2008, 2011), 3–4.
 - 3 Robert Kuttner, *Can Democracy Survive Global Capitalism?* (New York: W.W. Norton & Company, 2018), xvi–xix; Thomas Piketty, *Capital and Ideology*, trans. by Arthur Goldhammer (Cambridge, MA: Belknap Press of Harvard University Press, 2020), 649, 961.
 - 4 Because of the human impact on the climate and environment, the International Congress of Geological Sciences voted favorably to call the current geological epoch the “Anthropocene.” For a provocative article that also takes in the political meaning of this event, see Arun Saldanha, ‘A Date with Destiny: Racial Capitalism and the Beginnings of the Anthropocene’, *Environment and Planning D: Society and Space* 38.1 (2020), 12–34. For a clarifying treatment of Deleuze’s idea of the “logic of immanence,” see Hanjo Berressem, ‘Ecology and Immanence’, in *Handbook of Ecocriticism and Cultural Ecology*, ed. by H. Zapf (Berlin: De Gruyter, 2016), 84–104.
 - 5 Evans, *The Multivoiced Body*, 3–8.

But the idea of a differential unity remains abstract. To remedy this deficiency, I will argue that Deleuze and Guattari's cosmology can provide this type of unity and the three political virtues (solidarity, heterogeneity, and fecundity) with a concrete interpretation and an ontological basis. This accomplishment would help cosmopolitanism resist what Deleuze and Guattari call the "axiomatic of capitalism."⁶ More specifically, I will argue that the under-appreciated notion of "voice" in the cosmology of Deleuze and Guattari will help us deal innovatively with the issues of diversity and the axiomatic. It will also aid in addressing a third issue we must confront after having dealt with the other two. Unlike the latter it is internal to Deleuze and Guattari's cosmology. It is suggested in Claire Colebrook's essay on Deleuzian cosmology, 'Destroying Cosmopolitanism for the Sake of the Cosmos.'⁷ The solution to this third issue will also suggest the reality of a geological epoch that absorbs the Anthropocene. It will encompass the voices of the entire cosmos; we can name it the "Chaosmocene."⁸

Chaosmos

We can begin tackling these issues by introducing Deleuze and Guattari's characterization of the cosmos. In *The Logic of Sense* and elsewhere, Deleuze argues that the cosmos consists of series of elements that intrinsically diverge from each other but, paradoxically, still communicate with one another. This communication does not reflect a predetermined order. Instead, it repeatedly produces new "singularities" that would undermine any such regime. It is therefore a "composed chaos," a cosmos that is simultaneously an anti-cosmos or anti-order. Deleuze refers to this cosmos with the hybrid term, "chaosmos."⁹

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- 6 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. by Brian Massumi (Minneapolis: University of Minnesota Press, 1987), 454–55.
 - 7 Claire Colebrook, 'Destroying Cosmopolitanism for the Sake of the Cosmos', in *After Cosmopolitanism*, ed. by R. Braidotti, P. Hanafin, B. Blaagaard (New York: Routledge, 2013), 181.
 - 8 This particular twist on the names of geological epochs is inspired by Bogue's rewriting of "cosmopolitanism" as "chaosmopolitanism"; see Ronald Bogue, 'Nature, Law, and Chaosmopolitanism', in *Revisiting Normativity with Deleuze*, ed. by R. Braidotti and P. Pisters (New York: Bloomsbury, 2012), 98–114.
 - 9 Gilles Deleuze and Félix Guattari, *Thousand Plateaus*, 100, 6, 313, 323, 328–89, and *What Is Philosophy?*, trans. by Hugh Tomlinson and Graham Burchell (New York: Columbia University Press, 1994), 118, 208, 156; Gilles Deleuze, *The Logic of Sense*, ed. C.V. Boundas, trans. by Mark Lester and Charles Stivale (New York: Columbia

To further characterize chaosmos, Deleuze uses “voice” to signify the becomings that make up reality: “[Being is the] single and same voice for the whole thousand-voiced multiple, [...] a single clamour of Being for all beings”.¹⁰ Indeed, Being’s “univocal meaning” is simply its division of itself into this clamorous progeny. But Deleuze, along with Guattari, also describes the interrelationship among these voices as a form of solidarity: “What we are talking about is not the unity of substance but the infinity of the modifications *that are part of one another* on this unique plane of life”.¹¹ Because each of these modifications is also a singularity, we can say that each voice is part of the identity or being of the rest and at the same time their “other”. Deleuze and Guattari’s identification of reality with chaosmos therefore affirms at once both solidarity (each voice is part of the identity of the others) and heterogeneity (each voice is simultaneously the other of the rest). Moreover, the interrelation among these voices is dynamic: their interaction produces new voices and thus the fecundity of the cosmos. In other words, the vocalicity of this chaotomic reality captures what we have been seeking in Deleuze and Guattari’s cosmos: a unity composed of difference with its three political virtues of solidarity, heterogeneity, and fecundity. We will see that this threesome applies not only to humans but also to all the inhabitants of the cosmos.

With this view of the cosmos, then, Deleuze and Guattari escape the dilemma of diversity and provide an ontological basis for cosmopolitanism and its differential unity. But this cosmopolitanism must also have an ethical dimension if it is to commit us to supporting the three political virtues along with opposing global capitalism and the negative implications of the Anthropocene. Deleuze and Guattari offer this ethics in following Nietzsche’s idea of “*Amor fati*” or love of fate. This fate, and what we are asked to love and to will, is the new event of becoming that is harbored within the mundanity of what occurs around us. In short, affirming chaosmos and the differential unity of reality is to become “citizen[s] of the world”, to become cosmopolitan.¹²

Deleuze and Guattari also call this political ethics an “ethology”. According to it, the good is joy in increasing the power or audibility that a voice gains by receiving the “affects,” the capacities, of other voices, or, alternatively, by adding its

University Press, 1990), 174–76, and *Difference and Repetition*, trans. by Paul Patton (New York: Columbia University Press, 1994), 123–24, 128.

10 Deleuze, *Difference and Repetition*, 304, 25–26; see also Deleuze, *Logic*, 179–180, 267.

11 Deleuze and Guattari, *Thousand Plateaus*, 254 (my italics); see also 255, 256, 514.

12 Deleuze, *Logic*, 148, 149–50.

own affects – what it can express – to the other voices; in contrast, the bad is the sadness associated with the decrease in audibility that a voice undergoes when it is muffled and separated from what it can express. Given what we have said about solidarity, heterogeneity, and fecundity, joy ultimately would be when all the voices, all the multiplicities, mutually increase each other's power to produce new voices through their creative interplay with one another.¹³

Assemblages and Their Two Planes

To see how the cosmos can be good or bad at any moment in the interplay among its constitutive assemblages – its voices – we must go to another level. It concerns a general tension constituting each assemblage as a becoming. This tension is well known to readers of *A Thousand Plateaus*: it consists in the symbiotic relation between the “plane of organization” (or the “actual real”) and the “plane of consistency” (or the “virtual real”).¹⁴ According to Deleuze and Guattari, the intrinsic becoming of each assemblage involves three phases: “absolute deterritorialization” first dissolves the forms and relationships that entities have on the plane of organization; after which these now relatively unformed entities or “haecceities” and their “affects” enter into “unnatural participations” – novel relationships – with each other on the plane of consistency; but they are then reterritorialized into the no longer “absolutely deterritorialized” entities they become in their reappearance on the plane of organization; and then the cycle begins again.¹⁵ In short, each becoming consists in the symbiotic opposition between the different territorializing movements of the two planes, whether it be the production of sandstone on the physicochemical stratum, the appearance of

13 Deleuze and Guattari, *Thousand Plateaus*, 256–65.

14 Deleuze and Guattari, *Thousand Plateaus*, 473; see also 56, 215, 220, 227, 230–31, 269–70, 285–86, 473, 508–10.

15 Deleuze and Guattari, *Thousand Plateaus*, 265–268. More elaborately, a becoming involves an eventual “struggle” between the reterritorializing movement and the absolute deterritorialization now turned into a “relative deterritorializing” force; the result of this conflict is a more, or less, reterritorialized plane of organization in comparison with the former plane of organization. The becoming as a whole is the actualization of the virtual real, which is then already part of a new or further becoming/absolute deterritorialization of the original “assembled desire” in question. These becomings are an aeonic rather than the chronic form of time that characterizes the plane of organization alone: the aeonic event takes place temporally as an organic whole. See Evans, *The Multivoiced Body*, 34–36, for a fuller exposition.

a new species on the organic stratum, or the occurrence of human beings and their economic systems on the alloplastic (or human) stratum of the cosmos.¹⁶

In her article, Colebrook warns that we will continue to think of the cosmopolitical “speaking-seeing face,” “commanding voice,” and “organized body” as “synthesized and coordinated to produce the man of politics.”¹⁷ This is the same politics that has given us capitalism, human induced climate change, and “managerial globalization,” that is, the Anthropocene.¹⁸ Colebrook calls instead for a “differential politics” that will free us from this “all-too-human composition.”¹⁹ She describes this politics as different “than a discursive politics among communicating individuals.” Indeed, it “needs to open up to forces that are not our own,” the “elemental and inhuman,” and thus to think the life that “may be worthy of living on.” This approach, she continues, requires “a thought of the cosmos” that undermines “the polity” and takes us beyond what the “elements and forces” merely “mean for us.”²⁰

I can agree with Colebrook that we require this sort of radical thought and the absolute deterritorializations that can create the elemental and inhuman forces of the plane of consistency and the cosmos. But how can we do our part in bringing this radical change about if we are only the “political man” already congealed on the plane of organization? The conditions that Deleuze and Guattari stipulate for absolute deterritorialization suggest the necessity of some form of creative polity on the plane of organization if we are to enter a satisfactory absolute deterritorialization on the plane of consistency. Deleuze and Guattari hold that the absolute deterritorialization of the plane of organization converts that plane’s particular “particles,” “forms,” and “functions” into the unformed entities or “haecceities” and their “affects” that are most nearly compatible with what the overall assemblage is becoming, what its voice or “abstract machine” is aiming to express.²¹ Indeed, if the particular composition of the plane of organization made no difference to absolute deterritorialization and its results, then Deleuze and Guattari would be endorsing a pure form of vitalism, the creation

16 Deleuze and Guattari, *Thousand Plateaus*, 57–68, 502.

17 Colebrook, ‘Destroying Cosmopolitanism’, 179.

18 Colebrook, ‘Destroying Cosmopolitanism’, 172. See also Claire Colebrook, ‘A Grandiose Time of Coexistence’: Stratigraphy of the Anthropocene’, *Deleuze Studies* 10.4 (2016), 440–454.

19 Colebrook, ‘Destroying Cosmopolitanism’, 179.

20 Colebrook, ‘Destroying Cosmopolitanism’, 181.

21 Deleuze and Guattari, *Thousand Plateaus*, 270; see also 266–68.

ex nihilo that they repudiate. Chaosmos would become pure chaos, pure desire rather than assembled desire, divergent series that could not communicate with one another.

To see what conditions – what polity – on the plane of organization might best support the sort of differential politics favored by Colebrook and Deleuze, we must note that the two planes of an assemblage share a pair of [sub-]assemblages or “aspects” that are components of the assemblage as a whole.²² Deleuze and Guattari call one of these components the “collective assemblage of enunciation”. They say it is “unconscious” and describe it as a “constellation of voices”.²³ They refer to the other component as the “machinic assemblage of bodies.”²⁴ Moreover, these two component assemblages “reciprocally presuppose” each other: on the one hand, the voices of the assemblage of enunciation can express themselves in ways that impact upon the organization of the bodies of the machinic assemblages; on the other hand, these bodies can shake up the discourses of the voices in the collective assemblage of enunciation.²⁵

In the collective assemblage, the voices and their correlative discourses interpellate and subjectify us as their enunciators. For example, professors and students repeat or modulate the patterns, the voices, that are already laid out for them by the traditional discourse and rules of the university. Deleuze and Guattari hyperbolize this notion and say that our “direct discourse” is actually the “free indirect discourse running through [us], coming from other worlds or other planets”.²⁶ This indirect discourse is therefore logically prior to the direct, self-aware discourse that constitutes “intersubjective communication”.²⁷ Because of this priority, Deleuze and Guattari claim that languages consist of “order-words”. These words “incorporeally transform” us into their enunciators: “language,” therefore, “is not life; it gives life orders”.²⁸

Deleuze and Guattari emphasize the collective nature of the voices composing this indirect discourse and its order words. They hold that a statement

22 Deleuze and Guattari, *Thousand Plateaus*, 90, 140, 504.

23 Deleuze and Guattari, *Thousand Plateaus*, 84.

24 Deleuze and Guattari, *Thousand Plateaus*, 90, 91, 140–43.

25 If this seems similar to the reciprocal presupposition between expression and content, it is. However, the two sub-assemblages (enunciative and machinic) or two “aspects” of the entire assemblage encompass both function/matter and expression/content (Deleuze and Guattari, *Thousand Plateaus*, 140–41; see also 90).

26 Deleuze and Guattari, *Thousand Plateaus*, 84.

27 Deleuze and Guattari, *Thousand Plateaus*, 78, 85.

28 Deleuze and Guattari, *Thousand Plateaus*, 76, 77, 79.

is “individuated, and [its] enunciation subjectified, only to the extent that an impersonal collective assemblage requires [and determines] it”.²⁹ Thus I speak in the voice of a professor – all those preceding me – at the same time as I speak as this professor that I am. This collective impersonality of the constellation of voices reinforces what was said earlier about each voice resounding in all the others – that each is part of the identity and at the same time the other of the rest. Consequently, Deleuze and Guattari declare that this constellation of voices “explains all the voices present within a single voice”.³⁰

Order-words help provide the lawful regularity that we find on the plane of organization. They reinforce Colebrook’s concern that a managerial form of political man can only repeat a too regulated manner of existing. But Deleuze and Guattari also hold that “passwords” are included within and challenge the order-words.³¹ These passwords give rise to incorporeal transformations that amount to “life” and “a passage to the limit”, reducing the fatal pronouncements of the order-words to only one “variation” of that passage. Thus language can take on the forms given to it by a poet like e. e. cummings, for example, “he danced his did”, “they went their came”, or by other vehicles of linguistic variation.³² In tandem with these variations, the bodies on the plane of organization are also “caught up in this movement of metamorphosis” and thus “overstep the limits of their figures”.³³

Given this distinction between the two types of words, our question now includes which sort of polity would best facilitate the release of the passwords that lie in wait within order-words and permit corporeal metamorphoses. This question leads to the axiomatic of capitalism and the “minoritarian” voices that oppose it.

The Axiomatic of Capitalism

Although each becoming in the human stratum is an intersection of all the voices in the cosmos, one of them is often hegemonic. Deleuze and Guattari refer to the hegemonic voice of modernity as the “postsignifying subjective regime of signs”.³⁴ They add that this semiotic regime has Capital as its “point of

29 Deleuze and Guattari, *Thousand Plateaus*, 80.

30 Deleuze and Guattari, *Thousand Plateaus*, 77, 80, 84.

31 Deleuze and Guattari, *Thousand Plateaus*, 107, 108.

32 Deleuze and Guattari, *Thousand Plateaus*, 99, 110.

33 Deleuze and Guattari, *Thousand Plateaus*, 108, 109–10; see also 62, 89.

34 Deleuze and Guattari, *Thousand Plateaus*, 119–139.

subjectification par excellence”.³⁵ They assign several major features to capital, which they refer to as the “axioms” of capitalism. One axiom is that capital constitutes itself by conjugating flows of “unqualified” labor and wealth. This conjugation transforms labor into a commodity and private property into “convertible abstract rights” for owing and selling. Indeed, the “Object” of capital is not the earth but these commodities themselves.³⁶

A second axiom of capitalism shifts from its Object to its “Subject”. Capital itself, rather than individuals, becomes an “independent Subject”. Not only does it constitute “the sole social bond”, it also exceeds the states and transforms all of them into “models of [capital’s] realization”, like the “different neighborhoods” of a “single City”.³⁷ According to a third axiom, the workers and other subjects interpellated by capital become components in a system of “machinic enslavement”, that is, parts of “human-machine systems”. We are “subjected” to these systems insofar as we think we make TV and other technologies what they are, when in reality they shape us. We are “enslaved” by these same systems insofar as we become component parts of their feedback loops.³⁸ A fourth major axiom reduces law to the immediate characterization of the axiomatic, reminding us that the latter is the semiological form of capitalism and that its axioms are components of the assemblages of production, consumption, and circulation.³⁹ In short, capital is a voice that ventriloquizes us.

Other axioms emphasize the capitalist axiomatic’s continuous stopping of flows or converting them into “decidable propositions.” For example, U.S. capitalism added the axiom of the Marshall Plan to resurrect Europe after WWII and turn it into a capitalist ally and a market necessary for the U.S.’s own economy.⁴⁰ Similarly, capital can confront and displace its internal limit of the falling rate of profits by creating new industries and/or finding new markets.⁴¹ It can even make a policy of peace that operates as an excuse for technologically freeing the unlimited material process of total war.⁴² Moreover, capital produces axioms for decoding and exploiting the global South’s flows of natural and human resources for the benefit of the global North; simultaneously, it renders traditional workers

35 Deleuze and Guattari, *Thousand Plateaus*, 130.

36 Deleuze and Guattari, *Thousand Plateaus*, 452–53, 454.

37 Deleuze and Guattari, *Thousand Plateaus*, 234–36, 454, 452–53, 459.

38 Deleuze and Guattari, *Thousand Plateaus*, 458–59.

39 Deleuze and Guattari, *Thousand Plateaus*, 453, 461.

40 Deleuze and Guattari, *Thousand Plateaus*, 462.

41 Deleuze and Guattari, *Thousand Plateaus*, 463.

42 Deleuze and Guattari, *Thousand Plateaus*, 467.

of the global North obsolete by relocating manufacturing and industrial agriculture to the global South.⁴³

What we've heard already about capitalism presents it as the special kind of voice that I call an "oracle", with the axiomatic as the oracle's semiotic discourse. This oracle, like those of racism, patriarchy, homophobia, fascism, and the Anthropocene, declares its discourse non-revisable and aims to cease the clamor of the other voices or, alternatively, to harness and reduce them to its own purposes. But Deleuze and Guattari are at pains to show that the idea of "a world supergovernment that makes final decisions" is an "absurdity".⁴⁴ Besides conflicts concerning when to add or subtract an axiom, the greatest political struggle concerns "the opposition between, on the one hand, the plane of consistency and, on the other, the plane of organization and development of capital".⁴⁵ More specifically, the absolute deterritorialization of capital creates and connects novel flows that are in excess of anything the axiomatic can reterritorialize into the commodity form on the plane of organization. Deleuze and Guattari call these novel flows "undecidable propositions" and claim that they follow "lines of flight that are connectable" and thus escape becoming the "decidable propositions" of the axiomatic. These undecidable propositions are therefore "the germ par excellence of revolutionary decisions." Indeed, "every struggle is a function of all of these undecidable propositions and constructs *revolutionary connections* in opposition to the *conjugations of the axiomatic*".⁴⁶

To make these undecidable propositions and their political sense more concrete, we can examine Deleuze and Guattari's discussion of flows represented by minorities and the proletariat. For the two cosmologists, the minoritarian is always deterritorializing the majoritarian standard of "the average adult-white-heterosexual-European-male-speaking-a-standard language" that dominates the modern plane of organization.⁴⁷ The minoritarian action releases new propositions of flows on the plane of consistency. In contrast, the majoritarian axioms of capitalism work to reterritorialize minorities into its type of propositions by either eliminating the minorities or integrating them into the majority. That is, capital wants to transform "nondenumerable sets" into "denumerable" ones. But this conjugation of the minoritarian flows fails because exterminating a minority

43 Deleuze and Guattari, *Thousand Plateaus*, 468–69.

44 Deleuze and Guattari, *Thousand Plateaus*, 461.

45 Deleuze and Guattari, *Thousand Plateaus*, 473; see also, 461.

46 Deleuze and Guattari, *Thousand Plateaus*, 473.

47 Deleuze and Guattari, *Thousand Plateaus*, 105–06.

by starvation or other means always creates a new nondenumerable minority out of those who escape that fate. The same is true for integrating minorities into a majority: those who refuse this inclusion become a new minority.⁴⁸ Thus, while capitalism effectuates itself in denumerable sets, it simultaneously “constitutes nondenumerable sets that cut across and disrupt [its] models”.⁴⁹

For Deleuze and Guattari, the main importance of minorities is their asserting “the power of the nondenumerable”. This power consists in connecting all the voices in their nondenumerability and forming a “zone of indetermination” with them, letting them become “imperceptible” on the plane of consistency. This imperceptibility consists in their being freed of their denumerable forms and becoming pure haecceities with new affects for combining with one another in novel ways, for becoming “minority as a universal figure, or becoming-everybody/everything”.⁵⁰ When the minorities become universal in this sense, they become “revolutionary”, carrying “within them a deeper movement that challenges the worldwide axiomatic” and “destroys the dominant equilibrium of the denumerable sets”.⁵¹ In other words, this movement would be similar to opening up the “elemental and inhuman” forces of which Colebrook speaks or escaping from the geological epoch of the Anthropocene and entering into an epoch that will require another name.⁵²

48 Deleuze and Guattari, *Thousand Plateaus*, 470–71, 471–72.

49 Deleuze and Guattari, *Thousand Plateaus*, 472.

50 Deleuze and Guattari, *Thousand Plateaus*, 470.

51 Deleuze and Guattari, *Thousand Plateaus*, 472.

52 Besides the name that I will ultimately suggest, another is the Symbiocene. The version of the latter by Glenn Albrecht is very attractive about grasping the interconnections among the elements of nature. But he rejects democracy as too “anthropocentric” and proposes instead a ruling body that seems to come close to what has been called technocracy: he says that what he calls the “sumbiocracy” requires “those who govern (Sumbiocrats) to have an in-depth understanding of total ecosystems and the symbiotic interrelationships that enable them to function” (15). But this appears to preclude the democratic selection by ‘we the people’ of a leadership with a broader or different wisdom than the “socio-biological” sort depicted by Albrecht (15). I agree, however, that it would be very important for the elected leadership to be familiar with and favorable toward this socio-biological knowledge as well as having a group of experts of that knowledge as advisors. See Glenn A. Albrecht, ‘Exiting the Anthropocene and Entering the Symbiocene,’ *Minding Nature* 9.2 (2016), 12–16.

A Parrhesiastic Cosmopolitanism?

But how can minoritarian voices facilitate this revolution? How are they to compose a constellation of voices that would simultaneously enable the absolute deterritorialization of the capitalist axiomatic and the Anthropocene, and then resist capitalism's reterritorialization of the laudatory effects of the deterritorialization? Deleuze and Guattari hold that the minorities cannot accomplish these two goals via their own states or axiomatic processes; but they allow that the "calculus" of "the pure becoming of minorities" might involve "its own compositions, organizations, [and] even centralizations".⁵³ Our question, then, is what sort of cosmopolitan organization or polity on the plane of organization would be most appropriate given the ultimate goal of "becoming-everybody/everything"?

We have already seen that the chaosmotic ontology of Deleuze and Guattari, as well as their notion of the constellation of voices, support the idea of the differential unity of the cosmos and its three political virtues of solidarity, heterogeneity, and fecundity. Because each voice is part of the identity of the others, the creation of a new voice is immediately the metamorphosis of the entire multi-voiced body, however so slight a change to our eyes. In other words, the being of this chaosmotic cosmos is its metamorphoses. Moreover, we saw that the immanent political ethics of the cosmos, *amor fati*, amounted to the ultimate joy of all the voices, all the multiplicities, mutually increasing each other's power or audibility, producing new voices through their clamorous interplay with one another. But this can be accomplished only if the cosmos can hold off the counter tendencies within itself toward either chaos or congealment.

On our own stratum, the alloplastic, we run the same gambit as the other two strata of the cosmos. But we do so by the terms of our own species vocality, our own singular "refrain".⁵⁴ As in the other voices that make up the cosmos, our

53 Deleuze and Guattari, *Thousand Plateaus*, 471. Deleuze and Guattari list women, workers, oppressed masses, and other minorities or marginalized groups as those whose struggles on the plane of organization can open up "the gap between two types of propositions, propositions of flow and propositions of axioms".

54 Deleuze and Guattari, *Thousand Plateaus*, 310–50. Deleuze and Guattari refer to human language (refrain) as "superlinear" because only it can "represent all the other strata [the physiochemical and the organic] and thus conceive a scientific conception of the world" (Ibid., 62). They also hold that the effectuation of the alloplastic or human stratum involves the absolute deterritorialization of the head of a pre-human organic creature, removing it from the stratum of the organism and connecting it to the stratum of "significance and subjectification", while, correlatively, transforming the organic stratum's "milieu" into the "landscape" or "open world" for the newly transformed

alloplastic voices are shot through with one another. Thus here too a valorization of any one voice is at once that of all the others as well as the affirmation of the three political virtues and the metamorphoses of the body that these voices create in their dialogic interplay with one another.

We can make this political ethics more specific by adding to Deleuze's insightful treatment of Michel Foucault's work in other texts.⁵⁵ This extension consists in Foucault's later reflections on the ancient Greek notion of *parrhesia*.⁵⁶ The latter notion urges us to speak truth courageously to the other enunciators in the constellation of voices, but also to hear them fearlessly in turn, that is, with a disposition to change possibly our own discourse in light of what they say. So long as this parrhesiastic pact preserves an agonistic space for dialogic exchange, for an exchange that intrinsically invites a response even to the rejection of the very idea of that space, so long as it favors "pass words" over "order words," the minoritarian over the majoritarian, we can speak of a parrhesiastic cosmopolitanism. The commitment of the cosmopolitan enunciators to this political ethics constitutes their solidarity as well as their simultaneous valorization of the heterogeneity and fecundity of the voices that make up the alloplastic polity.⁵⁷

inhabitants, though the new stratum remains part of cosmos that includes the other two strata, the physio-chemical and the organic (172). This deterritorialization is more complex than what I've just stated, but it allows me, on my own account, to image the full meaning of it as follows: the "superlinear" human language mentioned above is the creative dialogic interplay among voices; this interplay makes each voice a dialogic and non-synthetic hybrid of the rest and is also the creator of novel voices; the alloplastic stratum or assemblage is then the broader setting of this interplay among human voices (their refrain); and it is within this dynamic setting that the enunciators of these voices carve out their role, however small, in the ongoing becoming (event) of the alloplastic assemblage – it is their (our) "fate". See Evans, *The Multivoiced Body*.

55 For example, Gilles Deleuze, *Foucault*, trans. by Sean Hand (Minneapolis: University of Minnesota Press, 1988).

56 Michel Foucault, *The Government of Self and Others: Lectures at the Collège de France, 1982–1983*, vols. 1 and 2, ed. by F. Gros, trans. by Graham Burchell (New York: Picador/Palgrave Macmillan, 2011).

57 Although I think that the commitment to parrhesiastic dialogue follows from the Deleuzian and my own political ontology of the three political virtues, the connection between the political ethics of that sort of dialogue and the ontology still requires more elaboration. For now I can say that a commitment to at least the opposite of parrhesiastic dialogue (for example, manipulative or hate speech) would fall under the rubric of "oracle" and thus against the *amor fati* (see above) for chaosmos and the three political virtues.

More concretely, parrhesiastic cosmopolitanism would imply an economic structure that I can only suggest here. Its affirmation of mutual audibility, its political ethics, would require factories and other workspaces different than the ones most of us have experienced under capitalism. It would require that the managers and policies of these production and service firms be determined democratically by the workers themselves. This democratic form of worker management could be linked to markets but only to the degree that the control of new investments by the cosmopolitan body act as what David Schweickart calls a “counterfoil” to the “irrational consequences of an overextended market – what Marx calls the ‘anarchy’ of capitalist production”.⁵⁸ These democratic economic forces would not just be supportive of parrhesiastic cosmopolitanism, they would be the embodied expression of it and the courageous champions of speaking and hearing it.

There is, of course, a darker side to the joyful political ethic of parrhesiastic cosmopolitanism. The affirmation of all the voices in the cosmopolitan polity includes even the oracular voice of the capitalist axiomatic. Therefore even it must be heard in the parrhesiastic manner we have prescribed. But the axiomatics’ desire to seal up the open space for this agonistic dialogue means also that the cosmopolitan polity equally resists such a threat to its integrity. It will, that is, remain true to its political ethics and *hear* the oracle parrhesiastically but also reject it as a governmental power or *policy-making voice*.

The political ethics derived from Deleuze and Guattari’s cosmic ontology therefore commits the enunciators of parrhesiastic cosmopolitanism to generate all the propositions of flows that it can to deterritorialize the oracle of capital and its axioms. The hope is that this would establish the parrhesiastic cosmopolitan body to become a self-generating, self-deterritorializing process – the condition and the result of its absolute deterritorialization – one that always includes resistance to oracles as part of its political ethics. In facilitating this absolute deterritorialization of itself, the cosmopolitan body would remain what it is but always as different, always in metamorphosis.

58 David Schweickart, *After Capitalism* (Lanham, MD: Rowman & Littlefield, 2002), 57; See also Tony Smith, *Globalization: A Systematic Marxian Account* (Boston: Brill, 2006). Of course, this degree of socialism on the plane of organization would hopefully trigger an absolute deterritorialization of itself more conducive to the Chaoscene I am suggesting (see below).

The Chaoscene

Would this vision of parrhesiastic cosmopolitanism, the creative interplay among the voices of the cosmic body, be equivalent to Deleuze and Guattari's "becoming-everybody/everything"? It would, but only if it includes listening to all the voices of the three strata mentioned earlier, all the voices of the cosmos, and not just those of the human stratum. The voices involved in this broader range of interlocutors communicate via many simple but effective "languages" for us to hear parrhesiastically. At the simplest level these languages consist in the invitations they give us to explore their enunciators, on the one hand, and, on the other, the ability of their enunciators to disrupt and in that way exceed the discourses within which we attempt to capture them. Thus Colebrook cites how Roman Polanski's movie *Chinatown* reveals the elemental sound of water to be a retort to the commodity status to which our managerial politics attempts to reduce it. As a voice, then, water has an ethical status in itself and cannot be treated simply as something that stands in reserve for our purely pragmatic uses. Indeed, hearing its voice on its own terms is part of what we can mean when we speak of cosmopolitanism as our becoming-everybody/everything.⁵⁹

This idea of inter-cosmic communication via the notion of voice may seem anthropomorphic and thus part of the Anthropocene. I have two responses to that worry. First, none of the terms we use scientifically or otherwise for describing nature are free of metaphoric reference to our bodily interaction with objects. Our understanding of the phrase "the furthest star from the Earth" makes implicit use of our ability to imagine ourselves trying to traverse that great distance. Everything is brought down to our measure even as it simultaneously transcends our discursive reach. One day I write a poem about the mountain; but the next it suggests other aspects of itself for a second, even contradictory, poem; the mountain lures geologists to theorize its stratigraphic structure but later forces them to revise it.

We can use the word "voice" for the communication between any of the interconnected elements of the cosmos. However, we must admit that the language of any such element can be radically different from those of the other elements. We can never vouch, then, to a full understanding of what the other elements

59 With so many voices resounding in one another (the dynamic form of hybridity), it is possible that losing one's leading or primary voice might cause some anxiety and even sadness instead of Spinozian joy, a loss of audibility, and ethical wellbeing. Exacerbated intensity of this low level anxiety can be an unfortunate basis for the production of oracles. For elaboration, see Evans, *The Multivoiced Body*, 206–211.

are emitting to us, or of how they are receiving us. The acknowledgement of the radical disparity of these cosmic languages, of the difficulty of deciphering these inter-communications, is what allows us, as a particular class of such elements, to escape the negative charge of endorsing a reductive form of anthropocentrism.

The second response: the use of voice, given the earlier exposition of the term, is more likely than not to let us feel (in our languages) a kinship with the rest of the elements of the cosmos. Because we understood earlier that each voice is part of the being of the others and at the same time their other, that they resound in one another, this solidarity is not of the homogenizing or hierarchical sort, not an “oracle”. All the voices fit into the cosmic nexus of the three political virtues (solidarity, heterogeneity, and fecundity) of which we spoke before. As we saw above, this means that all the cosmic elements have an ethical standing with which we should regard and hear them. Because of the near incomprehensibility of the many languages of the cosmos to which we attempt to listen, we must be extra careful in our effort at ethical cooperation with them. We must especially not mistake mastery of them for the idea of cooperating with them or taking into account what we think they are “saying” to us about themselves in the course of our relationships with them. Perhaps this receptivity to otherness might even contribute to a better understanding of each other in our own species, a lessening of our barbarity toward one another. Given this way of viewing the “constellation of voices” of which Deleuze and Guattari speak as well as Colebrook’s words on water and my mention of the ethical standing of all cosmic voices, we can call the hoped for next geological epoch – but also all the epochs taken together – the Chaoscene.

I began this paper wondering what sort of cosmopolitan political ethics would be compatible with Deleuze and Guattari’s cosmology and their challenge to the capitalist axiomatic. We have seen that it must be one that simultaneously facilitates several tendencies: first, absolutely deterritorializing the axiomatic; second, opening up all the voices in the cosmos to a parrhesiastic form of mutual audibility that reflects Deleuze and Guattari’s ideas of “unnatural participations” and “becoming-everybody/everything”; and, third, resisting, and always deterritorializing once more, in the name of the Chaoscene, the inevitable reterritorializing attempts by capital and the Anthropocene. May such a parrhesiastic cosmopolitanism emerge soon, lest the cosmos lose a planet dear to us.

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Glen A. Mazis

A Posthumanist Truly *Back to the Things Themselves*: Merleau-Ponty's Embodied Phenomenology and Literary Language

Abstract

Merleau-Ponty's embodied phenomenology and its arrival at the indirect ontology of "the flesh of the world" makes phenomenology vital to the posthumanist effort to displace the anthropocentric positioning of human subjectivity and replacing it with an ontology and epistemology wherein the human emerges from the depth of the world in a co-birthing with myriad beings. Merleau-Ponty's articulation of perception as having latent depths of the emotional, memorial, imaginal, intuitive, proprioceptive, and archetypal trajectories enmeshed within a cultural and historical background renders it a *dialogical phenomenon* and alters the status of "the things themselves" from their original Husserlian conception. The motto of "back to the things themselves" becomes an effort to employ what I have called the "physiognomic imagination" to bring forth the latent sense communicated to perceivers by the things of the world that draws them beyond reflective boundaries within a matrix of sense-emergence. For Merleau-Ponty this midwifing of greater depths of sense occurs through the poetic and literary creative use of language rather than through everyday empirical language or the traditional conceptual language of philosophy. Embodied phenomenology and literature work together to bring forth this posthumanist recovery of sense and philosophy requires literary language for its own articulation. Literary works of this sort manifest a posthumanist beauty, which is not a matter of harmony, perfection, or representation, but of opening the liminal space of displacement into the depths of the world to register the world's gestures. In the limits of this chapter, Proust, Silko and Woolf are touched upon as carrying forth this manifestation of matrixed ontology.

Introduction: Embodied Phenomenology and Posthumanism

When Edmund Husserl coined the phrase that was to become the rallying cry of phenomenology, to turn back "to the things themselves,"¹ he was attempting to found a philosophy that would combat the "natural attitude", as he called it,

1 Edmund Husserl, *Logical Investigations*, vol. 1, trans. by J.N. Findlay (New York: The Humanities Press, 2001), 168.

of naïve realism, yet in carrying out this project, he failed to truly hearken to the things themselves in their silent voices. Although, his aim was the admirable one of leading philosophy from substituting reductive formulations of the being of the world and of humans for the actual experience we have of self and world in perception and other aspects of immediate experience, Husserl still maintained that consciousness is the constituting center of the sense of that experience. In other words, his starting point for phenomenology was still a classic humanist one with consciousness at the center of experience and origin of its sense. To answer the question posed by his famous student, Martin Heidegger, as to the meaning of Being, Husserl needed to move beyond a constituting consciousness to an opening to the things themselves through our body's primary access to the world in perception and its inseparable depths, a solution only sufficiently explored later by Maurice Merleau-Ponty. This transformation of phenomenology to Merleau-Ponty's embodied phenomenology relocates this perspective in accord with the vision of posthumanism, even though many still think of phenomenology in Husserlian terms and see it as passé, and certainly not as relevant to a posthumanist perspective.

Husserl's initial declaration of phenomenology's mission of returning "to the things themselves" [*zu den Sachen selbst*] was determined by his conception of the philosophical project according with a traditional aim and method such that "it must attain by itself the concept-systems that determine the fundamental sense of all scientific provinces" and these concepts "predelineate [...] any possible world of being whatever".² These concepts, Husserl declares, can have "no paradoxes" and must achieve the Cartesian clarity and distinctness that Husserl felt described the way our transcendental apparatus structured reality. Like the long tradition before him, his model for philosophical discourse was the language of science. However, this is a self-justifying method of keeping humanism alive and blocking access to the voices of things as our interlocutors. Instead, Merleau-Ponty's phenomenology, differing from Husserl's even at its inception, let alone later in its more radical formulations, seeks to "bring back all the living relationships of experience, as the fisherman's net draws up from the depths of the ocean quivering fish and seaweed" and to "reveal the world as strange and paradoxical".³ The tradition of grasping the world and self through concepts,

2 Edmund Husserl, *Cartesian Meditations*, trans. by Dorion Cairns (New York: Humanities Press, 1970), 154.

3 Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. by Colin Smith (New York: The Humanities Press, 1962), xv, xvii.

clear and distinct ones, which express essences, as Husserl's phenomenology still aimed to accomplish, clings to the idea that humans can stand outside the enmeshed depths of humans and world instead of returning to this level of experience in which, as Merleau-Ponty says, "there is overlapping and encroachment, so that the things pass into us as well as we pass into things".⁴ The need to move into these enmeshed depths and go beyond concepts is remarked by Mauro Carbone in *The Thinking of the Sensible* as at the heart of the shift in Merleau-Ponty's way of doing philosophy versus the tradition: "From the calling into question of the *frontal positioning* of subject versus object, there can only follow the calling into question the *grasping* of the object by the subject. The direct result is therefore the calling into question the modern notion of 'concept', the Germanic root of which expresses precisely the intention of grasping".⁵

Merleau-Ponty achieves this shift by turning to an ever greater degree to literature and creative language, and to using creative language to express his own philosophy and to articulate the sense of things in particular situations, that is to say, letting singular beings be listened to in a distinctive way such that their indirect voices are heard. This *indirect ontology*, as he called it, leads to seeing within the text an inseparability of phenomenological philosophy and literature, both seeking to be originary language. Both will be seen to be expressive of the depths of perception bringing forth its latencies that contain the revelatory meanings gained through perception, but only incipiently so, until they become what they were not yet through imaginative articulation in metaphor and the singularity of description. Merleau-Ponty rightly understood that phenomenology once focused on embodiment and the perceptual access to the world no longer concerns a "subject" confronting an "object" as in reified or foundational approaches to philosophy, but rather uncovers the way in which the world is an interlocutor with the prereflective perceiver that can be affirmed in a becoming that transforms both continuously within the flow of time and process. This makes phenomenological ontology in Merleau-Ponty's writings a posthumanist perspective despite many still thinking of phenomenology in terms of Husserl's humanism.

There are many ways to approach Merleau-Ponty's indirect ontology of the flesh and to see its sources and its overlap with the creative use of language in literature, but in this essay I would like to focus on phenomenology's rallying cry

4 Maurice Merleau-Ponty, *The Visible and the Invisible*, trans. by Alphonso Lingis (Evanston: Northwestern University Press, 1968), 23.

5 Mauro Carbone, *The Thinking of the Sensible: Merleau-Ponty's A-Philosophy* (Evanston: Northwestern University Press, 2004), xvii.

of returning to the things that surround us and enter into our being in order to show the place and power of *the things themselves* to decenter humans into the depths of the world. This means to focus on things not as objects unrelated to humans, but rather to attempt to listen in to our dialogue with things as human's ongoing interlocutors. Within the language use that elicits the sense that is a reply to us from the things of the world is a power that can only be articulated through the creative literary or poetic use of language. Merleau-Ponty clearly saw this tie between embodied phenomenology and the power of literary language to express sense in a way that was open to the "indirect language" or "the voices of silence" coming from the things and world that surround us, the more-than-human. This insight into the Being of things in their interrelation to the Being of humanity becoming manifest only through the power of expression of literary language will be the second focus of this essay.

A posthumanist approach to understanding humanity and the world seeks to articulate how humans are part of a more encompassing and richer fabric of being that the anthropocentric tradition of philosophy and science that not only put humans at the top of the Great Chain of Being, but also saw consciousness as the constituting power for the structures and meaning of reality, which situated humanity in a short-circuiting relationship and understanding of the world that was self-imprisoning. Humans could only look to themselves and their faculties for the meaning of Being. This undermines even well-intentioned attempts to value all beings in a more cooperative and egalitarian basis, such as many movements in ecology. A truly nonhierarchical and interdependent sense of Being is not possible to achieve until the schema of the necessary constituting of consciousness is jettisoned, otherwise ecology becomes a set of projections and not an encounter with the world. In the closing sections of Timothy Morton's *Ecology without Nature*, he tells his readers that to practice a "dark ecology" or a "really deep ecology", requires "loving the thing *as thing*"⁶ as the key to the practice of ceasing to project our human categories onto the world in traditional constructs like "nature" or "thing" that keeps us from any significant encounter with the other-than-human. Lacking the openness of encounter that another ontology and epistemology would provide, not only veils the truth of experience, but the possible aesthetic categories with which we consider art and its expression, such as beauty, are also misapplied. In addition to foisting our projections onto the encounter and obscuring what is manifest, we are also foisting the traditional

6 Timothy Morton, *Ecology without Nature: Rethinking Environmental Aesthetics* (Boston: Harvard University Press, 2009), 196.

categories of beauty upon the experience of “nature”. This traditional idea of beauty is comprised by attributes such as harmony, symmetry, or perfection, which may not be appropriate aspects of beauty if it is to be considered in a non-anthropocentric manner. Within the movement outside ourselves, beauty may appear with differing attributes or aesthetic excellence may be measured in differing ways. It is the contention of this essay that the phenomenology of an embodied encounter with things reveals an open encounter with another sort of relationship with things. Rajiv Kaushik states that this is what is distinctive about Merleau-Ponty’s ontology and where it led him, as he calls it “an ontology from within the middle of things”.⁷ Within this relationship, we might find that the encounter with things travels another avenue other than the human-centered overvaluing of “consciousness” as a constituting power and instead allows aesthetic experiences of another kind. A posthumanist beauty would not be about those traditional attributes, but instead would focus on the displacing of the subject into the depths of the world in an encounter with things, as suggested by Elaine Scarry’s statement in *On Beauty and Being Just* where she says that “at the moment we see something beautiful, we undergo a radical decentering”.⁸ That is the understanding of beauty that we will attempt to explicate in terms of Merleau-Ponty’s ontology as going beyond the anthropocentric into the depths of the world.

Embodied Phenomenology’s Dialogue with the World: The Invisible of the Visible

In the early pages of *The Visible and the Invisible*, Merleau-Ponty describes the scope of his embodied phenomenological approach to philosophy:

I can only address myself to my experience of the world that recommences for me each morning as soon as I open my eyes, to that flux of perceptual life between it and myself which beats unceasingly from morning to night, and which makes my own secret thoughts change the aspect of faces and landscapes for me, as, conversely, the faces and landscapes bring me help sometimes and the menace sometimes of a manner of being a man which they infuse into my life.⁹

7 Rajiv Kaushik, *Merleau-Ponty between Philosophy and Symbolism. The Matrixed Ontology* (Albany: State University Press of New York, 2019), 44.

8 Elaine Scarry, *On Beauty and Being Just* (Princeton: Princeton University Press, 2001), 111.

9 Merleau-Ponty, *The Visible and the Invisible*, 35.

This embodied phenomenological approach focuses on the flux between our perceiving bodies and the continual becoming of the world, which enfolds the human into its fabric. The locus of this access to the world is a prereflective expression within perception where the world infuses persons with felt sense. Emerging from within this interchange that Merleau-Ponty called the *reversibility* of perception, which is always asymmetric (being more on “my side”, yet carried beyond myself) and not a coincidence (always of a *gap* [*écart*]), is a sense and a being which is a “co-birthing” [*co-naissance*] from both human and world.¹⁰ When in the quoted passage above, Merleau-Ponty refers to faces, we are apt to think of only human faces, but with Merleau-Ponty’s description of the prereflective embodied experience, we realize we perceive the faces of all things within the world, that each being has an expressiveness on their surface like that of the faces of other people. In his radio lectures after World War Two, Merleau-Ponty stated how embodied beings are always caught up in an “enigmatic world of which we catch a glimpse” such that we are haunted continuously by “a world in which every object displays the human face it acquires in a human gaze”.¹¹ As we are open to the things of the world in our perception, each thing wears an expression that has a depth of sense to be discerned and explored, just as when we glance at another person. Again, this dimension to be explored is one of the aims of Merleau-Ponty’s phenomenology as he first announced it in the *Phenomenology of Perception*: “to restore to things their physiognomy” [*de rendre à la chose sa physionomie*].¹² In giving phenomenology this task, he is attempting to correct the “blindness” he finds in empiricism that “excludes from perception the anger or the pain which I nevertheless read in a face” or see “in the appearance of a landscape, an object or a body, whereby it is destined to look ‘gay’ or ‘sad’, ‘lively’ or ‘dreary’, ‘elegant’ or ‘coarse’”.¹³ Just as what we read in a person’s face is only the beginning to go deeper into what sense we are to make of them, so, too,

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- 10 David Morris, “The Enigma of Reversibility and the Genesis of Sense in Merleau-Ponty,” *Continental Philosophy Review* 43 (2010), 158. As David Morris expresses this idea of reversibility: “Merleau-Ponty writes that “[t]he subject of sensation is neither a thinker who takes note of a quality, nor an inert setting that is affected or changed by it, it is a power *qui co-naît* à a certain existential environment. The point of [Morris’] word play (which draws on Claudel), is that to ken (know, *connaître*) the world is to be kin, co-born (*co-naître*), with the world.”
- 11 Maurice Merleau-Ponty, *The World of Perception* (New York: Routledge, 2004), 70.
- 12 Merleau-Ponty, *Phenomenology of Perception*, 57 [*Phénoménologie de la perception*, p. 69].
- 13 Merleau-Ponty, *Phenomenology of Perception*, 23, 25.

with *physiognomic sense*, as Merleau-Ponty called it, of things, events and other foci of perception. However, although taken in at a glance, this sense will have to be teased out from a latent background. Another way to express this insight is to say: “The face, as letting us see something further than the face, which can yet only appear within the facial surface, institutes a metaphysically peculiar depth dimension”¹⁴

Also, this latent sense of perception is not a discrete atom, but like all beings, their identity and sense emerge from “among” or “within” their various appearances in what Merleau-Ponty called “style”. The different aspects of a being or a person or a series of actions or events as unfolding within time and within a context form a Gestalt and become an interrelated presence through auto-organization, not through any reflective ordering, as discrete and differing notes form a melody within time’s unfolding. As David Morris expresses this idea in stating, “Being has meaning latent within itself not by way of a possible that, on the classical model, is beyond being, waiting to be actualized, but a possible that can be modeled on the sort of ‘implicit totality’”.¹⁵ Merleau-Ponty’s ontological notion of “the flesh of the world” expresses that humans are interwoven in a processual becoming with other people, things, and creatures in a historical, cultural context, such that nuance and singularity are key to the distinctive identity of beings in their “style”. One differing chord or one differing dab of color can transform a musical piece or a painting. This dimension only becomes more manifest through an expressive dialogue with the things themselves that allows a certain kind of presence to come forward through the imaginal extension of what is present latently in perception. Perception considered in this way is at the same time inextricably affective, memorial, kinesthetic, sensual, archetypal, and intuitive. Each perception has these depths within a latent background within the trajectories of perception as calling for further midwifing to bring out its full meaning.

To understand this depth of sense requires a hearkening to what Merleau-Ponty called the “invisible of the visible” and the “voices of silence” (a phrase borrowed from Malraux), by which he meant those deeper significances of the qualities and value of beings at the heart of their meaning and purpose that are expressed within the sensual qualities of the perceived and are only accessible as the “other side” of the visible and sensual in general. The dominant philosophical

14 David Morris, ‘Faces and the Invisible of the Visible: Toward an Animal Ontology’, *PhaenEx* 2.2 (2007), 141.

15 David Morris, ‘The Enigma of Reversibility and the Genesis of Sense in Merleau-Ponty’, 163.

and cultural tradition of Greece-to-Europe-to-America has asserted this meaning to be the subject's human production within the relationship to these beings, instead of seeing that the world "speaks" to us in its way. Given that the expressiveness of "the flesh of the world," as Merleau-Ponty called this matrix of humans and the beings of the world, is not directly graspable through categorical speech or what he called "empirical language" – that is to say, the well-worn phrases we daily use to identify things and events – embodied phenomenology requires the poetic and literary use of language to bring forth these senses in an allusive manner, since they cannot be directly grasped. They are "present" in a prereflective but only latent fashion, needing to emerge through an indirect and metaphoric teasing out of what takes us beyond the surface of language to that place where Merleau-Ponty says "It is the error of the semantic philosophies to close up language as if it spoke only of itself: language lives only from silence; everything we cast to others has germinated in this great mute land which we never leave". He continues that in the depths of our perceptual access to the world, there is a bubbling up of sense or a gesturing of the world that

the philosopher knows better than anyone that what is lived is lived-spoken, that, born at this depth, language is not a mask over Being, but – if one knows how to grasp it with all its roots and all its foliation – the most valuable witness to Being.¹⁶

This sense is lost in the literalization of beings, as James Hillman, the analytic psychologist, often called our misuse of thought and language to probe these depths of latent sense. Literalized language takes becoming out of the processual duration of time and cuts the threads of the interrelated multiplicity of senses constellated by each being. To give an example from Proust, of whom Merleau-Ponty said, "No one has gone further than Proust in fixing the relations between the visible and the invisible, in describing an idea that is not the contrary of the sensible, that is its lining and depth".¹⁷ The hawthorns of *The Search for Lost Time*, stationed in the church give a sense of holiness, celebration and affirmation that is not in the Church and its accoutrements and trappings of liturgy and ritual for Marcel. The hawthorns open a dimension of sacredness for him and vitality of spirit that is part of the expressiveness of the hawthorn blossoms' qualities but is so within the context of Marcel's longings, proclivities and reflections. It is a dialogue in which the visible expresses the invisible spiritual meaning otherwise absent except through this sensual presentation. Examples of this sense in other

16 Merleau-Ponty, *The Visible and the Invisible*, 126.

17 Merleau-Ponty, *The Visible and the Invisible*, 149.

literary figures besides Proust, such as those in Valéry, Claudel, Ponge, Simone, Stendhal, Baudelaire, Balzac, Breton, Saint-Exupéry and others were literary sources that Merleau-Ponty cites as key influences on his thought. Merleau-Ponty's philosophical prose became increasingly articulated in metaphor and literary figures, which is important to note in terms of our question about the relationship of philosophy and literary language. After exploring Merleau-Ponty's ideas about expression, we can think to what extent embodied phenomenology is literary and to what extent poetic and literary writings are philosophical in being phenomenological articulations of the latencies of embodied prereflective apprehension. In this way, it is possible to see how vital phenomenology is to the posthumanist endeavor to articulate a non-anthropocentric description of humanity's relationship to others, to the natural and cultural world, and to the things themselves.

Embodiment's Co-birthing with the World and Literary Language's Expressiveness

In *The Visible and the Invisible*, Merleau-Ponty states: "There is a world of silence, the perceived world, at least, an order where there are non-language significations – yes, non-language significations, but they are accordingly not *positive*".¹⁸ This is a theme throughout Merleau-Ponty's work: that there is signification that is not yet language and works within a silence that plays off other significances that turns us towards the *gestures* that are made *by the world*. They are not positive in the sense we usually think of signification as a frontal grasp or representation of what is signified, but rather work indirectly with other sensual appearances in the space among them in bringing forth a style or a nuance within a becoming, as indicated by Merleau-Ponty when says in *Phenomenology of Perception* of the sleeting weather we might confront that it communicates "by a piece of its behavior, a certain version of its style" [*un comportement du monde, une certaine inflexion de son style*] in their particular way of being hard, ready-made pellets pelting us from the sky and then crumbling on impact with the ground.¹⁹ There is a resistance, a harshness, and a coldness of the sleety weather, which is more than just a temperature reading, on this day so unlike the embrace of a warm sunny Spring afternoon. There is a plethora of significances within the depths of perception working through differences and within gaps, allusions, and rhythms,

18 Merleau-Ponty, *The Visible and the Invisible*, 171.

19 Merleau-Ponty, *Phenomenology of Perception*, 403.

that are latencies of sense that come to be manifest through expression within “a silence of consciousness embracing the world”.²⁰

There is a kinetic gestural sense of all beings of which all their qualities of color, texture, sound, tempo and a myriad of other aspects are part of that which is resonant with the meaning of movements we make towards the world and each other. In his lectures of 1953, *The Sensible World and the World of Expression*, Merleau-Ponty declares “movement and meaning are inseparable and synonymous”.²¹ Sense is not an inert given, but a dynamic, a movement, that is lived through as taken up more fully, generating more of the sense that was there initially.²² If sense is more like a trajectory with a deep background that is a possibility to become more fully emergent from its latency, then further perception in what Merleau-Ponty calls “perceptual faith” is key to sense but also entails that the expression in language is vital to this plumbing of as yet not manifested depths of sense. Towards the end of these lectures, Merleau-Ponty also says, “the perception of movement is comparable to the understanding of a sentence”²³ which points the way to how in that decade he will explore how the literary and poetic use of language allows this movement of sense further fruition. This deeper expression is a drawing forth of sense to make present what was only latently there but is key to what sense is as having this ongoing possibility. This is the imaginative extension of sense found in perception that I have called the “physiognomic imagination”, because it follows the “face” presented by things or creatures in their expression as they turn towards us versus the imagination of the merely make-believe, which is not rooted in the tensions and trajectories of what we are trying to fathom in what we have perceived.²⁴

20 Merleau-Ponty, *Phenomenology of Perception*, 403.

21 Maurice Merleau-Ponty, *Le monde sensible et le monde de l'expression: Cours au Collège de France notes, 1953* (Geneva: MétisPresses, 2011), 77.

22 David Morris, *Merleau-Ponty's Developmental Ontology* (Evanston: Northwestern University Press, 2018), 92. David Morris sums this aspect of sense as articulated by Merleau-Ponty in the *Phenomenology of Perception*: “it is conceptually and methodologically crucial that [in] the *Phenomenology* [...] the form dynamic that shapes sense for us, and that is at issue in our expressive activity, is not something rooted in a source given for all time, but is something expressively generative: we access it only in living through it, as an individual and ongoing event”.

23 Maurice Merleau-Ponty, *The Sensible World and the World of Expression: Course Notes from the Collège de France, 1953*, trans. by Bryan Smyth (Evanston: Northwestern University Press, 2020), 160.

24 Glen A. Mazis, *Merleau-Ponty and the Face of the World: Silence, Ethics, Imagination and Poetic Ontology* (Albany: State University of New York Press, 2016), 180–189.

Since Merleau-Ponty often referred to Proust's *In Search of Lost Time*, examples of the invisibility of the visible can be cited in Marcel's communication with the hawthorns that give him a sense of holiness, much more than the human expressions from inside the church, or the mentioned five notes of the Vinteuil sonata expressing love from that same work, or the lemons discussed in the 1948 radio lectures, or the many other specific examples given by Merleau-Ponty. However, I would like to cite a passage from Leslie Silko's Native American novel, *Ceremony*, in order to offer a literary work from a different culture articulating the same themes:

Dragonflies came and hovered over the pool. They were all colors of blue -- powdery sky blue, dark night blue, shimmering with almost black iridescent light, and mountain blue. There were stories about the dragonflies too. He turned. Everywhere he looked, he saw a world made of stories, the long ago, time immemorial stories, as old Grandma called them. It was a world alive, always changing and moving; if you knew where to look, you could see it, sometimes almost imperceptible, like the motion of the stars across the sky. (*Ceremony*, 95).

In this passage, the novel's protagonist, Tayo, beginning his long journey back from a state of no longer feeling alive after being violated in innumerable ways as a Pueblo Native American and a survivor of the Bataan Death March of World War Two, looks out over a pond, a cliff face with crags and niches, the frogs emerging after a rain, and insects in the grass, the varied shades of blue, and recognizes that all things in the world speak to us as perceivers as if telling stories, stories that have a deep historical and cultural background, but are always moving and transforming. These are what Merleau-Ponty meant by the "voices of silence" that indirectly reveal "the invisible of the visible" and call always for more exploration of their depths.

Something that should be noted here is that this is not a return to some pure state of romantic intuition. Merleau-Ponty's ontology is not a romantic vision opposing an irrational or nonrational silence to reflection and language. Rather both are intertwined and can artfully be made to augment each other. Kaushik states that "on Merleau-Ponty's reading, the literary work effects a double eclipse of both reader and author, to show instead a language neither inside nor outside us, neither absolutely proximate nor irremediably distant".²⁵ Instead Kaushik points to the ambiguity of an enveloping and transformational process that captures us within this crestive language use. As Merleau-Ponty expands this insight

25 Kaushik, *Merleau-Ponty between Philosophy and Symbolism. The Matrixed Ontology*, 116.

in his lectures on the sensible world, our gesturing towards the world in response to its solicitations to us in its gesturing “even incorporates Theoria, involves a Theoria or gnosis that is its background, that it modifies and which modifies it in return.”²⁶ In other words, although we continually return to our pre-reflective perception of things, this experience has been transformed by our prior expressions of it and our reflective understanding of that prior experience, which now will again break open these to birth new expression. It is that back and forth Merleau-Ponty calls a *chiasm* where the crisscrossing or back and forth is dependent upon the meaning of its parts but each are transformed through the other in coming to be new wholes.

However, it is not any sort of reflection or conceptual language use that accomplishes this, not categorical reflection and empirical speech, but literary, poetic and artistic hearkening and expression. In *The Prose of the World*, Merleau-Ponty begins with making the distinction between two ways of expression through language:

Let's speak of two languages: the language after the fact, the one which has been acquired, which disappears before the sense which it is conveying, – and the one which creates itself in the moment of expression, which makes me glide from the signs towards the sense – the language that has been spoken and the speaking language.²⁷

Merleau-Ponty uses this distinction between the established language, “the language which has already been spoken” (*le langage parlé*) and is circulated, and a more expressive language, the language that gets us beyond the past conceptions of things and reawakens a more primary sense of what the words are expressing, “speaking language” (*le langage parlant*). The speaking language is the language of the creative writer and the poet. It moves us beyond our partial views with which we started as inhabiting a perspective before we enter the literary work. Yet, the work uses those views in their own transformation: they become what they have never been but were possibly in their latency. Part of expressive language's work is to undo, to deviate, or to *deform*, as Merleau-Ponty will say often, the established language and its accepted notions, the accepted formulations. In other words, expressive writing

is open, because of its divergence in relation to a norm of sense. Poetic language continually goes beyond itself, breaks with the established language use, and transforms the

26 Merleau-Ponty, *The Sensible World and the World of Expression*, 100.

27 Maurice Merleau-Ponty, *The Prose of the World*, trans. by John O'Neill (Evanston: Northwestern University Press, 1973), 10.

sense with which it started as its basis, which had more to express in its latent depths. The expression of new sense moves between the old sense and the newly expressed sense. It reverberates in this new space between the established language and its divergent new use opened up by creative expression.²⁸

As portrayed by Silko in the passage quoted at the beginning of this section, Tayo could have just noted there were dragonflies, labeling them and paying them no more attention, or seeing them as just blue, instead of the many shades with suggestive senses to each. Instead, he deepens his perception of them to hear, see, imaginatively prolong their stories of nature's power to regenerate, of interrelations of spirit and matter, of the ability to become transformed through continual movement and transition, of the buoyancy of belonging, and so forth.

In this liminal zone, there is a force to language which pulls us beyond language at the very instant we truly experience its presence or as Merleau-Ponty says in the radio lectures:

the poet [...] replaces the usual way of referring to things, which presents them as 'well known,' with a mode of expression that describes the essential structure of the thing and according forces us to enter into that thing. To speak of the world poetically is almost to remain silent.²⁹

Paradoxically, in using well-worn speech, the words disappear in taking us immediately to their expected reference, whereas with expressive language, we experience the words in their partial obscurity as something that makes us linger and be thrown back to the writer's experience and our experience. Merleau-Ponty likens the poet to the painter, and asks what is it that they are trying to express to the reader or viewer: "How could the painter or the poet be anything else than his [or her] encounter with the world?"³⁰ No matter what the poem may describe or the painting portray, it is *the encounter* of the artist and the world that is being expressed. In reading a poem or viewing a painting, it is not just what things are "in themselves" that is expressed taken as self-subsistent objective entities, but the manner and the movement integral to a kind of *meeting* and *coming to dialogue* with the artist is presented. The encounter itself, the dialogue that ensues and can be deepened, is presented and opened up for we readers to enter into, alongside the author and also drawing on one's own context of experience.

28 Maurice Merleau-Ponty, *Intuition and Passivity: Course Notes from the Collège de France*, trans. by Leonard Lawlor and Heath Massey (Evanston: Northwestern University Press, 2010), 11.

29 Merleau-Ponty, *The World of Perception*, 100.

30 Merleau-Ponty, *The Prose of the World*, 63.

Proust is not representing the literal location of Combray when the protagonist's opens up the latent sense of his childhood dwelling within *In Search of Lost Time*, but rather is opening for us readers some place that is not a locatable point on a Cartesian grid of space and the way of entering and experiencing within that space. As readers, we are pulled into *the place of encounter* between the artist and what is expressed, and Combray becomes more than Combray, taking on a symbolic dimension that weaves connections with myriad other aspects of the world that are always implicit in the prereflective perceptual encounter with the world, but typically passed over.

The Things of the World as Interlocutors

In his course, 'Studies on the Literary Use of Language', when Merleau-Ponty is exploring this moment of expressiveness in Valéry's poetry, he points to the poet's belief that one must encounter silence to find the object of poetry. Valéry says in this encounter with silence, poetry restores through language that which is expressed within cries, within tears, within caresses, within kisses and sighs. The words – like these expressive gestures – bring forth the emotional sense of life around us.³¹ This is the space of encounter as articulated by Merleau-Ponty in his radio lectures when he describes the anger one might feel in a confrontation with another person. He says it is not some "inner state" of subjectivity nor obviously is it something objective in the other, but it is what permeates the space between as a felt quality. If we return to what I said at the beginning of this essay about the sense in the qualities of the thing as being latently present in the unity of a way of becoming manifest as a style, it is resonant with what was just stated about expressive poetic language. Merleau-Ponty examines as an example of a thing we encounter a lemon and states, "the lemon is a unified entity of which all the various qualities are merely different manifestations".³² He continues, "each of its qualities is reaffirmed by each one of them, each of its qualities is the whole" not as properties but as *emanations of a way of being*, like a person's behavior, where their way of talking or walking or caring or dealing with untoward events all are part of a whole as an expressive flow that is recognizable and unique even though indefinable as a distinctive style. I think W.H. Auden expressed this aptly when in his lament over W.B. Yeats' death in the poem, 'In Memory of W.B. Yeats',

31 Maurice Merleau-Ponty, *Recherches sur l'usage littéraire du langage* (Geneva: Métis-Presses, 2013), 94.

32 Merleau-Ponty, *The World of Perception*, 59.

he said what was lost from the world on the day of Yeats's death was a life that was a unique "way of happening".³³

These qualities of thing or other beings are summed up by Merleau-Ponty in *The World of Perception* as "a particular way the world has of acting on me and my body" such that "each of these qualities has an affective meaning which establishes a correspondence between it and the qualities associated with the other senses".³⁴ If humans, the natural world, and the world of artifacts are all of the "flesh of the world" – a matrix of sense – then Merleau-Ponty comes to call things in *The Visible and the Invisible* the prolongations and encrustations of the flesh in my own body, or as he said a decade earlier:

our relationship with things is not a distant one; each speaks to our body and to the way we live. They are clothed in human characteristics (whether docile, soft, hostile, or resistant) and conversely, they dwell within us as emblems of forms of life we either love or hate. Humanity is invested in the things of the world and these are invested in it.³⁵

As invested in things and the way we are in reversibility with them, to use Merleau-Ponty's term, a dialogue back and forth, as so palpably expressed by Virginia's Woolf's image of Mrs. Ramsey's converse with the beam of the lighthouse and the hills and waters of the Hebrides or St. Ives in *To the Lighthouse*,³⁶ things also hold the way of the cultural style of our collective experience and how it has been shaped by our shared history. Things hold memories both personally and collectively, not only tea-soaked madeleines or wooded paths in the Bois de Boulogne, and then come to be transformed with new senses, becoming palimpsests that surround us. They have a germ of sense that can be explored and elongated. In his recent *Sites of Exposure*, John Russon articulates how the things of the world are the keepers of cultural styles,³⁷ just as Merleau-Ponty could see

33 W.H. Auden, *Collected Poems* (New York: Vintage Books, 1991), 247.

34 Merleau-Ponty, *The World of Perception*, 62, 60.

35 Merleau-Ponty, *The World of Perception*, 63.

36 Virginia Woolf, *To the Lighthouse* (New York: Harcourt, 1981), 63. Mrs. Ramsey thinks, "[...] met the third stroke [of the lighthouse] and it seemed like her own eyes meeting her own eyes [...] of one was alone, one leant to inanimate things; trees, streams, flowers; felt they expressed one; felt they became one, felt they knew one, in a sense were one".

37 John Russon, *Sites of Exposure: Art, Politics and the Nature of Experience* (Bloomington: Indiana University Press, 2017), 44: "[...] family, business, nationality, religion [...] these realities themselves exist in and through the medium of things. We embed ourselves in a world of things [...]. At each level, our identity, our agency, is established

the Parisian values, attitudes and temperament embedded in the myriad aspects of that city's style, whether through its pace and architecture or other perceived aspects of its presence.

This dialogue with things, however, is one that happens in the "speech before speech" as Merleau-Ponty called it, in the silent perceptual depths of a thick apprehension that always is inexhaustible in possibly yielding more of its sense to later expression, which transforms what it was in the first place, to an ongoing becoming, which is the latent power of language, since as Merleau-Ponty says in 'Indirect Language and the Voices of Silence': "the genesis of meaning is never completed".³⁸ It is poetic language which restores this motion to that which it expresses and returns it to the flow of becoming. In the radio lectures, Merleau-Ponty says "poetry as the creation of language, one which cannot be fully translated into ideas," because he says in the poem, as in perception, form and content are inseparable and "what is being presented cannot be separated from the way in which it presents itself to the gaze". It is the encounter with another way of being insofar as things themselves are gestural, expressive, and have a face or expression that they turn towards us in perception, that is communicated as we enter into this liminal place of metaphor and literary language. Merleau-Ponty description of poetry *per se* continues after that sentence to include all literature as poetic in this way, as he says, "a successful novel would thus no consist in a succession of ideas or theses but would have the same kind of existence as an object of the senses or a thing in motion, which must be perceived in its temporal progression by embracing its particular rhythm and which leaves in the memory not a set of ideas but an emblem and the monogram of these ideas".³⁹ The emblem is that kind of dynamic imagination deepening what is given in perception as a further ontological genesis. This is why Merleau-Ponty begins his course on literary language by saying that what is needed to understand literary language is to see an imaginal [*un imaginaire*] for which "a real would be equivalent to an imaginal" [*un réel qui soit l'équivalent d'un imaginaire*"].⁴⁰ It is also what makes sense of the sentence in his unpublished lecture notes found on his desk after his death that stated, "all ontology is a type of imagination, all imagination is an

as a kind of 'co-operation' with the world, and co-identity is embodied in the things of the world".

38 Maurice Merleau-Ponty, *Signs*, trans. by Richard McCleary (Evanston: Northwestern University Press, 1964), 40–41.

39 Merleau-Ponty, *The World of Perception*, 100–101.

40 Merleau-Ponty, *Recherches sur l'usage littéraire du langage*, 75.

ontology. There is an imagination which is in no way a nihilation (position of the unreal as unreal) which is a crystallization of being".⁴¹ The five notes of Vintueil's violin sonata do not stand for or represent love or recall instances of love for Swann within the pages of *In Search of Lost Time*: they are its coming into being, a crystallization that opens a dimension of the world with others and transforms Swann. The invisibility of the sense of love, never graspable as a being or discrete event, comes to dawn on Swann through the sensual taking in of the notes of the sonata.⁴²

Embodied Phenomenology Is Inseparably Interwoven with Poetic Literary Language

Given the ontology of the flesh of the world, which aims to articulate the way the world is manifest in what Merleau-Ponty called "primordial experience" the inchoate, prereflective apprehension through perception and its rich interweaving with affect, memory, movement, gesture, historical and cultural context and other strands of meaning in a continual becoming that even transforms the past and encompasses the voices of silence of the world itself, philosophy can only be an expression that is ambiguous, but telling, and yields a never-ending sketching forth. As Merleau-Ponty said in a working note of February 1959, right after he declared that "silence will not be the contrary of language," he asserts that "one cannot make a direct ontology. My 'indirect method' (being in the beings) is alone conformed with being".⁴³ The phenomenology of embodiment necessarily leads to Merleau-Ponty's conclusion stated in *Signs*: "the tasks of literature and philosophy can no longer be separated."⁴⁴ This paper cited the thoughts of the protagonist Tayo, a Pueblo Native American, in the novel, *Ceremony*, whose journey required that he pay more and more attention to what his senses brought to him, and his realization that the dragonflies, the varied blues of their bodies, the pond itself, were all stories: they were storytellers whose perceived sense reached back and forward in time and place. This is the same conclusion reached

41 Maurice Merleau-Ponty, from the unpublished notes in the *Bibliothèque Nationale* (BBN DESC [120] (15).

42 Marcel Proust, *In Search of Lost Time*, vol. 1, trans. by C.K. Scott Moncrief (New York: The Modern Library, 2003), 496: "Swann had regarded musical motifs as actual ideas, of another world, of another order, ideas veiled in shadow, unknown, impenetrable to the human mind, but none the less perfectly distinct".

43 Merleau-Ponty, *The Visible and the Invisible*, 179.

44 Merleau-Ponty, *Signs*, 36.

by Merleau-Ponty when he adds, “Philosophical expression assumes the same ambiguities as literary expression, if the world is such that it cannot be expressed except in ‘stories’ and, as it were, pointed out”⁴⁵ This insight becomes ever clearer in his work, but even at the end of the introduction to *Phenomenology of Perception*, his early masterwork, he says of phenomenology that it is

as painstaking as the works of Balzac, Proust, Valery or Cezanne – by reason of the same attentiveness and wonder, the same demand for awareness, the same will to seize the meaning of the world or of history as that meaning comes into being.⁴⁶

There is in both the literary and embodied phenomenological endeavors an attentiveness to the things of the world as they turn their faces towards us expressively or as we cited Merleau-Ponty earlier, there is the effort “restore to things their physiognomy”⁴⁷ [*de rendre à la chose sa physiognomie*].

The flesh of the world operates in such a way that the perception of the simple red of a dress is interlaced with the sense of red roof tiles, flags of gatekeepers, robes of professors, bishops and advocate generals, the essence of the Russian Revolution of 1917, particular clothes of a band of gypsies from 25 years prior, the red clay of certain terrains, and a host of other things and events Merleau-Ponty continues to list in this key passage of *The Visible and the Invisible* in which he exemplifies the matrix of the flesh in any perception by citing the perceived sense of this red dress.⁴⁸ Other additional interlaced things and events could be added given other situations and histories, but the point is that this play of difference is the crystallization of being at the level of primordial experience at the heart of this ontology. This enlacement means that metaphor in the bringing together of what is different and yet somehow brought into relation in such a way there is a transformation of the sense of what has been brought together is key to articulating the allusive sense of being. In summarizing the import of his 1953–54 course on ‘The Problem of Speech’, Merleau-Ponty states the creative writer

takes everyday language and makes it deliver the prelogical participation of landscapes, dwellings, localities, and gestures, of men among themselves and with us ... a system of signs whose internal articulation reproduces the contours of experience; the reliefs and sweeping lines of these contours in turn generate a syntax in depth [...].⁴⁹

45 Merleau-Ponty, *Signs*, 36–37.

46 Merleau-Ponty, *Phenomenology of Perception*, xxi.

47 Merleau-Ponty, *Phenomenology of Perception*, 57.

48 Merleau-Ponty, *The Visible and the Invisible*, 132.

49 Merleau-Ponty, *Themes from the Lectures at the College of France 1952–1960*, 25.

This kind of creative use of language is the lifeblood of literature and the poetic use of language, but it is also essential to the task of phenomenology. The literary artist uses words to paint the encounter with the hawthorns, the dragonflies, and the long stroke of the lighthouse as the phenomenologist looks at the syntax that holds the wonderer in thrall within these specifically rendered encounters. In describing things and articulating their sense, the creative writer or the artist pulls their audience beyond themselves and their reflective boundaries into an emergence of themselves from the world as suggested by those voices of silence of the things themselves. It is indirect expression of the things themselves in their own reversibility of sense that makes embodied phenomenology vital to the posthumanist articulation of another ontology and way to live among the things and creatures of the world.

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Cassandra Falke

Eco-Phenomenology in the Dark

Abstract

This chapter uses the methods and insights of phenomenology – especially Maurice Merleau-Ponty’s chiasmus and Jean-Luc Marion’s saturated phenomenality – to articulate the symbiosis between the human subject and the natural world. By conceptualizing the human subject as felt as well as feeling (Merleau-Ponty), and as receiving experiences that overwhelm our conceptual apparatus (Marion), these two French phenomenologists prepare the groundwork for an understanding of humans as maintained and shaped by the natural forces we so often strive to instrumentalize. After clarifying ways that chiasmus and saturated phenomenality can contribute to a symbiotic, posthumanist understanding of our relationship to the earth, I describe the non-certain nature of what humans can know about the effects our life has on a given ecosystem. Moving from the metaphorical darkness of uncertainty to the literal darkness of an Arctic winter, the chapter’s conclusion exemplifies the uncertain, receptive, touched and perceived nature of human personhood through a phenomenological description of being in the woods in the dark. Deprived of sight, which most humans rely on so heavily, we can experience smells, sounds, and tactile sensations without the concepts for them arriving immediately. Such an experience returns one to the “wonder before the world” that Merleau-Ponty says characterizes the phenomenological reduction, but more than that, it returns an individual human subject to his or her position as one living thing among so many.

Ted Toadvine and Charles Brown claim that “an adequate account of our ecological situation requires the methods and insights of phenomenology” because phenomenology attends to alternative ways of receiving what the natural world gives.¹ Rather than proceeding as though certain the concepts through which we try to understand the world are adequate, phenomenology addresses the plentitude our concepts miss. This chapter uses the methods and insights of phenomenology – especially Maurice Merleau-Ponty’s chiasmus and Jean-Luc Marion’s saturated phenomenality- to articulate the symbiosis between the human subject and the natural world. By conceptualizing the human subject as felt as well as feeling (Merleau-Ponty), and as receiving experiences that overwhelm our

1 Charles S. Brown and Ted Toadvine, *Eco-Phenomenology: Back to the Earth Itself* (Albany: State University of New York Press, 2003), xii.

conceptual apparatus (Marion), these two French phenomenologists prepare the groundwork for an understanding of humans as maintained and shaped by the natural forces we so often strive to instrumentalize. In addition to returning us to the “wonder before the world” that Merleau-Ponty says characterizes the phenomenological reduction, these ideas can return an individual human subject to his or her position as one living thing among so many.²

Before proceeding, I should specify the article’s rather modest claim to being posthumanist in orientation. Since the 1990s, the concept of posthumanism has been used to question boundaries between humans and technology, humans and animals, and humans and objects. Generally, it implies a critique of human dominance of the more-than-human world and a recognition that definitions of humanity have been used historically to support colonialist and paternalistic structures. Francesca Ferrando’s distinction between *post-humanism* and *posthuman-ism* offers a useful way of disentangling the various strands of post-human thought. She defines post-humanism as “a radical critique of humanism and anthropocentrism”. Post-humanism advocates care for the planet as a home to non-human species and ecosystems that support biological diversity. Much post-humanist writing also attends to specific histories of humanism to show how definitions of the human have been used to undermine those deemed less human on racialized or gendered grounds. Posthuman-ism, in Ferrando’s distinction, recognizes “those aspects which are constitutively human, and nevertheless, beyond the constitutive limits of the human in the strict sense of the term”.³ She does not elaborate on this definition further, but it can usefully be applied to the epistemological elements of posthumanism – the recognition that humanness inevitably structures our knowledge but that it does so in a limiting way. There are ways of knowing inaccessible to us as a species. While this article participates in a critique of anthropocentrism, it does not focus on a history of humanism. It is also not posthuman-istic in so far as that implies a focus on technological expansion of human capability, but it does advance posthuman-ism’s critique of speciesist dominance based on epistemological certainty.

Acknowledging human responsibility for current environmental crises requires that a concept of agency restricted to human actors be preserved, even though this pushes against some theorizations of the posthuman, such as Actor Network Theory or Object-Oriented Ontology. In his recent critique of

2 Maurice Merleau-Ponty, *Phenomenology of Perception*, trans. by Donald A. Landes (London: Routledge, 2012), lxxvii. Merleau-Ponty is quoting Eugen Fink in this phrase.

3 Francesca Ferrando, *Philosophical Posthumanism* (London: Bloomsbury, 2019), 3.

posthumanist approaches that neutralize human agency, Arne Johan Vetlesen forcefully lays out the scope of human destruction:

the extinction of species unprecedented in pace and scope, the loss of biodiversity, the shrinking of habitat available for nonhuman creatures and life-forms of all kinds, the acidification and plastification of the oceans, the melting of glaciers and the release of methane from permafrost and from the seabed, the dying of coral reefs, the rising temperatures and sea levels – to name but a few instances of the crisis set in motion. By humans. Humans who have, for the most part, reinforced rather than halted the crisis since being alerted to it.⁴

To face the fact that humans are, compared to other species, uniquely implicated in these effects is not to return to a humanistic ideal, but to highlight the consequences of decisions that take inadequate account of complex webs of interdependence that exceed the human.

Phenomenology is uniquely suited to describe the ways we experience this interdependence and therefore uniquely appropriate for articulating how that interdependence might be brought more readily to mind in our engagement with the more than human world. Since its beginnings in the early twentieth century, phenomenology has sought to distinguish itself from scientific or psychologically reductive approaches to what Edmund Husserl calls the lifeworld.⁵ For phenomenologists, every experience offers something unique, which is always more than the sum of categorically comprehensible parts, and not only because there are more parts than one personal psyche can receive. Experience is, in fact, given in a way that transcends the categories we apply to objects and processes. Referring to objects and processes as though they had a formal existence prior to or outside of experience allows us to think about experiences abstractly, communicate about them and form expectations. The objectification of phenomena, therefore, serves several purposes, but phenomenology strives to return to the more immediate givenness of the experience. As Husserl put it in the most frequently cited definition of phenomenology's goals: "We must question the things themselves. Back to experience, to seeing, which alone can give our words sense and rational justification"⁶

4 Arne Johan Vetlesen, *Cosmologies of the Anthropocene: Panpsychism, Animism, and the Limits of Posthumanism* (New York: Routledge, 2019), 236.

5 Dan Zahavi provides an excellent overview of the concept of the lifeworld, particularly in relation to science. *Phenomenology: The Basics* (New York: Routledge, 2018), 51–55.

6 Søren Overgaard, *Husserl and Heidegger on Being in the World* (Dordrecht: Springer, 2004), 1; Original: Edmund Husserl, 'Philosophie als strenge Wissenschaft', in *Essays*

Although some phenomenological thinkers preserve the concept of an ego as the source of sense, others prioritize what gives itself in experience over the human receiver. The clearest example of this anti-egoic prioritization is Jean-Luc Marion's concept of "saturated phenomenality". Within phenomenology, the attention and conceptual apparatus a person turns toward an experience are known as intentionality, and that which is given to intentionality is referred to as intuition. The common usage of the term 'intuition' shares with the phenomenological concept the sense of knowing arriving prior to conceptual articulation, but in phenomenology intuition does not forbid such articulation; it merely preserves the distinction between givenness and the concepts through which an experience might be conceived or remembered. Much of phenomenology is concerned with the paucity of intuition. There are many cases in which we direct our attention to, or intend, more than we receive intuitively. This happens with mental phenomena when we try to remember something and cannot quite manage and with physical things that we see only partially. Occasionally, as when doing math, intentionality, concept, and intuition fit perfectly. There is nothing to the number five beyond its concept and the way it functions as a value, which means we can adequately intend it. But Marion asserts that phenomenology has limited itself by not thinking more about instances in which the givenness of intuition exceeds, or as he says "saturates" intentionality. He defines categories of phenomena that are always given as saturated: historical events, our own flesh, the face of the other, works of art, and divine revelation.⁷ These experiences have the capacity to 'subvert' and 'decenter' intentionality. In each of these cases, the "givenness contravenes, in its intuition, what previous experience should reasonably permit us to foresee".⁸ By re-orienting phenomenology toward saturated phenomena, Marion prioritizes the givenness of an experience over the certainty a human subject can obtain about that experience. Historically, he asserts, "phenomena that do *not* appear, or appear just a bit" have been "set up as models for all the others on account of their certainty";⁹ but that exchange has cost phenomenology the recognition of all those situations in which what is given is unforeseeable and irreducible.¹⁰ The human is preserved in this reorientation toward

and Lectures: (1911–1921), ed. by S.H. Rainer and N. Thomas (Dordrecht: Nijhoff, 1987), 21.

7 Jean-Luc Marion, *Being Given: Toward a Phenomenology of Givenness*, trans. by Jeffrey L. Kosky (Stanford: Stanford University Press, 2002), 225–241.

8 Marion, *Being Given*, 225–226.

9 Marion, *Being Given*, 194–195.

10 Marion, *Being Given*, 227, 189.

givenness, but is downgraded from her position as the ego that constitutes the perceived world. She rather becomes a witness to more givenness than she can ever receive.¹¹

Saturated phenomena, and indeed all phenomena to an extent, escape object status because we experience them first as events. If I walk into a forest, for example, there will be rocks and trees there, but they will be given in a particular moment. The particular light, the weather, my own speed of movement and more will all combine to make one rock or tree stand out as an object and others fade into the background. Although it is practical to regard a tree as an object (if it blocks one's path, for example), much of what is given in a particular moment gets cut away in that process. Every event, Marion asserts, "can be reduced to the condition of the object".¹² And "Nothing becomes certain that does not also become an object".¹³ But that certainty comes with a cost; objectifying what is given as an event ignores what exceeds our intentionality. We know this happens; we know there is an excess that we cannot know with many experiences, and yet unlike other forms of unknowing, this form of unknowing cannot be converted into knowing through further examination. That which we would know more of, the event, has passed. Marion calls this certainty that there is knowledge lost to certainty "negative certainty".

Although Marion's concept of saturated phenomenality is centrally concerned with that which exceeds human cogitation, he spares little thought for those elements of the world that are neither human nor human products. He mentions "beings of nature" only briefly, and categorizes them as common-law phenomena.¹⁴ I would like to argue that Marion mis-categorizes "beings of nature" as common-law rather than saturated phenomena.¹⁵ Common-law phenomena "vary in terms of their givenness"; the fulfillment of intentionality by intuition "can be adequate" but "most of the time [...] remains inadequate".¹⁶ While natural phenomena may vary in terms of their givenness, many obviously exceed human intentionality. No concept or rating system can adequately conceptualize a hurricane. No amount of forethought can predict the sweeping and apparently

11 Marion, *Being Given*, 216–219.

12 Jean-Luc Marion, *Negative Certainties*, trans. by Stephen E. Lewis (Chicago: University of Chicago Press, 2015), 170.

13 Marion, *Negative Certainties*, 2.

14 Marion, *Negative Certainties*, 195.

15 Marion, *Negative Certainties*, 195.

16 Marion, *Being Given*, 222.

arbitrary destruction such natural disasters bring. A hurricane obviously arrives as a saturated phenomenon. But as Christina Gschwandtner points out, every ecosystem, from rainforests to anthills, exceeds our intentional grasp.¹⁷ Even a singular experience in nature, like the smell of a river after years away or the sight of an animal I did not realize was watching me, can be given as saturated.

As with other saturated phenomena, hurricanes and anthills offer an experience of overflowing givenness that we may or may not receive. With works of art, this non-reception is easy to recognize. A painting always offers infinite interpretive potential and “demands” we “change our gaze again and again” every time we see it,¹⁸ but one may ignore this demand. A bad mood or conviction that one has seen all there is to see can “restrict the intuitive given” to what fits in a predetermined concept.¹⁹ Similarly, experiences of animals, weather or ecosystems can be given as saturated phenomena but received in a way that strips away their excess. Part of what guides our tendency to treat certain experiences as objects instead of phenomena or common law instead of saturated phenomena is the context in which they occur. Non-human life that shapes itself in relative freedom (that which we typically call ‘wild’) nearly always gives itself as saturated, but it is harder to see a bird in a cage at a pet store as overwhelming. So much of the miraculous about birds is blocked out in that scenario – flight, communication, strategies for concealment. The conceptual apparatus that signals this is a pet, it can be purchased, it is owned and made for owning succeeds in limiting the experience of the bird to the extent that it is hard to question. One may think as a matter of principle that birds cannot be owned, but to release one from a store would be theft, legally and practically, so the concept of bird-as-merchandise is reinforced. But in a forest or even a yard, birds intuitively exceed what a human can foresee, adequately conceptualize, or interpret. Their particularity as individuals, the moment their call reaches through space, their navigation of the wind, these things exceed genus and species designations or wild versus domestic dichotomies. Even the question of interpreting a bird highlights the anthropocentric assumptions of the hermeneutic processes most of us are habituated to. We ask of a painting ‘what does it mean?’, but that is a nonsensical question when directed at a bird. It need not mean, but be.

17 Christina M. Gschwandtner, *Degrees of Givenness: On Saturation in Jean-Luc Marion* (Indianapolis: Indiana University Press, 2014), 80.

18 Marion, *Being Given*, 230.

19 Marion, *Being Given*, 223.

Marion says that, conceived as witness rather than constituting ego, a person not only finds phenomena given, but finds him or herself given through the reception of saturated phenomena. Part of what birds (or foxes or mountains or hints of petrichor) give us when, as saturated phenomena, they give us to ourselves is this absence of human meaningfulness. When a bird regards me, it does so because I mean something to it not because it means something to me, which makes it fundamentally different from a painting or work of literature, the meaning of which cannot be said to lie somewhere other than human comprehension however inadequate human comprehension might be. Mountains and smells cannot be said to regard us in the same way a bird does, and as with the bird they cannot be said to be meaningful in a way that humans can make sense of. Even more than other forms of saturated phenomena, natural phenomena (by which I mean those humans do not have a hand in making, even if we have a hand in defining them) give us to ourselves by illuminating the limitations of our interpretive horizons. The mountain I look at as I write this (Bentsjordtinden) sits right across the water from my backyard. I see it from my bedroom window as soon as I wake up; it literally shapes the horizon for every backyard game or hour tending the garden. It would be wrong to say it is meaningless, since my sense of where I am is shaped so profoundly by its presence, but I simultaneously recognize the insignificance of my location to the mountain. Were I to look at that mountain, as some of my neighbors have, every day from birth to death, the length of those days would remain profoundly insignificant compared to the time the mountain has been available for perception. I could say that Bentsjordtinden gives itself as a common-law or even intuitively poor phenomenon because, following the classic example of the cube, when I intend it, I direct my attention to the mountain as a whole and see only one side of it. But a mountain is not a cube. It reveals itself, the polar light, the seasonal growth of trees, the retreat of snowpack with more abundance than I can even notice, much less conceptualize. The process of thinking through the ways Bentsjordtinden shapes my experiential and reveals my interpretive horizon is, as Marion points out, infinite.²⁰ And much of what I can learn from the mountain relates to my own limitedness with regard to receiving its intuitive givenness.

The claim that Bentsjordtinden gives more than I can comprehend meaningfully is fundamentally an epistemological and hermeneutic claim. It implies already a process of coming to terms with an experience that has passed by the

20 Jean-Luc Marion, *Givenness & Hermeneutics*, trans. by Jean P. Lafouge (Milwaukee, Wisconsin: Marquette University Press, 2013), 59.

time I think about meaningfulness. Although the infinite hermeneutic is an important implication of saturated phenomenality, it cannot be the most important one for an eco-phenomenological examination that goes beyond anthropocentrism. Prior to conscious hermeneutic processes, experiences of mountains or birds have already revealed the human encountering them as placed, limited and embodied. Recognition of this fact is implied in Marion's discussion of the subject as witness because we are constituted as witnesses by what comes to us from outside ourselves. But it is Merleau-Ponty, more than Marion, who has elaborated this positionality in a way that is helpful for eco-phenomenology. Already in his major thesis *Phenomenology of Perception*, Merleau-Ponty is concerned with the ways perception arrives prior to conceptualization. He points out that children perceive the world around them prior to knowing how other humans refer to things in it. Likewise, as adults there are moments when the processes of perceiving and conception can be experienced separately. If on waking, I feel that my cat is beside me, the touch of her fur and the weight of her reach me before I say to myself 'cat' or more accurately the name of my cat. Preconceptual perception is easier to recognize in a partially awakened state, and it is easier for sighted people to think about it using senses other than sight, but as Merleau-Ponty makes clear, we are never out of the state of pre-cognitive bodily perception.

Later in his life, the philosopher comes back to questions of perception as related to our being in the world, and he declares that he must begin to ask the central questions of *Phenomenology of Perception* again. Because he started "from the 'consciousness'-'object' distinction", in his early work, he says, the question of how we perceive is "insoluble".²¹ His clearest attempt to locate another starting point is the posthumously published essay called 'The Intertwining – The Chiasm'. Here he tries to express what it is to live always in "the durable flesh of the world".²² The figure of the "chiasm" connotes both the biological process of our optic nerves crossing to enable stereoscopic vision and the rhetorical figure of inversion. It thereby suggests both simultaneous synthesis and reversibility. Within this understanding of perception, experiences arise all at once, shaped by but not limited to conceptions. "What there is then are not things first identical with themselves, which would then offer themselves to the seer, nor is there a seer who is first empty and who, afterward, would open himself to them – but something to which we could not be closer".²³

21 Maurice Merleau-Ponty, *The Visible and the Invisible*. ed. by C. Lefort, trans. by Alphonso Lingis (Evanston: Northwestern University Press, 1968), 200.

22 Merleau-Ponty, *The Visible and the Invisible*, 123.

23 Merleau-Ponty, *The Visible and the Invisible*, 131.

The mountain is both the boundary of my sight and the thing that I see. My vision 'up against' the mountain conjures the mountain up against my vision. In the world, we are simultaneously touched and touching although we cannot capture both of these experiences. Merleau-Ponty explores the possibility that acts of sensing imply simultaneously being sensed. The body, he continues, is "bound to the world through all its parts, up against it".²⁴ This chiasmic understanding of our relation to the world implies that there is a correspondent pressure on what we perceive that comes from us. Since we cannot access this invisible effect, it has no epistemological value other than to designate the limit of what we know. Nevertheless, a chiasmic understanding of our interaction with the natural world emphasises that human perceptual acts matter to the more-than-human world. There is no form of human interaction with mountains, birds or trees secure from the possibility of effecting them.

Merleau-Ponty explains the chiasmus through the phenomenon of one hand touching the other. He identifies

three distinct experiences which subtend one another, three dimensions which overlap but are distinct: a touching of the sleek and of the rough, a touching of the things – a passive sentiment of the body and of its space – and finally a veritable touching of the touch, when my right hand touches my left hand while it is palpating the things, where the "touching subject" passes over to the rank of the touched, descends into the things, such that the touch is formed in the midst of the world and as it were in the things.²⁵

The operation of touch here stands in for all sensate experiences and because of Merleau-Ponty's insistence on the embodiment of all human experience, it describes the nature of all experience. The designation of sleek or rough speaks to how something gives itself, a process which gathers together prior experiences that operate through comparison and make knowledge operative. For example, the top half of Bentsjordtinden is grey, which I recognize as causally related to the low altitude tree-line in the Arctic Circle, and which suggests a hard path underfoot if I plan to walk it. The "passive sentiment of the body and its space" refers to the limited but vast possibilities my body enables – all we can look at, smell, touch, hear, and taste. The possibility of looking at the rocky top of the mountain is there, but I could instead look at the strawberry patch or the poppies or smell the poppies, but I cannot smell the rock on the mountain. Recognition of the possibility of human action in spaces dominated by non-human forces preserves the philosophical grounds on which human agency can be understood

24 Merleau-Ponty, *The Visible and the Invisible*, 131.

25 Merleau-Ponty, *The Visible and the Invisible*, 133–134.

without reinforcing a human/non-human dichotomization more than is rhetorically necessary.

For each sensually perceptible possibility, there is a correlative, which is both more than human and impossible to perceive, but that impossibility arises because of the limitations of individual human bodies and minds, not because of any form of species distinction. This correlative is the third experience Merleau-Ponty describes. If I touch my left hand with my right, I can experience my right hand touching or my left hand being touched, or I can reverse the sense of which hand is doing the touching. This is also how it is, Merleau-Ponty says, when we touch the flesh of the world. When I smell the poppies, they are being smelled. When I touch them, they are being touched. Although my smelling does them no harm, my touching easily can. When touching another person, a kind person attends to the other's experience of being touched automatically most of the time. Could a similar awareness of the non-human natural world be instilled through the habit of thinking about the correlative of our enfleshed touching the world as the world being touched? The strength of this idea, in terms of a more-than-human environmental ethics, is that it recognizes the impact human action has on the natural world without subsuming that impact under a human-centered teleology. Miners know that they impact that natural world, but they do so for the purpose of extraction. Policy-makers pronouncing an area protected know that their act, although it is a legal and categorical act rather than a physical one, impacts an area by forbidding certain future forms of activity. These forms of recognition of human "touching" subordinate the natural world to human teleologies with a confidence borne out of knowledge that claims certainty about the natural world. But pairing the concept of saturated phenomenality and the awareness of negative certainty that comes with it with the idea of the world being touched reinforces the unpredictability of every human action on ecosystems we can never conceptually understand.

Philosophers struggle to express what it is that greets the perceptual and interpretive abilities we cast out into the world with every glance. Language is much better able to contend with the visible than the invisible. Marion calls it "givenness." Merleau-Ponty describes it as the correlative or extension of bodily senses. There are visible and invisible phenomena, phenomena of human flesh and the "flesh of the world", but the boundaries between the two are always untraceable or upon being found (like the boundary between the touching and the touched hand) require one to send intentionality to the boundary's other side to find it at all. Some refer to it as a call. The tendency to look for expression of what it is among the human senses reveals both the effort to exceed what we can know as humans and the impossibility of the attempt. Within the French

phenomenological tradition, it is often designated the *il y a*, the “there is”.²⁶ Whatever one calls it, it seems impossible to know if what calls has an unity internal to itself that is simply outside of what we can perceive or whether the heterogeneous offerings of the natural, non-human world offer only themselves from themselves. What we can know is that our ability to accept these offerings is limited by the poverty of intentionality we turn toward them. Nevertheless, we respond, and in that response there are consequences for the manner in which we touch the “flesh of the world”.

The “flesh of the world” includes man-made products as well as cats and ecosystems but because cats, ecosystems, mountains and other natural phenomena exceed our intentionality so consistently while also registering our impact in invisible ways (the way our left hand receives the touch of our right but without us having access to the recipient experience), a particular humility is called for with regard to these natural phenomena. Merleau-Ponty’s description of the chiasmic relationship between the visible and the invisible enforces the realization that all of our acts leave traces. Some evidence of our too-rough touching of the “flesh of the world” is obvious – mountaintop removal that scars the landscape and poisons rivers – but much of it remains invisible. Sometimes this is due to lack of knowledge that will eventually be supplied. The long-term effects of carbon emissions were not understood, for example, when cars were first invented. But other invisible effects are unknowable due to our finitude, a finitude that cannot be overcome with regard to living plants, animals and ecosystems the way it might be with those things that can be reduced to objects with less certainty lost. There is something wild in nature that resists being known, something unpredictable. Viruses, mountains, moths all change in ways we cannot keep track of. I can return to a household thing, a flashlight let’s say, and find out more about it. It is not without eventness – it could be the flashlight my father and I used when playing shadow animal games, and I have just found it after all these years – but not much is lost in treating most flashlights in most situations as objects. But a fox, a fox, offers much that I cannot know. If I see a fox, it is on his or her terms more than mine, and I may never see him or her again so whatever is given in the event of that encounter is given fleetingly. To point this out is not to return to a romantic sense of closeness to nature, but rather to acknowledge the plentitude

26 Ted Toadvine documents the occurrence of *il y a* at the *The Visible and the Invisible* in ‘The Primacy of Desire and its Ecological Consequences’ in *Eco-phenomenology: Back to the Earth Itself*, 153.

of non-human life that gives itself in ways that overflow our spatio-temporally limited, conceptually pre-inscribed intentionality.

When I walk in a forest, see a fox, wake up with my cat, regard the alpine glow on Bentsjordtinden, more givenness than I can take in is offered to me. I may not always receive it, but it is given. That which is given may also overwhelm me in unpleasant ways as in hurricanes or cold, but there too my finitude is revealed. If I am certain there was more given in my encounter with a fox than I could take in, how much more ignorant am I about what the encounter offered to the fox? Not having any way to access animal perception, I would not speculate on the fox's intentionality, nor would I attribute to a mountain intentionality I cannot know is there, but I know that a fox that has seen me cannot return to being a fox that has not encountered a human. I know the rock that mainly composes Bentsjordtinden has been rearranged ever so slightly by my footfalls. The air that composes our atmosphere is altered ever so slightly every time I ignite the diesel in my car. The habits of prioritizing certainty over eventness, visible effects over invisible, and human perception over our often-bruising touch of the non-human world lead us to treat trees, mountains, cats and foxes as objects that we know through what we see, but as Merleau-Ponty and Marion's concepts reveal, the object-world we so often pretend to live in is not the world nature gives us at all.

To conclude, I want to describe a scenario in which the habits of certainty, reliance on vision, and prioritization of human perception are all rendered unworkable by the environment. Phenomenological thinking tends toward the descriptive rather than the analytical because of its commitment to uncovering 'the things themselves', restricting them as little as possible through pre-determined concepts. This description can reveal aspects of experience that go unrecognized because the concepts we typically bring to lived experience conceal them. The experience of being in the dark in the woods, especially where I live, reveals the limits of the aforementioned habits. I live near Tromsø, Norway at 69 degrees North, well above the Arctic Circle. After the sun sets on November 27th, it remains below the horizon until January 15th. We have 50 days known as 'mørketid', the dark time. My house is about an hour's drive from the city, perched on the side of a small mountain with the sea at the front of the house and the mountain rising behind. When there is daylight, we regularly see moose, reindeer, and white-tailed eagles; small mammals like shrews, mice and moles; and a variety of sea birds. Less often, we see otters, orcas, foxes and lemmings. Just across from my front door, a path leads up the mountain. I can walk it or ski it, depending on snow levels. There may be moonlight or a blue lightening of the horizon where the sun would be, but away from the glowing windows of houses,

there is no other light. Sitting on the first ridge of the mountain and facing the sea, I can feel the openness of the air in front of me. The birches struggle to reach their full height here. With the mountainside angling down in front of me fairly sharply, none of them have enough height or thickness to impede the movement of air, which is constant near the sea. I know this ridge well and can make it up with no light.

Descending the back side of the first ridge, I turn on my headlamp. It illuminates 40 meters directly in front of me, enough to find the trail and check my bearings. As I head down into the valley behind the first ridge, the mountains close off any glow from the horizon. Unless the moon is overhead, I can see the spill of our galaxy overhead easier than the bog or snow underfoot. Up the second, higher ridge fir trees grow. I can smell them about ten minutes before I reach them if the air is dry. With the rocky mountainside above, the bog below, the small growth of fir provides a haven from the wind. If I am still, I can hear animals moving in the unmoving air. Contrary to places I have lived in Appalachia or Montana, no animals here will harm me, so no fear comes with the sounds, even if it is a large animal like a moose. What accompanies the sound is rather an awareness of how ill-equipped I am to perceive the changes taking place all around me. Moose see poorly, but can smell and hear far better than I can. Foxes, who hunt at night, see well in the dark. Unless they are pouncing, they are miraculously quiet. I rarely see them, but sometimes find their scat on rocks just uphill of the bog, where presumably they hunt lemmings, or I find feathers and footprints in my yard. In the daylight months, they are not shy about marking their territory. Sitting on the edge of the stand of fir, now with my headlamp off, I realize how many things can take my measure through sight, smell and sound without my even knowing they are there. Or if I know they are there, as with a noisy moose, without my being able to determine what direction he is facing or if it is a he or a she. A fox could have watched me cross the now-frozen bog and ascend into the trees the same way humans watch lions walk about in Botswana, but unlike the lions, I would have no awareness of being watched. Being in the forest here in the long night of winter offers a uniquely powerful experience of the chiasmic reversibility Merleau-Ponty describes. My senses are tuned to full power, but sitting just in the grasp of the stand of fir, in what my daylight mind tells me is a concealed spot with good visibility, I am much more perceived than perceiving.

I know this with what Marion calls “negative certainty”. To some extent my failure to know what’s around me could be mediated by night-vision goggles or pre-installed cameras, but to a large extent my existential finitude just prevents me from taking in what is happening around me. I could be straining my eyes

to catch the profile of a moose I hear and miss the aurora unfurling overhead. Directing my hearing toward some small mammal, I can lose track of the falling temperature. Compared to other places in the Arctic, the winter temperatures here are moderate, but winter storms can move in quickly, making it impossible to see and difficult to move. The cold is the killer here, more nonchalant than any animal predator. Northern lights and winter storms are both obviously saturated phenomena. The rarity of the aurora and deadliness of the storm make them stand out in the range of human experience. But what prior experience has prepared me to experience those snow crunching moose sounds or even the non-appearance of a fox I know might be there. What concept do I have for the non-appearance of the animal I know I sense and the one I do not sense? Without concept, without the ability to begin perceiving the scents and displacements I leave behind when I go, how can I know what affects my human presence has had?

An eco-phenomenology based on Merleau-Ponty's chiasmic reversibility or the overflowing givenness Marion describes does not pre-determine policy or behavior. It is modest in its claims. It encourages us to make a habit of knowing what we don't know and imagining what we cannot sense. In the forest here at night, there is a minimal technological boundary between me and the local ecosystem, which makes it easier to perceive the radical finitude that impedes our decision-making with regard to the environment. It reminds me of the extent to which almost every decision has an environmental impact. Being primarily a descriptive discipline, phenomenology does not provide instructions for how to live in a more ecologically sustainable way. Instead, through attention to the invisible inverse of our perceptions and actions and the overwhelming givenness of the natural world, phenomenology can reorient us – away from dominance and certainty, toward receptivity and grateful stewardship.

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Avital Ronell

Nietzsche Apologizes for the Weather: A Storm Chaser's Report

Abstract

Beginning with the unreadability of weather for Goethe, I consider the premises of climate control by analyzing a logic and history that extends from Goethe to Nietzsche and Freud. It is worth revisiting the haunts of these “weather prophets”; as the earliest weather forecasters were called in English. They handled matters of climate as if they answered a biblical-mystical calling; they probed an essential immateriality as if they were prevailing upon a remote deity. Goethe, Nietzsche, and Freud, according to different degrees of urgency, were assigned to think of futurity, marking discrete zones pivoted on the precarity of our *Umwelt*; they concerned themselves with the untappable and non-empirical yet poetically urgent cast of climate, a nearly unconscious brace of Being, calling up an aspect of a covert existential drive. At the same time, weather conditions prime the pump of thinking for Nietzsche, or sound the fury of ancestral dismay for Freud, who reads extreme weather conditions according to the protocols of the “primitive” worldview: Bad weather hits us when we fail to bury the dead enemy, when we miss the call to honor the departed and thus fail to accommodate the dead other, whether introjected as friend or foe or remote ancestor. The pertinence of the Freudian prophesy holds for unresolved effects of war and climate today. For Goethe, Nietzsche, and Freud, climate is a morph of Being and attaches to the unconscious in various ways; the visitation of climate is never merely located outside, nor ours to play with, but comes as a portentous announcement, a rain of rancorous disapproval from the inside/outside haunts of a higher power signaling nearby.

*For Werner Hamacher,
force of Nature*

The unreadability of weather led to a campaign of speculative proportions that could have unhinged the great poet. Accustomed to mastering elusive objects and cutting through thickets of poetic anxiety, Goethe came up against an untamable force, recalcitrant and ever-dissipating. His pursuit was unrelenting, crossing a line of scientific inquiry with insolent determination. As object of contemplation, or posed as subjective filtering system, weather was out of bounds, borne on cloud formations and evinced by the earth-shudder of precipitous eruption. At one point, Goethe made the ‘frightening’ observation that he himself was the

weather.¹ This appropriation of the elements to Himself was part of a larger usurpation, a contest he fearlessly engaged with other gods and *Götter*. Eventually he was credited with establishing the groundwork of meteorology. As natural scientist, statesman, conversationalist, and poet, Johann Wolfgang von Goethe kept going at the problematics of weather from 1786 to 1829, shifting the significance of nebulae among different fields of critical action and consequence. Goethe the empiricist, whose studies were often methodical and on point, part of a cumulative scientific investigation, allowed his poetic intuition to take the lead and provoke leaps that science to this day savors. Yet, the legendary risk factor exacts a price when the spirits intrude upon a scientific lab and sensibility.

Weather-streams continue to evade systematic predictive evaluation, though nowadays we are coming close to anticipating increasing slams. In terms of Goethe's inquiries, the fluctuations of weather, difficult to pin but constitutive of mood and inclination, burst through the heavens at the whim of divine forces, impermeable and menacing. Whatever served as port of origin – whether framed as scientific ground or celestial outburst – made it seem to Goethe and his entourage of poet-scientists as though weather were sent our way by the Immortals, as part of the *Geschick des Seins*, pumped by destinal velocities. Nothing foretold whether weather could yield meaning or was just blowing smoke on a contingency plan, tossing cloud puffs around in a fateful game whose rules remained hidden or entirely arbitrary. The unmoored condition that attaches to weather and disperses subjectivities was no mere *Sturm und Drang* fantasy featuring a vulnerable species tossed around, rained on or scorched, historically inundated by a storm (*Sturm*) of impulse unknown (*Drang*). The shape of weather belonged neither fully to art nor science, both to the earth and sky, inviting phantom gatherings and widespread dispersal, fits of empirical intrusion, evasive stunts and suicide runs.

Weather created its own phenomenology, overcast with attending spirits and tentative climate controls. In the 18th century, the atmospheric supplement, a vital supply line to all manner of human activity, remained mostly unfathomable,

1 Johann Von Wolfgang Goethe, 'Zur Witterungslehre', in *Goethes Werke*, Band XIII (Verlag C.H. Beck: Munich, 1975), 305. The 'frightening' conclusion ascribed to Goethe continues: "It is my personal approach that creates climate. It is my daily mood that makes the weather". This statement wafts in the public domain, having become so popular that it bears no specific reference. I assume it originates in the voluminous *Conversations with Eckermann*; See Avital Ronell, *Dictations: On Haunted Writing* (Bloomington: Indiana University Press, 1986).

a philosophical wonder and scientific outlander. Maybe it took a 'naïve' sensibility, as Schiller called it, to seek proximity to the troubled concept, more alienating than the shenanigans of any *Faust*-bound homunculus. For his part, the oversized poet, Goethe – a scientific Wunderkind and highway commissioner, among other state-appointed passes of privilege, the Nietzschean idol who towered over his contemporaries and thundered maxims in his own cheerfully unnerving way – took on the immaterialities of climate and its untrackable origins with intimidating gusto, going after the inescapable force of another law.

When fathoming weather variables, he attached his inquiry to tenuous means of description, deploying divinatory skills and prophetic speculation. Goethe's poetic-scientific efforts to predict the weather implied, for and in his time, a scandalous overreach, stealing into the domain of the gods, tapping what is largely untestable. Breaching the empire of natural endowment, he appeared to enter a realm of supernatural secrecy, capriciously guarded by hidden sentinels. From Goethe to Nietzsche and Freud, the quasi-philosophical yet poetically urgent cast of climate, a nearly unconscious brace of Being, called up an aspect of existence that exposed man to radical contingency, yet was unshakable as a structuring mechanism. Hovering between meaning and the senseless, weather was always susceptible to a sense-making hustle. A default causality, it called up the necessity for constant reporting and fast-spin interpretation.

Climate covered the sacred ambiance of our ability to grow, thrive, or collapse under the onerous unreadability of its sway. A roaming premonition of Being, climate exceeded man's empirical grasp, sent from another domain, ticking off intimations of impermanence, sounding a peril advisory. On the edge of cognition, climate proved ready to uproot or shelter growth, offer gentle coaching or pour on signs of brutal indifference, maybe signaling a difficult cohabitation of forces. Or, varying weather conditions simply were kept on idle as an unrelenting menace. We shutter our house of Being at times, anticipating a threatening riddle of signs, the messaging from a forgotten crime scene, as if still working an unconscious structure that Freud discovered and upheld.

For the most part impervious to human application, weather imposed a large portfolio of imponderables. Instigating a pattern of habits and behaviors, the notion of weather has issued inscrutable directives that belong to a furtive fold in history, escaping the narrative checkpoints of historical recounting. Entire armies were stalled and reassigned by unfavorable weather conditions, as Schiller's historical dramas underscore. Since the epic campaigns of the ancient Greeks, one was dependent for the progress of history on wind velocity and other unpredictable puffs of the unbridled elements.

Like Kant, Goethe understood that weather and its complex donations were responsible for destruction, yet it also appeared to assure the conditions for flourishing sustainment, taking away what it gave. Weather inevitably confounded, bullied, uplifted and lulled, becoming the untappable ground of existence in its manifold, hanging at the limits of vitality and need. Nowadays we are compelled to ask again, “what has defined this aggregate of imponderables that creates dependency, ruling our *Umwelt*, our environment, without a proper frame or ground?”. Autonomous yet seasonal, in perpetual theoretical free fall, and at no point beholden to a reliable higher or constraining concept – at once real and spectral – weather conditions have determined the fate of sailors, farmers, builders and dwellers, those exposed to the outdoors and afflicted by bad hair days, while its recessive qualities also exacerbate brooding poetic sensibilities. In sum, tropologies of weather apply pressure to the purported solidity of any number of mortal planning schedules, existential arrangements, or alert temporal fixation. In some languages the word for weather becomes indistinguishable from what is meant to designate time, giving us the double occupancy posted in *le temps, el tiempo, il tempo*, crossing a number of time zones. When Nietzsche succumbed to darkness, clocked officially for madness, he started apologizing for the weather and the time-structure it disjunctively marked.

With historical hindsight, we can see that the consortium of poets and philosophers, according to different degrees of urgency and lucidity, and beginning with Goethe’s ‘Gedanken über die Witterung’, accepted an assignment to think of futurity, marking discrete zones that pivoted on the precarity of our *Umwelt*; they concerned themselves with quasi-empirical coordinates related to aspects of an existential drive yet to be named. The explorations led by the immense speculative taps of the 18th century gave way to the hyper-scientific drives of the 19th century. Returning on fast forward to our centuries, one can focus the premises of eco-climate by taking into consideration a number of contemporary and critical outposts, including Tom Cohen’s theorizations and Bernard Stiegler’s notion of the “Neganthropocene”, a barreling logic that extends from Goethe & co. to concerns of the current climate activists.² To these inquiries, one

2 See among other highly relevant essays, including those on the Trumppocene, Tom Cohen, ‘Toxic Assets-de Man and the Ecocatastrophic Imaginary (An American Fable)’, 2, (2011), <https://www.academia.edu/16656068/Toxic_Assets_De_Man_and_the_Ecocatastrophic_Imaginary_an_American_Fable_> [accessed 12/06/2021]; Bernard Stiegler, *The Neganthropocene*, trans. by Daniel Ross (London: Open Humanities Press, 2018).

can add the backdrop of monstrosities borne by weather's undead – the formations of non-presence in the speculative descriptions of Mary Shelley and her band of poets (which include Goethe's *Werther*, high on monster-*Frankenstein's* reading list). It is worth revisiting the haunts of these "weather prophets", as the earliest weather forecasters were called in English. They handled matters of climate as if they answered a biblical-mystical calling. It is no wonder that they probed an essential immateriality as if they were calling on a remote deity. Differently inclined, Stiegler was determined to scan some of these tropes in terms of a "Neganthropocene" where negation and negative premises of surrounding air qualities, whether of the *air* or *heir*, to speak with Shakespeare's mergers, remained largely unanalyzed, vacating premises attached to metaphysical presumption. What have we inherited from this material-immaterial domain that continually negates itself? How does the weather, as unfathomable as it is categorical, issue a call to responsible action?

Let us continue to cast a wide net, remembering that *weather conditions* involving specific coordinates of climate and food cultures prime the pump of thinking for Nietzsche and sound the fury of ancestral dismay for Freud. Intent on locating the psychic figurations and distortions of these conditions, psychoanalysis reads extreme weather according to protocols of a mourning disorder and its wide-ranging punitive consequences. Bad weather, Freud indicates, hits us at an unconscious level when we fail to bury the dead enemy, having disregarded the call to honor the departed. There are legions of departed beings that squat in our collective headspace, whether introjected as friend or warded off as foe, as spectral prod coming up close for inspection or signaling from afar, ambivalently posting threats. The pertinence of the Freudian prophesy, to some degree timed for the future of its disclosure, deserves further examination in our overlapping fields. For now, suffice it to note how uncontrolled climate attaches to the unconscious or comes to us as an emissary of Being in the works of Goethe, Nietzsche, Freud, Shelley, Leopardi, Glissant, and scores of other poet-philosophers that have stayed close to the bone of these ungrounding, accusatory formations. According to the schedules they have delivered, the visitation of climate's ambiguous facets is never merely settled outside, nor ours to play with, but comes as a portentous announcement, a rain of rancorous disapproval from the inside/outside range of a higher power gesturing nearby. The foreboding sendoff seems especially intrusive when that higher power is knotted into the agony of historical demise and human forgetfulness. The psychic crime of *forgetting to mourn* delivers a major contusion to the body politic, drives up fog and density in *Hamlet* as well as Kafka, shrouding poetic topologies, slapping a knell of misdeed that sounds off in the aberrations of climate. Nearly every

call of conscience depends on foreboding weather conditions to bring forth the condemnation of specters. One thinks of Macbeth's hallucinations, floating the ghostly returns of a bad conscience. Of course, there often lurks a Lady Macbeth in the shrouded background of historical bad conscience, blending into the fog of a fateful power grab.

The Ravages of Human-All-Too-Human Recklessness

What are the stakes in locating the *anthropos* as leader of the destructive pack that chronically compromises any just quota of regenerative care? Is the epistemic gesture of classifying an era still a legitimate tactic, or merely part of a repackaging of irresponsible excess, rendered with or without crucial theoretical bolsters? Perhaps the relative 'newness' itself of a reclassified era depends on a category to be dismantled, especially where it becomes necessary to reach back regressively. With cautious advance and following complicated instructions, redistricting the Holocene, "Anthropocene" is bound to a constellation centering and fortifying "man" in order to cope with the ravages of human recklessness under study. Bringing the tally of misdeed close to another poet, Hölderlin's understanding of *frivolity*, analyses of the Anthropocene count off the pileup of waste, metaphysical and material. It is as if mortal beings got to play the lead figures to whom a toy of custodial duty has been tossed.

If I am getting this right, the "Anthropocene", more forcefully than the Holocene or Late Pleistocene, has grown recently to circumscribe an epochality responsible for naming a breached guardianship of the earth, itself a questionable job description for man. Planetary distress has become the focus of intense interpretive fervor in the humanities due mostly to the increasingly scandalous depletion of resources and measurable exploitation of the earth, couched in suspicious language usage with referential consequence. Scores of activists and critically inclined observers, children and so-called adults, have been motivated to a level of concerted action, joined at their writing posts to denounce the world-class infraction. Something unbearable has befallen those who sense with strained acuity how close we are to voiding a sacred donation (at best) entrusted to and impoverished by the figure of man. Some stragglers have reported for duty precisely to monitor the passage of an obsolescing humanist rhetoric, another fallout center. Still, the cause of climate remains unsettled, giving rise to a complex series of *Einstellungen*, Husserlian attitudes, diverse and resolute, contradictory and justly panic-stricken. The steady spoilage of the earth has given a touch of mystical ardor even to the sturdiest among scientific and rhetorical analyses. A mystic's anxiety finds different forms of articulation, and panic pulls all sorts of

triggers, as Robert Musil noted, including that of dumbfounded stupor. The most empirically distilled reflections are no longer simply invulnerable to entreaties of compassion for a withering planet. The rhetoric of care often switches to the emergency channel, cast, as when a plane is about to crash, in the feminine. Thus some interventions speak through prosopopoeia, capturing the voice of daughters, the hapless inheritors of earth's timing out.³

Despite the sense that we are running out patriarchy's clock, a glint of optimism sparks the theoretical framing of the question at hand. In principle, any finitizing move that brackets an epoch bears good news to the extent that it puts a limit on the ascribed damage, controlling the epistemic borders of the Anthropocene. Stamped with an expiration date, the arc of destruction comprehends its own abolition. The rise of sentinel daughters overseeing the limit installs a distinctive phrasal regimen. This voice-over serves as a way of announcing that "It will be over" -- or *something* sinister will be over, implying closure, if not an ending to a reign of terror. The bracketing may even offer to confer new names and new addresses. Sending up a flare, "Anthropocene" as approved designation, sufficiently kid-tested, offers to close off an era marked by malignancy and deceit, predatory greed and genocidal ravage.⁴ The epoch, mark of a steady de-creation, is systematized by the ways the human animal has been fixing murderous rage on its own and neighboring species, reasserting the extreme malaise of its own disjunctive naming: the *human* and *animal* uncomfortably meshed.⁵ To a large extent, the Anthropocene identifies a periodization of a geo-historical era that judges itself doomed to and fascinated by its own extinction,

3 I thank Phillip Lewis, Professor Emeritus at Cornell University, for letting me read chapter IV, 'Toward Reckoning with a Crisis,' of his forthcoming book on the Anthropocene. In the course of his own argument, Lewis delivers sensitive critical assessments of Mark Hertsgaard, *Hot: Living through the Next 50 Years of Earth* (New York: Houghton Mifflin Harcourt, 2012); and Roy Scranton, *We're Doomed: Now What?* (New York: Soho, 2018) both of whom invoke their daughters to underscore an intergenerational and interpretive pathos of planetary depletion. Professor Lewis has also alerted me to the important work of Srećko Horvat, *After the Apocalypse* (Cambridge: Polity Press, 2021).

4 I treat these themes in 'Lyotard, Kid-Tested,' in Avital Ronell, *Losers Sons: Politics and Authority* (Urbana and Chicago: University of Illinois Press, 2012), 155ff.

5 Slovenian philosopher Alenka Zupančič presented a lecture on the stresses of disjunctive human-animal *Erlebnis* at the European Graduate School in Switzerland, August, 2015.

whether experienced as imminent or cautiously put on hold, scaled by moral or supramoral valuation declaring its finite status (to click on Nietzsche).

In more recent times, figures as diversely disposed as Valerie Solanas, Jacques Derrida, Kathy Acker, and a repurposed Leopold von Sacher-Masoch shot ahead of the curve when measuring the hols of gender and effect of the *Anthropos* as a lingering Greek appropriation of man. Solanas predicted the end of “man”, seeing the final call both historically mandated and as a biologically viable feature bound for a spectacular fade-out. She famously (and indefensibly) went after a menacing morph of man, referentially anchored, when she, supreme androphobe, took aim at Andy Warhol. Derrida’s reflections on the vanishing aims of man, and Heidegger’s shading into Dasein, were given in the essay, ‘Les fins de l’homme’ (‘The Ends of Man’). Acker trounced man through her incestuous pairings and flawless denunciation of human practices and metaphysical habits. Deleuze has routed masochistic politics according to a specific planetary map of primeval climate change.⁶

Major human-animal dispositions and structuring principles are broken down in Deleuze’s analyses, preparing ideological inroads that show how the political resolve of Sade and Sacher-Masoch diversify over eco-geological determinations. Revolutionary zeal has been shaped in terms of categories that rely on climate. Thus, in ‘Coldness and Cruelty’ Deleuze’s investigations of Sacher-Masoch’s *Galician Tales* and *Frinko Balaban*, the novels serve to establish a three-fold face of nature: cold, maternal, severe. Attentive to Sade and Sacher-Masoch’s campaigns against political tyranny, Deleuze shows masochism and its penchant for theatricality to invest a peculiar form of cruelty in the woman torturer who freezes existence down to a starting point for Idealism’s resolve, undaunted and purposeful, revealing “the cruelty of the Ideal, the specific freezing point, the point at which Idealism is realized” (CC, 55).⁷ As a climatic index, the freezing point has been assimilated by thought formations and entire spreadsheets of predictive behaviors. Maintaining complicity with Sacher-Masoch’s remarkable texts, Deleuze advances a revision of man, following the tracks of a weathered gynocracy.

6 Valerie Solanas, *Scum Manifesto* (New York: Verso Books, 2016); Jacques Derrida, ‘The Ends of Man’, in *Margins of Philosophy*, trans. by Alan Bass (Chicago: University of Chicago Press, 1972).

7 Gilles Deleuze, ‘Coldness and Cruelty’, in Gilles Deleuze and Leopold von-Sacher Masoch, *Masochism: Coldness and Cruelty & Venus in Furs* (New York: Zone Books, 1989). Cited henceforth as CC.

Among his many figural poses, man as father is too often seen hiding behind the masochistic ideal figured as the woman torturer, a move made and blindly repeated by many psychoanalysts to which Deleuze refuses a pass. Along with Freud and Edmund Bergler, he situated the specific element of masochism in the oral mother, lodged in the ideal of coldness, solicitude and death, “between the uterine mother and the Oedipal mother” (CC, 55). In addition to its many literary and theoretical merits, Masoch’s work has left a map of the hetaeric or Aphroditic era of primeval swamps, charting a dogged trek among the Amazons’ strict gynocritic and agricultural order where “the swamps were drained” (CC, 53). Portentous and still signaling in the background of our own histories, the shifts that Deleuze’s text registers focus on “the catastrophe of the glacial epoch, which accounts both for the repression of sensuality and the triumphant rise of severity” (CC, 53). In a kind of introject of planetary conditioning that fixes sexual difference, the glacial chill marks the “coldhearted alliance between man and woman”, henceforth more or less frozen in place, heir to “the cunning and violence, hatred and destruction, disorder and sensuality” everywhere at work and working us over (CC, 54). Whether lost in pockets of disavowal or remembered and transfigured, sexuated beings hark back to spare relationality, a chill factor inherent to the Ice Age. Deleuze steering Masoch does not leave things static. Together they situate atmospheric conditions and epochs to describe another logic of becoming, recasting diverse conditions prompted by barometric pressures and geologically inherited stances that culminate in an inescapable sexual standoff, no matter how smoothed over.

For his part, Professor of History Dr. Masoch felt humiliated when learning that he had become the namesake of “masochism”. Henceforth his legacy named a perversion; moreover, he stood for the cold shower of human relations hinging on sexual difference, icy moralism and, perhaps worst of all, on a relaunch of Idealism. Deleuze’s discovery of the freezing points in human relations identified by Masoch, their various meltdowns and overrides, opens the dossier of a mythological and folkloric review of climate catastrophe still hounding the human form of existence. The ruptures first scanned by Sacher-Masoch are folded into the human psyche and history by means of the discontinuities and upheavals that climate change to this day implies. Introjected climate crashes prove determinant for peaking revolutionary attitudes and the generation of supra-historical memory traces that Deleuze locates in epochal climate. These crashes and permutations retain instances of a largely voided history of disaster and conceptual changeover that only recently has come under consideration due to material breakout points. Folded into the psyche, climate becomes politically charged, part of a largely undetected recovery of somatic compliance with the

deranged elements. As motivator for political change in the texts under study, climate suffices to incite revolutionary action by developing a heightened sensibility for necessary rupture and a supply of figural replacement parts for a provocative understanding of geo-history.

Let us remember that Freud first opened the gates to a discussion of uncontrolled climate and the unconscious. His considerations allowed him to take measure of world-class aggressions that plunge one into the depths of an ongoing mourning disorder. As frangible ground, the earth, mercilessly assaulted, has been repeatedly positioned by the technologies and rhetoric of conquest to assume a place of precarity as though she was the *enemy*. The diverse implications of earth as forming a feminine phantasm should not be overlooked to the extent that, especially in Lacanian terms, the empire of maternal territories is subjected time and again to unbridled attack and pornographic capitulation. This flat screen of fantasy shows how we support our troops and manufacture tropes that, with unconscious precision, run into Mother Earth, by letting them have a go at the internal maternal empire.⁸

Chasing Down the Reality Principle

Georges Bataille said that we stand in *need* of a story – an indispensable part of our survival kit when things get iffy. We probably all have a story to tell about freezing in place, a standout moment that frames the coming-to-consciousness (or, remaining-in-a-fog, prodded by the correlates of “consciousness”) when arrested by the gravity of a menacing irregularity in “nature”, or even by the menacing *regularity* of natural blow-off points. Stuck in the rut of *paleonymy* – what Derrida saw as our being saddled with ancient types of designation and their obsolescence – I provisionally keep a problematic vocabulary intact, following the prompts of “nature”, if halfheartedly, by suspending the inferences of biologisms and essentialism that sustain phantasms of geo-social hierarchy. If only to break through my own climatically appointed epochs I offer a snippet from my split-off part album as an illustration of an autobiographical drive beholden to a rolling weather report. Here’s my story.

It seems far away, timed the way traumatic clusters flash back while clocking forward, in this case sounding an alarm that was set off in downtown Manhattan,

8 For more on the maternal imaginary lodged in the spread of global warfare: Avital Ronell, ‘Support Our Tropes: Reading Desert Storm’, in *Finitude’s Score: Essays for the End of the Millennium* (Lincoln and London: University of Nebraska Press, 1994).

reviving part of a condition that has sunk into latency until it suddenly jumps ahead of our chronometers and expectations. Extreme weather episodes eventually pull back, leaving traces like bread crumbs, as if to secure their return, gearing for a comeback like a revenant dissatisfied – or, in accordance with Emerson, like writing itself, tracing and erasing.⁹ On different registers of civic consciousness, though by now recorded, settled and archived, ‘Super-Storm Sandy’ continues to return, gathering velocities as a troubling event, severe and unyielding, following a rhythm of repetition compulsion, unpredictable yet also sure-fire in terms of weather’s unscheduled eventuality. Around here, one lives with the backdrop of a sinking city, an apparition from the future, at this point heavy with the fatigue of the Pandemic and its incessant mutation.

The episode first timed in around Nietzsche’s birthday. It was mid-October, 2012. Cut off by climate drama, New York connected to the greater part of our world that regularly lives on the subthreshold of calamity, awaiting the next trial, the next move commissioned by an unfathomable adversary – one thinks of those friends in Haiti and Malaysia who try to keep it together in areas that are rarely disaster-free or earthquake-proof, hardly protected by any type of bracing or fortifying human aid. On the contrary, these areas, often struggling sovereignties, have been rendered fragile by leveling exploitation, the habits of Western strip downs and continual spoilage. Downtown New York, assumed in some memory banks to belong to another codification of privilege and zip code, another protective installation, revealed that no circumscribed area would be spared or could be offered guarantees of safety, no matter how pampered their time-share on this earth, no matter how ostensibly removed from concerns of climate justice.

Before Sandy, I had experienced a close-up of climate beatdowns in the form of blizzards, heatwaves, and other notable climatological rumbles. Reminding the ego-being of its vulnerability to the elements, such episodes bring the human quality of existence to the edges of a timed precipice, profiling that aspect of the human that collapses into an ill-prepared and *persecutable* object, a mere plaything of invisible forces. This is not to say, with duped simplicity, that weather conditions must not be accounted for or to great measure restrained by wide-ranging scientific method and stubborn strategic pursuit. In terms of a kind of *Erlebnisphilosophie*, however, weather does not operate merely as an observable

9 Eduardo Cadava, *Emerson and the Climates of History* (California: Stanford University Press, 1997). Eduardo Cadava analyzes climate concerns in Emerson in terms of writing traces.

phenomenon that can be fully understood or naturalized, but also pounds and pelts, changes surfaces with a flare of temporal suddenness that rises to complete something like an unconscious shakedown. Correlating with the quirks of tyrannical arbitrariness, only ever partially scheduled or comprehensible, weather can 'show up' as abrupt arousal – as a call, in the Heideggerian lexicon of Being, fateful and finitizing. On another register, the severe flash of variability aligns with Freud's recognition of unconscious tosses, ticking off psychic dents that result from the way one is pounded or slammed by an experience of sudden, invasive disruption. Such eruptions, no matter how scientifically mastered, generate further unconscious effects, even on Heidegger's de-psychologized patrol; they unleash an eerie relation to the very possibility of a future suddenly upon us, if attached to the force of an *incalculable advent*.

I revert to a different bite-sized autobiographical trace, set on the edges of climate.

On the West Coast, a building satisfies earthquake-proof-requirements when its design features built-in fissures and intentional crevices. By contrast, the material cast of honed solidity or, rather, *rigidity* is a sure killer, because if you're too rigidly set in position, or disposition, they will cut you down: you'll be toppled. Like the dialectical drop of The World Trade Center -- a structure too massive, *too strong*, architecturally speaking, to hold it together in a crunch. Or, shifting registers, one risks falling apart like the figure of the tyrant in Plato, a standout strongman who proves too brittle, incapable of exercising democratic pliancy in the social field of human and animal governance. (According to Plato, dogs are happier in a democracy and like to frolic with their owners. These are not drug-sniffing, police and killer dogs leased out to a state on the prowl, hunting down citizens.) The story of the power-tyrant requires another dossier, a record of which I shall keep on file, evaluating biblical start-ups and philosophical measures of what constitutes weakness or locks in the fantasy of strength.

When weakness is part of the concept of a building's stance, it allows for suppleness, indicating a prototype for what appears to remain *unscathed*, supporting a structure that can sway and shift around as part of its inbuilt survival mechanism. The "architecture of pain", as Lacan¹⁰ says in a different context, serves as a model of psychic intactness, giving ample allowance for punctuated lacerations and weak points meant to bolster and refine part of one's psychic

10 Jacques Lacan, *The Seminar of Jacques Lacan. Book VII: The Ethics of Psychoanalysis 1959–1960*, ed. by J.-A. Miller, trans. by Denis Porter (New York and London: Routledge, 1986).

repertory [...]. Well, having reminisced a bit – having retrieved remnants of my own storm center, internally surveilling – I have been slow to offer a theoretical understanding of the primal call of natural disaster. One of the aspects of the earthquake in Berkeley was that it made you secretly wonder, in light of sublime eruption, whether we had lapsed into another logic, close to biblical law – in the sense of punitive judgment – placing us all, no matter how scattered or rationally outfitted, under penalty for a collective wrongdoing?

Shaking off far-fetched mystical speculation, we welcomed reasoned documentation that semster and sought its reassuring menu of predictable repressions, philosophical bullet points. Still, we ran into foreboding alleys of thought. Immediately after the earthquake, my students and I turned to Kant, a classically reliable homebase. We traced what had happened to and in philosophy, from the outposts of literature, as a consequence of the earthquake of Lisbon in 1755. Everyone in the business of figuring things out in the 18th century, the really big guns of thought, was shaken, fatefully gripped; in many ways we have not stopped picking up the pieces of the geo-apocalypse that the Earthquake of Lisbon presaged. In Goethe, Lisbon marked the spot where Nature became irreversibly callous, proving dangerously capable of maiming her charges. Henceforth cast as demonic, “Nature”, an independent libidinal stronghold, became an unbeatable adversary. In the precincts of neighboring writer, Heinrich von Kleist, all bets were off as world and *Umwelt* started “Bebing” – *Beben* being the quake that punctuates or *syncopates* our very sense of the worlds we inhabit, or from which we are expelled.¹¹

I guess I will never forget the tensed constellation in Berkeley in 1989, when Philippe Lacoue-Labarthe and Jean-Luc Nancy taught their first campus seminar together, when buildings became unhinged: Was it something they said, we all wondered?

The earthquake in California. That run-in with cracking Nature made us cry for a few weeks – a flood of precipitation that seemed thrown into the package deal of after-tremors and collapsed bridges. Without much warning, structures rattled, the earth shook, making our complexions show different shades of green. Strangely, this shakedown did not appear to faze me. Groomed by catastrophic prediction from day one, I tended to stay steady while things and people started crumbling around me. Even as a child I had prided myself on being a ‘Strong

11 I refer here to Werner Hamacher’s magisterial essay, “The Quaking of Presentation: Kleist’s “Earthquake in Chile””, in *Premises. Essays on Philosophy from Kant to Celan*, trans. by Peter Fenves (Cambridge and London: Harvard University Press, 1996).

Oak, my other name (I must have picked up that tree-prosthesis somewhere, on TV or available books) -- in any case, I had taken on the features of a character somewhat cartoonishly brave, able to hold still as things fell apart. Leaning into anguish, whether externally pitched or internally churning, I had become remarkably earthquake-proof. So I told myself as a tried adult. I'd borrowed the attribute from architecture.

Regarding our own era, one no longer seriously believes in 'natural' disasters, but tends to be drawn, rather, to weigh other causalities shaped by the incessant prod of planetary exploitation and uninhibited wastefulness. To this end, Freud's light on primitive appropriations of the inappropriable, helps to make sense of that which throws you against a new wall of experience or its repetition and registered displacement. Following his detail, and what can be gleaned from the Lisbon legacy, one has learned to dismantle any lingering idea of a driverless 'natural' disaster in our day, sidestepping our way of trampling on the planet, carbon footprint by carbon footprint, neighborhood by neighborhood, with dire negligence concentrating in areas of greatest poverty.

Like many of our companion species, I continue to be affected by storm cycles and their invisible after tremors. Recorded somatically, upheavals unleashed by inclement weather live in the psyche-body, promising a future run at you. In small dosages, the imminence of these anticipated intrusions can leave one stuck for months, unable either to surrender or to act, energy-trapped. When the storm hit, people in the area were stunned to witness the powering down of habitual trajectories and hard-edged rhythms associated with 'New York, New York.' From the start, the double naming of the borough suggested to me that I lived in a toponymy of repetition whose temporal implications involved an accumulation of dates that would never simply vanish, but instead profiled frozen poses of the urban *Guernica* on a recurring loop.

During historical panic attacks, one looks to origins and passable coherencies, asking not only '*What is happening?*' but also, inescapably, '*Where did this come from?*' In the context of dazzled states Lyotard's phrasal regimen can help to sort things out, particularly where he's chasing down the reality principle, locating the skeptical knockout phrase, '*Is this happening?*'.¹² In a squeeze, what happens often fails to register. The ontic-ontological variables of eventfulness block our ability to *know for sure*, even when we end up sifting through ruins, combing grounds materially available yet frequently bumping us off the cognitive grid.

12 Jean-François Lyotard, *The Inhuman: Reflections on Time*, trans. by Geoffrey Bennington and Rachel Bowlby (Stanford, California: Stanford University Press, 1991), 88.

When Freud reviewed the attitude of so-called primitive peoples to calamities missile-guided by Nature or gods, he pointed to a subtle but insistent flex of *wrongdoing* among our predecessors, a felt failure in the realm of remembrance. Disruptive nature, which puts into play and unlooses something like the *supernatural*, appears to be sent our way as a message from above. Most often, the hard-hitting delivery represents to us a form of reprisal, handing down a notice of accusation to psychic receptors. According to the scheme laid out by Freud, the super-natural (Sandy's name was *super-storm*) is recognized by means of unconscious triage, dispatched as something that humankind has called upon itself in response to stinging acts of frivolity. Freud's premier example involves disavowed or failed mourning – of the enemy. The so-called primitives, still part of our unconscious makeup, believed that storms break out in order to mark down those who have neglected to honor or properly bury their enemies. The misery of forgetfulness can happen to anyone, then or now, by inadvertence or intention, abandoning those kept close to the heart or wrapped in enmity.

Exposed to the furor of the elements, one petitions and supplicates. Diminished and somehow recalled to order, one looks to the fine print of abasing lucidity and updates the unconscious formulation of a reprimand, unforgiving and driven. Have we failed in turn to see what drives such an exorbitant threat, tracing the configuration of a punishing symptomatology? Confronted by the dispatch of planetary turbulence, one squints and wonders, searching for answers in some psychic outpost. Have we not neglected to heed the unconscious cast of revenge-messaging sent our way by those abandoned, the dishonored undead? The enemy, having acquired marks of a dead target even while living, cannot simply be zoned outside the borders that let us live – there remains something about the enemy, no matter how remote, that cannot simply be dismissed but becomes part of a process of civic incorporation. The incorporated enemy bursts out on this side of a stipulated divide, carrying forward the anonymous work of destruction, stirred into displaced forms of action and camouflage. (This outburst of hostile representation holds true for the increasing Nazi incorporation among American 'patriots', a killer swarm of revenants assimilating former enemy tropes).

Exposure and Retaliation

Disruptions of habitable conditions, the way we inch toward the edges of extinction, bring home the stench of neglect. One blinks, asking, Has anyone taken up Antigone's post in terms of our recent wars, whether mapped on Afghanistan, Syria, Ukraine, or Gaza, or in ghetto streets and corporate war rooms, the exploitation of 'shithole' countries, or among ourselves and inner aliens in domestic

cells of strife and conflictual work places, in the hell of unemployment, when we are laid up? The implication of *every* citizen, in the waging of these and other aggressions signed by rotating leaders, still needs to be imagined in terms of the Freudian hypothesis, when retrieving the remnants of something like the responsibility of a burdened collective unconscious that has forgotten to bury a dead sibling-enemy. (The brother, Derrida has reminded, originates the very concept of enmity.¹³ Inverting only a bit, one can ask whether every enemy is not a disavowed brother.)

The exposure to an untestable retaliatory force, hypothetical and bordering on the incalculable, seems far-fetched -- perhaps closer to science fiction than to science. But even objectivist science folds when made to place bets on the yields of material data in matters of failed mourning -- a predicament for which so many figures of the human, on and off the literary page, steered by an anthropological drive, tally uncanny punitive damages.

Is there a way in which radically disrupted weather systems tell us, if merely on an unconscious register, that we -- as *Geschlecht*, or urgent "hit" of Being -- are involved in large-scale wrongdoing? Being of the scientific epoch, I do not underestimate the stock of empirical and technical deregulations responsible for global warming and other environmental breaches. Still, *could* the awesome roar of the super-storm, a synecdoche for climate justice, have arrived as a call from elsewhere, as a signal of inner disturbance as well as stubborn material circumstance? Are we still susceptible to spirit mechanisms that call us to order, beginning with early speculation and augury, putting out a demand to clean up an offending legacy humanly dispatched? In other words, given the context circumscribed by a Freudian anthropology, can extreme weather serve as an uncanny demand to interpret our graceless menu of aggressions brought home to us, the world-bereft unsheltered? I am not alone in referring us to unconscious programming and the way calls are fielded when accompanied by historical clusters of deadly static.

Closure, Freud has asserted, is what we want. Our narcissism calls out for closure, *organizing* a dream of collective demise, part of a significant phantasm dispatched by Ego. Narcissism, preening for its curtain call, *wants* to call it a wrap -- and, who would not, at times, perhaps at this time, *who would not want to bring it to a final curtain?* We want to be careful not to confuse closure with the end or *telos*. Freud's reflections on the inherent *desire* for termination may

13 Jacques Derrida, *The Politics of Friendship*, trans. by George Collins (London and New York: Verso, 1997).

serve as a warning signal for epochs that find satisfaction in executing a closural cut wherever they find and fear, disavow and repel the specter of accelerated extinction. Don't forget that part of the good news of Christianity is that *the end is near*. The warning of imminent fulfillment does not mean that we don't have a gun to our heads with regard to indisputable facets of climate disaster, but that we must proceed with caution when leading narratives and tropologies convene to name an ending while sneaking in the add-on dream of a comeback, equipped with a redemptive rhetoric of possible recuperation, a willed *Ueberwindung*. I am not ruling out the possibility that we have gone too far. Western logos likes to see an endpoint, compel boundaries and close gates. It likes to blow up bridges. "We're done," say the poets wryly. This time we may have gone too far, exceeded all boundaries and dreams of epochal restarts.

At the same time, the very thought of being 'finished with' something as a wish-fulfillment bequeathed by the Western logos, risks putting us in a slumber, collective and 'interested,' encouraged only by evasive strategies of denial and a hankering for the finality of an ending. Thinking we're done, over and out, keeps us out of the ring where the fight must go another round with the tenacious extinctive impulse.

Given these constraints, where does one locate the call for climate justice? Whether or not we are tuned by impending or past storm systems, geological rupture and other quakes of alternation, spoilage, deforestation, drought, unbreathable air, and contaminated water, all of us are to a certain degree affected, afflicted, drawn in and upon by these disturbances. Weather systems as hostile advent can hit you anywhere, at home, after surgery, or when we are hosting allergic marks on our skin – a huge reception area of a troubled forecast whose intrusive effects can provoke somatic outbreaks and psychic lesions.

Originary Unbelonging: The Returns of AIDS

It is difficult to get an assessment of what we are up against without taking into account Freudian discoveries of the death-drive or what happens when tropics of anthropomorphism are used recklessly, with little critical discernment or concern for the programmed relapses and overall regressive humanism. A number of troubling ideologies and substitutive claims continue to be made on behalf of earth-dweller, "Man". Leaning on Paul de Man's critique of anthropomorphisms and Derrida's warning with regard to facile recuperations of the *Anthropos*, Tom Cohen questions humanist ideologies in his work on the growing theory of climate and its attendant repressions. His study invites us to widen the scope of

interrogation, admonishing that we stay on guard for stealth recuperations of assumptions that reinforce patriarchal structures and humanist complacencies.

The many appropriations of the earth, including a steady preoccupation with locating man's custodial rights, continue to entrench us in a conceptual snag, an archaic dilemma whose logic of polarity still involves a notion of *dominion*. In a Nietzschean way, interpreted by Derrida, we can ask ourselves to imagine a relation to the earth without recourse to the habitual rhetoric of domination or power and their corollaries, without a forced concept of belonging, a credible and renewable membership in a group or system of beliefs. Sometimes asserted axioms of belonging reduce to first chakra tribal appropriation – practices across cultures and identitarian neighborhoods that deserve further analysis. Is the earth ours to desecrate – or redeem, even when the task is presented in the mode of care? What would constitute an *affirmative alienation* on the other side of exploitative dominion, a decisive *unhousing* that opens and exposes Being to another logic of justice, bringing up a kind of ethical inflection of expropriation? Are we not in some regards the aliens we fear? Let us take a brief rhetorical view of how the earth cleans up, binding *property* and *propriety*, common jointures of *appropriation*. It is hard to give up on dwelling, the different adaptations of settlement and habitat, even as we seek to preserve their sanctity. Nietzsche has led the way when it comes to exploring what passes for good. He questioned the social display of good conscience, complacent and self-satisfied. His work put the pressure on the trafficking of goods for the good, leading the investigation of a purported value system, hiding a will to power, that drives any genealogical probe.

Calls for sanitation actions, cleanup, however righteous, ethically pitched – and however indisputably needed for the requirements of sustainability – make us aware at least of flipside desecrations and histories of cleansing. Making allowances for the earth's capacity for mutation, one can imagine evolutionary leaps with or without the figure of man at the controls, with and without the aggressions and hyperbolic overdose of destruction that human forms of being have wrought. But once “man” attaches to the calculative grid, one can begin to tally the damages with symbolic currencies such as *money* and its fecal origins, the peculiar form of donation associated with the ‘*filthy rich*’ and the increasingly hazardous waste of capital flip-offs. Can man be entrusted to clean up without cleaning up, without aggressive acquisitions of property and violent appropriation?

What or who counts as ‘dirty’ in the lexicon of the Anthropocene? How does cleanliness get apportioned? One cannot set apart the question of environmental modelling and limitation, a racist tipping point, when sizing the panic that overwhelms protesting earthlings – Flint, Michigan is an acknowledged sign of the

way entire regions, neighborhoods of color, bowed by poverty, are susceptible to largely unprotested attacks of pollution or its corollary in contaminated water. For a long time now we could take measure of how the poor fail, for the most part, to excite the so-called universal clamor for planetary climate justice. Who or what has been seen historically as compatible with cleanliness? Who or what gets isolated as dirty? There is a fast dialectical spin on these qualities to the extent that money tends to cover up its dirty traces by all sorts of rhetorical acts of ‘laundering.’ – These questions, roughly put, can help us detect what has escaped even the most indignant among us, those who gauge the responsible leveraging of environmental justice. What is the theological-libidinal economy that disdains yet upgrades dirt and the dirty secrets of desire? Who is dirty, dirt poor, savage, unclean, in the count-up of a smoldered human stain? One might consider Bataille’s pornographic inscription when naming his leading lady “Dirty” and the way he lays waste to the highest values associated with propriety. Without fully managing this swerve, I will just point out that in his novels and reflections on sacrifice – on Nietzsche, on torture and depravity – Bataille links sovereignty with waste, much the way Benjamin refers love to squandering and the pleasures of laying waste.¹⁴ There is something about wasteful indulgence – wasting time, draining energy resources, or even just wasting away – that *excites* the lead figures of the Anthropocene, powering up acts of extreme expenditure, the legendary giveaway of potlatch.

Still shivering, the earthquake of Lisbon, having changed the course of philosophy, and which sent tremors to Goethe’s corpus, taught us how, suddenly, the maternal cast of natural envelopment splits open and turns out a demonic aspect, proffering what Melanie Klein calls a bad breast, symbolically lifted but humanly configured. The earth herself, often troped and gendered in the feminine, turns pernicious, proves capable of feats of self-destruction, taking down with her the figure of man, together with entire species of plant and animal life. Man, on the other hand, uncomfortably set as a human/animal, equipped with internal receptors and compatible with technological extensions, prosthetic morphs, mechanical changeovers, fractal interiorities, sleep modes, and survivalist technique, stubbornly imagines an infinite series of redemptive coupons ready to trade in – priming his comeback. Driven by a test-*Trieb*, testing to limits, that is, testing to failure, this figure of man bumbles forth, a routed danger to the planet-worlds.

14 Walter Benjamin, ‘Hashish in Marseilles’, in *On Hashish*, ed. by H. Eiland (Cambridge: Harvard University Press, 2006).

The drama of extinction seizes on the figure of man, referring back to humanity in a way that sets (and assumes) a stage for the mutation of particular life-forms. Associated with climate change, the current relation to the thought of imminent extinction continues to derive its epistemic authority from an understanding of the Anthropocene, a term that stubbornly recovers the figure of man, seeing man as responsible for the degradation of the planet and capable, if so willed, of a turnaround. To the extent that the planet itself suffers under the blindly pushed intrusiveness of man, a figure that persists as greedy, oblivious, rousing a narcissistic excess, addicted to power, payrolling the return of forms of enslavement, exacerbating uncontained bloodlust, there is something on the level of a nihilistic disclosure that we still must attend to, something that has put an autoimmune disorder strongly into play.

In some regards climate change has been met by a stupidly recurring cycle of disavowal shading into spurts of panic awareness. The chart of reactivity may well be part of the return and a displacement of other forms of malignant shutdown and aggressive encroachment: It is as though the planet itself had contracted the AIDS virus, carried and transmitted by the *Anthropos*. The way we have dealt with AIDS, or refused it the theoretical oxygen to yield its logic, calls us out to think it together with all forms of immunological snapping points. AIDS was one of the principal forerunners of the current Pandemic and sub-phenomena such as Monkeypox, marks of planetary energy drainage and social inequity.

It behooves us to remember that AIDS has never been a matter solely of virology but was from the start multifactorial, an effect of technology and part of the grammar of predatory raids on the earth's resources. The failure to read AIDS – the reluctance to cleave to its genealogical pulse and implications – is bequeathed to us by all sorts of robust traditions in philosophical and scientific analysis that won't let up. Perhaps the thought of autoimmunity in conjunction with Derrida's reflections and those of phenomenologists on the topic brings us close to comprehending the stakes of today's dilemma in which climate is indissociably clenched with the eruption of a global Pandemic. Precursor to Covid-19 and its variants, the appearance of AIDS remains a crucial figure in the technological disclosure, while it also disputes any claim to subjective recuperation. An effect of technology, AIDS, like climate change, remains part of the radical destructuring of social bonds that will have been the heritage of recent decades. Climate change, like AIDS, whether lodged in the violence of weather or in the strife of embodiment, remains, despite it all, a peculiarly *human* symptom, if functioning as the locus of a suicidal impulse that increasingly determines our species. Though exploited by religious phantasms, it is the affair of man, or the *Gestell* that contains anthropomorphic tropologies, figuring an aspect of man's

self-annihilating “toxic drive”. Like other pandemics of the past or to come, AIDS should not be viewed as sudden, epochal appearance but as a culmination in the history of debilitating forces, the effects of which underscore the turning of a humanity rigorously set against itself in permanent split or *Spaltung*. The vigorous rebound of God and religion testify to such a *Spaltung*, a turning away from earth-bound assignment. The disjunction between theology and climate justice can be pursued in further analyses of a troubled relation to the earth. For now, let us be relentless about asking, What are the multifactorial conditions for maintaining the stressors of this predicament or *Spaltung*? What kind of rhetoric holds it in place, keeps us bound to paleonymy and regressive positing, pathological protocols? Dr. Michel Bounan, in a pathbreaking work, *Le temps du sida*, has remarked apropos of the appearance and naming of the shattering status of AIDS:

A disease appears when an ensemble of ‘homologous’ aggressions, simultaneously physical and climatic, alimentary and toxic, microbial and emotional, self-induce a defensive mechanism, reaching a lesional threshold.¹⁵

On the rise, these defensive mechanisms push disease up along with suicide, anguish, poverty, complicated comorbidities, food injustice and racial inequity, existential downgrades that make up part of a history of runaway greed and perilously overlooked multifactorial symptom-clusters. Some of the conditions of pinpointed endangerment are due to the avarice and ego-driven excesses of well-known culprits; others redound to sheer laziness, panic and blindness on the part of still-mutating human beings. Panic and its dialectical flipside in paralysis should no longer be tolerated as leading supports of the relatedness to earth and its various life-forms. Understandably, though the stances of vulnerability tend to regress thinking to an obsolesced rhetoric of control and human dominion. In some instances a *will to rupture*, a breakaway from numbing repetition compulsion might suffice to encourage crucial shifts in a rhetoric of destructive practices. For my part, I try to allow for a steady surge of *Sorge* or anxiety that would clear out habits of failed analyses and overzealous displacements, often moralistically configured. Literary insight and poetic invention – the creation of new addresses, bodies, morphs, food groups, housing design, hospital, hospitality, and the positing of new names – are essential if we are to claim the crucial *Unwo*

15 Michel Bounan, *Le temps du sida* (Paris: Editions Allia, 2004), 124. In keeping with our reflections on *le temps*, let us translate this title both as ‘The Times and Climate of AIDS.’

(Celan) of our ever compromised dwelling as finite beings. The authority of that whose authority is set in powerlessness can help us with seeking out the new, if fragile, compatibilities linked to an inhospitable earth. Following these threads and tread marks I would like to learn to live with our originary *unbelonging*, a way of surviving in frustration, by means of just apportioning and workable disillusionment: a being-toward-*survie* with which Derrida cautiously overrides Heidegger's being-toward death.

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