

Do Deleuze and Guattari Have an Organology? (And Why Does It Matter?)

Chantelle Gray, University of Johannesburg

Abstract

The most sustained and recent work on mechanism, organicism and organology can be found in Yuk Hui's *Recursivity and Contingency* (2019). Of interest to me in this paper is the concept of a *general organology*, first introduced by Georges Canguilhem to reverse the relationship between mechanism and organism by inscribing the mechanical within the organic, but without sacrificing a theory of technicity. More recently, Bernard Stiegler further developed organology, particularly as it relates to the exteriorisation of memory into digital artefacts and the temporal questions raised by such exosomatisation processes. Given that Hui's main argument is to theorise the organic—from which organicism and organology stem—in relation to recursivity and contingency, it seems curious that he does not develop the work of Gilles Deleuze and Félix Guattari in any meaningful way. At the very least, Deleuze's work on difference and repetition falls within the ambit of his ambition. In this paper I ask: "Do Deleuze and Guattari have an organology?" My aim is not simply to determine whether they do or not, but also to answer the secondary question, "Why does it matter?" since it would only be of interest if Deleuze and Guattari attenuate Canguilhem, Stiegler and Hui's accounts in a significant way.

Keywords: geology, geophilosophy, immunology, immunological commons, organology, pharmacology

Introduction

In his 2019 book, *Recursivity and Contingency*, Yuk Hui raises the question of the organic, organicism and organology, precisely because these concepts are continually challenged by technological developments. “What we are witnessing today,” he argues, “is a shift from the *organised inorganic to the organising inorganic*, meaning that machines are no longer simply tools or instruments but rather gigantic organisms in which we live.”¹ Instead of tracing theories of organic along more traditional lines, Hui uses two key concepts—recursivity and contingency—to analyse their philosophical trajectories via a diverse range of theorists, including Immanuel Kant, Friedrich Wilhelm Joseph Schelling, Johann Gottlieb Fichte, Baruch Spinoza, Hans Driesch, Alfred North Whitehead, Georg Wilhelm Friedrich Hegel, Ludwig von Bertalanffy, Charles Darwin, Marshall McLuhan, Lynn Margulis and James Hutton, Raymon Ruyer, Gilbert Simondon, Jean-François Lyotard, Martin Heidegger, Bernard Stiegler and various cyberneticians. What is conspicuously missing from Hui’s account is any meaningful discussion of Gilles Deleuze and Félix Guattari’s work. This seems especially curious given Deleuze’s treatise on difference and repetition, which falls neatly within the ambit of Hui’s ambition. Hui even explains recursivity in a manner that echoes Deleuze’s thesis:

We can imagine a spiral form, in its every circular movement, which determines its becoming partially from the past circular movements, which still extend their effects as ideas and impressions. This image corresponds to the soul. What is called the *soul* is the capacity of coming back to itself in order to know itself and determine itself. Every time it departs from itself, it actualizes its own reflection in traces, which we call *memory*. It is this extra in the form of difference that witnesses the movement of time, while at the same time modifying the being that is itself time, so that it consequently constitutes the dynamic of the whole. Every difference is a differing, deferring in time and a being differed in space, a new *creation*.²

To be fair, Hui does comment positively on Deleuze’s concept of *quasi causality*³ and makes a link between his theory of modulation in the “Postscript on the Societies of Control” (1992) and Stiegler’s concepts of *adaptation* and *transcendental stupidity*.⁴ On the other hand, Hui sees Deleuze’s theorisation of societies of control as a prescriptive “*mechanist*

1 Yuk Hui, *Recursivity and Contingency* (London: Rowman & Littlefield International Ltd., 2019), 28.

2 Hui, *Recursivity and Contingency*, 4. See also Gilles Deleuze, *Difference and Repetition* (New York: Columbia University Press, 1994), 1–3.

3 Hui, *Recursivity and Contingency*, 18.

4 See Hui, *Recursivity and Contingency*, 184, 218, 224–225.

use of organicist machines for deterministic use”⁵ where I would describe it as a *descriptive* account of new machinic functions (in the broad sense that Deleuze and Guattari use the term “machinic” to refer to the dynamic arrangement of processes and flows of desire, matter, intensities and particles-signs rather any specific mechanist or organicist stratum, as discussed in detail in the final section of this paper). Nevertheless, Hui’s book provides an important contribution to ongoing debates about the organic in its relations to technology, or *organology*, a term first introduced by Georges Canguilhem to overcome philosophical tensions between mechanism and organicism. More recently, Bernard Stiegler has further developed the notion of a general organology, particularly as it relates to the exteriorisation of memory into digital artefacts and the temporal questions raised by such exosomatisation processes. This prompted me to ask the question: “Do Deleuze and Guattari have an organology?” My aim in this paper is not simply to determine whether we can detect an organology in Deleuze and Guattari’s oeuvre—despite them never using this term themselves—but also to answer the secondary question, “Why does it matter?”, since it would only be of use philosophically if they attenuate Canguilhem, Stiegler and Hui’s accounts in significant ways. I do this by tracing the origins of a *general organology* to Canguilhem via the proto-organological thought of Henri Bergson, and its more recent development in Stiegler’s work via the “implicit organology,”⁶ or *mechanology*, of Gilbert Simondon, after which I turn to Deleuze and Guattari’s theorisation of the organic, inorganic and techno-semiotic.

Canguilhem’s “Immunological” Organology

The concept of a *general organology* can be traced to the work of French philosopher Georges Canguilhem, affectionately referred to as “le Cang” or “King Cang.”⁷ Organology should, as Hui notes, be understood in terms of “the prefix *organo-*” which signifies “both *organs* and the *organic*,” because it is this double sense that makes visible the vitalist and materialist dimensions of Canguilhem’s theory of a general organology.⁸ Trained formally in both medicine and philosophy, Canguilhem is often considered part of two prominent French traditions: one being the history and philosophy of science alongside Gaston Bachelard, Jean Cavaillès and Alexandre Koyré⁹; the other being French biophilosophy, alongside Raymond Ruyer and Gilbert Simondon.¹⁰ Canguilhem was also an important

5 Hui, *Recursivity and Contingency*, 274, emphasis in original.

6 Hui, *Recursivity and Contingency*, 187.

7 Stuart Elden, *Canguilhem* (Cambridge, UK: Polity, 2019), 8.

8 Hui, *Recursivity and Contingency*, 157.

9 Elden, *Canguilhem*, 6.

10 Charles T. Wolfe and Andy Wong, “The Return of Vitalism: Canguilhem, Bergson and the Project of a Biophilosophy” in *The Care of Life: Transdisciplinary Perspectives in Bioethics and Biopolitics*, eds Miguel de Beistegui, Giuseppe Bianco and Marjorie Gracieuse (Lanham, Maryland: Rowman & Littlefield, 2015), 63.

point of contact between numerous philosophers, including Michel Foucault, Louis Althusser, Pierre Bourdieu and Gilles Deleuze, to name a few.¹¹ More recently, reference to Canguilhem's work has appeared in the philosophies of Stiegler, Hui and Catherine Malabou.

Dissatisfied with both vitalism and mechanism—the two main but opposing approaches to the study of life: organic and inorganic—Canguilhem wanted a theory capable of thinking the “human-machine as an organic whole.”¹² This entails reversing the priority of technics in theories of life by inscribing “the mechanical within the organic,”¹³ such that biological organisation is understood to “necessarily precede the existence and meaning of mechanical constructions.”¹⁴ Unable to think the continuity between life and techne, mechanism—from *mēchanē* (meaning “engine”)—likened the workings of organic beings to that of machines, the origins of which are commonly traced to Descartes' *Discourse on Method* (1664), though antecedents thereof can be found in Aristotle's work.

The two main concepts at work in Aristotle's theory of life are the *soul* and the *organ*. If the soul is the *form* of the organism, the organs (*organons*) are the *natural instruments* for carrying out the soul's purpose and specific functions, such as locomotion. As Canguilhem notes, for Aristotle a “living body is an animate and organized body”—it is animate “because it is organized.”¹⁵ A living body is thus not merely a collection of inert components brought to life by some exterior force as the body's capacity for life stems entirely from how its internal parts are arranged and directed towards specific biological functions and goals. Similarly, the soul or animating force is not reducible to something like an immaterial ghost trapped inside the body since it is the very form and purpose of the organised body itself.

Descartes proposed an entirely different theory. “For him, nature was identical with the laws of motion and conservation. Every art, including medicine, was a kind of machine-building.”¹⁶ Unlike Aristotle, Descartes did not simply posit a likeness between organisms and machines but proposed a veritable mechanist ontology of the organism,¹⁷ which is to say he demonstrated “that animals are pure machines.”¹⁸ Positively, we find in Descartes at

11 See Stefanos Geroulanos and Daniela Ginsburg, “Translator's Note,” in Georges Canguilhem, *Knowledge of Life* (New York: Fordham University, 2008), xiii and Paola Marrati and Todd Meyers, “Foreword: Life, as Such,” in Georges Canguilhem, *Knowledge of Life*, trans. Stefanos Geroulanos and Daniela Ginsburg (New York: Fordham University, 2008), vii.

12 Hui, *Recursivity and Contingency*, 25.

13 Canguilhem, *Knowledge of Life*, 96.

14 Canguilhem, *Knowledge of Life*, 91.

15 Georges Canguilhem, *Ideality and Rationality in the History of the Life Sciences*, trans. Arthur Goldhammer (Cambridge, Mass.: The MIT Press, 1988), 128.

16 Canguilhem, *Ideality and Rationality*, 129.

17 Canguilhem, *Knowledge of Life*, 83.

18 Canguilhem, *Knowledge of Life*, 79.

least some attempt to give a technical account of life, though it ultimately failed because his mechanist ontology could not adequately account for the normative *vital* technique of life.¹⁹ This is a direct result of its starting premise, namely that it takes “machines as already granted.”²⁰ To explain organs and organisms via mechanical models reduces both life and technique to mechanism. The first principle of organology is thus that it must understand the mechanical—or the technical more broadly—as arising from the organic while still retaining a theory of the technical character of life, or of life as “a sort of mechanics,”²¹ without thereby reducing life to mechanism or “drawing an equivalence between machine and organism.”²²

If Canguilhem charges mechanism with reductionism, he is equally critical of the unknowable substance underpinning many classical vitalist theories, which, in their fervour against “individualist, atomist, and mechanist” theories, fell prey to Nazi vitalist “theories of *Ganzheit*,”²³ an ideology which valorised “wholeness” or “purity” to justify scientific racism and eugenics. Vitalism was also widely critiqued for including anti-scientific views—an argument made also against the prominent vitalist Hans Driesch, a German embryologist whose experiments with sea urchin embryos²⁴ led him to posit a vital, immaterial principle driving biological processes, which he named *entelechy*. Superficial readings of Henri Bergson’s *Creative Evolution* (1907) similarly led many a critic to conflate his concept of the *élan vital* with Driesch’s *entelechy*. Yet Canguilhem cites Bergson’s work as an early example of organological thought. On his view, Bergson’s theorisation of the *élan vital* is not an attempt to subordinate a natural principle to the mystical, but to provide a framework that tethers life to “a common history, and a continuous line of evolutionary elaboration,” even as it has a “tendency to differentiate and diverge as much as possible within given and changing environments.”²⁵ For Hui, Bergson’s organological thinking lies “beyond the mere identification of vitalism with the *élan vital*.” He locates it rather in the question of how to conceive of life—in its vital and technical unfoldings—as a creative whole.

For Bergson, the *élan vital* is expressed as instinct and intellect, both of which are conceived of as *organs*, but whereas instinct leads to the development of internal organs

19 Georges Canguilhem, *A Vital Rationalist*, trans. Arthur Goldhammer (New York: Zone Books, 1994), 342.

20 Canguilhem, *Knowledge of Life*, 87.

21 Wolf and Wong, “The Return of Vitalism,” 67.

22 Hui, *Recursivity and Contingency*, 147.

23 Canguilhem, *Knowledge of Life*, 72.

24 Philippe Huneman, “‘Animal Economy’: Anthropology and the Rise of Psychiatry from the Encyclopédie to the Alienists,” in *The Anthropology of the Enlightenment*, eds. by Larry Wolff and Marco Cipolloni. (Stanford: Stanford University Press, 2007), 566.

25 Elizabeth Grosz, “Foreword,” in Bergson, Henri. *Creative Evolution*, trans. Donald A. Landes (London, New York: Routledge, 2023), xiii.

through its fostering of “a complete adhesion to the evolution of life,”²⁶ intelligence is understood as mechanical invention or the extension of the biological via externalised organs.²⁷ In Bergson’s words:

... all the elementary forces of the intellect tend to transform matter into an instrument of action, that is, in the etymological sense of the word, into an *organ*. Life, not content with producing organisms, would fain give them as an appendage inorganic matter itself, converted into an immense organ by the industry of the living being. Such is the initial task it assigns to intelligence.²⁸

Put differently, instinct is the organisation of matter or the knowledge produced by life itself, whereas intellect is the capacity to transform matter into tools, to turn the knowledge produced by life into practical knowledge of life—a knowledge that is technically oriented towards creation or fabrication, hence Bergson’s *Homo faber* in place of *Homo sapiens*. What Bergson offers us is an understanding of mechanical invention as a facet of the biological organisation of matter.²⁹

Like Bergson, Canguilhem is deeply interested in the *technique* of life as well as *knowledge* of life, which Canguilhem approaches via medicine, precisely because technique straddles the living and knowledge of life. What is important for Canguilhem is the idea that (biological) knowledge is equal to a capacity for overcoming problems; it is “simultaneously and inseparably the knowledge we have of life when we take it as an object, and the knowledge that life itself produces.”³⁰ One way this knowledge is expressed is through normative vitality, which is both the creative biotechnical activity by which life is rhythmically organised and the bio-autopoietic activities and technical adaptations of organisms in response to perturbations in their milieus.³¹ This implies that *experience* is

26 Thierry Hoquet, “Cyborgs, Between Organology and Phenomenology: Two Perspectives on Artifacts and Life,” in *French Philosophy of Technology: Philosophy of Engineering and Technology*, eds. by Sacha Loeve, Xavier Guchet and Bernadette Bensaude Vincent. (Cham: Springer, 2018), 263.

27 Hocquet, “Cyborgs, Between Organology and Phenomenology,” 263.

28 Henri Bergson, *Creative Evolution*, trans. Donald A. Landes (London, New York: Routledge, 2023), 178, emphasis in original.

29 Canguilhem, *Knowledge of Life*, 174.

30 Paola Marrati and Todd Meyers, “Foreword: Life, as Such,” in Georges Canguilhem, *Knowledge of Life*, trans. Stefanos Geroulanos and Daniela Ginsburg (New York: Fordham University, 2008).

31 The term *autopoiesis* is more readily associated with the work of the Chilean biologists Umberto Maturana and Francisco Varela (see *Autopoiesis and Cognition: The Realization of the Living*, Dordrecht: D. Reidel Publishing Company, 1980) than it is with that of Canguilhem. As far as we know, Canguilhem developed his theory of autopoiesis without being influenced by the Chileans. Although his theory differs slightly from Maturana and Varela’s, Canguilhem similarly understands autopoiesis as the capacity of living organisms to maintain viability in their overcoming of perturbations in their milieus.

“a necessary condition of biological knowledge as much as” it is “its outcome.”³² But, like health, knowledge is never perfect; it always carries with it the possibility of error. This is why a person’s immune system can make disastrous mistakes, such as when a cytokine storm is unleashed in the body. Although cytokines play a crucial part in the regulation of the body’s immune responses, the excessive production thereof, along with other chemical mediators, can wreak havoc on the body, damaging a person’s organs or even causing death. On the other hand, an organism can also learn from its errors to produce new orders of normativity.

More important is the idea that organismic health, or immunity, is always the result of a *relation*. While the organism produces its own immanent norms through biological and technical activity, it must do so by contending with heterogeneity, which includes, but is not limited to, pathological disturbances and other perturbations in both its internal and external milieus. This means that no environment is normal by itself because it is “the *relation* between the environment and the living thing that determines what is normal in both.”³³ As Canguilhem says: a “life that affirms itself against the milieu is a life already threatened.”³⁴ Immunity is thus the capacity an organism has to maintain its integrity by creatively adapting to challenges in its milieus, which suggests that the living brings to a situation “its own proper norms”³⁵ or, then, knowledge of life. But it is also a relation. What this brings to light is Canguilhem’s implicit understanding of the importance of an *immunological commons*. That is, he understood that immunity is collective rather than personal—it is a shared commons, a shared reality. Immunity also has a memory function by which it identifies environmental elements, processes this data, mounts a targeted biological defence, and stores the experience to recognise and neutralise those same threats more efficiently in the future. Another way of saying this is that immunity is a durational movement (*durée*) that cannot be reduced to either vitalism or mechanism. If Bergson’s contribution to organology is to theorise how “artificial organs” allow humans to expand their freedom by overcoming biological limitations, Canguilhem’s contribution is to extend Bergson’s thought to that of a general organology: a deep understanding of life and technical adaptation as immunological sense-making.

Influenced by Canguilhem, amongst many others, Stiegler argues for a pharmacological conception of organology in his work, as discussed in the next section.

32 Marrati and Meyers, “Foreword: Life, as Such,” xi.

33 Canguilhem, *A Vital Rationalist*, 354, emphasis added.

34 Canguilhem, *Knowledge of Life*, 133.

35 Canguilhem, *Knowledge of Life*, 133.

Stiegler's "Pharmacological" Organology

According to Hui, Stiegler's theorisation of organology, in contrast to that of Canguilhem, is less concerned with the question of an organic whole than it is with producing a theory of the functional organs. The reason for this, he goes on to argue, is that Stiegler's concept of organology is derived more from musicology than from "Bergson and Canguilhem's philosophy of life."³⁶ While it is true that Stiegler is influenced by musicology and shies away from Bergson, he *does* rely heavily on Canguilhem's insights on pathology, normativity and knowledge of life for his own "pharmacological" organology. As Stiegler himself writes, pharmacology "must be studied alongside the work of Georges Canguilhem," which must itself "be thought in terms of" a general organology or a "genealogy of the sensible."³⁷ In *The Re-enchantment of the World*, Stiegler defines organology as a method for describing the manner in which physiological, artificial and social organs and organisations have co-evolved over the course of history.³⁸ By physiological organs he means "the seat of the psychic apparatus," which is not equivalent to the brain because it presupposes other organs like language—the technical support for symbolisation—which develops alongside social organisations and artificial organs through transductive relations, "that is, relations whose terms are constituted by the relation itself."³⁹

Central to Stiegler's argument is the idea that all technical forms of life are *pharmaka*, given that the artificial organs emerging from processes of exosomatisation produce a disadjustment between the social, psychic and technical milieus. The extension of the organs by way of *techne* thus induces organological rather than merely organic relations between normativity and pathology. Infidelities of the milieu require the production of new knowledges of how to live, which include pragmatic know-how or skills (*savoir faire*), knowledge of how to live (*savoir vivre*), and theoretical or conceptual knowledge (*savoir théorique*), the latter of which must take the form of *care* for the overcoming of the initial disadjustment, such that "noetic life is essentially a life of healing."⁴⁰ Paradoxically, noetic life continually "disadjusts from itself, constituting the chronic character of its disease and its pharmacology."⁴¹ For Stiegler, as Hui notes, this is a problem of the functional organs, though it is, more specifically, about how *the life of the mind*, through its exteriorisation into memory supports like tools, artefacts and technologies, is temporally attenuated. Three theorists are important for Stiegler's advancement of this thesis: André Leroi-

36 Hui, *Recursivity and Contingency*, 200.

37 Bernard Stiegler, "Pharmacology of Desire: Drive-based Capitalism and Libidinal Dis-economy," *New Formations* 72, no. 72 (2011): 150–156.

38 Bernard Stiegler, *The Re-Enchantment of the World: The Value of Spirit Against Industrial Populism*, trans. Trevor Arthur. (London: Bloomsbury Publishing, 2014), 105.

39 Stiegler, *The Re-Enchantment of the World*, 105.

40 Bernard Stiegler, *The Age of Disruption: Technology and Madness in Computational Capitalism*, trans. Daniel Ross (Cambridge, UK: Polity Press, 2019), 156.

41 Stiegler, *The Age of Disruption*, 192.

Gourhan, Edmund Husserl and Gilbert Simondon.

Drawing on Leroi-Gourhan, Stiegler argues that technology is not merely a tool used by humans, but that it is, rather, co-originary with the genesis of humanity, that it is in fact what makes us human. To make the case for the co-constitutive character of technogenesis and anthropogenesis, Leroi-Gourhan provides paleoanthropological evidence showing how certain environmental pressures can trigger a mechanical reorganisation of physical attributes, in turn leading to the exteriorisation and liberation of the organs. In *Homo sapiens*, the emergence of an erect posture was decisive because it initiated major changes in the structure of the feet and spine.⁴² Freed from locomotion, paws became prehensile hands with an opposable thumb which reterritorialised around toolmaking and manipulation, so becoming fully integrated into the technical field.⁴³ This led to the mouth being freed from the function of hunting and grasping which, along with a receded jaw, became part of a “more intense, if slower, deterritorialization” which would, in time, give rise to language and abstract thought.”⁴⁴ Drawing on Ernst Kapp’s theory of organ projection, Leroi-Gourhan argues similarly that the fabrication and manipulation of tools and artefacts through *techne* opens another dimension of human self-actualisation because we gain more awareness of ourselves through our technical life. In effect, organ projection “pursues the process of self-consciousness all the way to the world of culture.”⁴⁵ According to Leroi-Gourhan, memory is exteriorised in at least three ways: via species, ethnic and artificial memory. In his own work, Stiegler reformulates these as phylogenetic, epigenetic and epiphylogenetic memory respectively.⁴⁶ As the term suggests, phylogenetic memory refers to the biological transmission of genetic memory through DNA,⁴⁷ whereas epigenetic memory indexes culturally and socially transmitted forms of memory that are typically learnt and shared within a specific community or social group. Finally, epiphylogenetic memory denotes artificial memory supplements which, although “supported by the nonzoological collective organization of objects,” nevertheless begin to function and evolve “as a quasi-biological” milieu, such that they take on a life of their own, particularly in terms of how they structure temporality.⁴⁸

For this part, Stiegler draws on Husserl’s theory of time-consciousness to argue that the

42 André Leroi-Gourhan, *Gesture and Speech*, trans. Anna Bostock Berger (Cambridge, MA: MIT Press, 1993), 89.

43 Leroi-Gourhan, *Gesture and Speech*, 37.

44 Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia Vol. 2*, trans. Brian Massumi. (Minneapolis: University of Minnesota Press, 1987), 172.

45 See Ernst Kapp, *Elements of a Philosophy of Technology* (Minneapolis: University of Minnesota Press, 2018), 119.

46 Bernard Stiegler, “Elements for a General Organology,” *Derrida Today* 13, no. 1 (2020): 72–94.

47 See Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus*, trans. Richard Beardsworth and George Collins (Stanford: Stanford University Press, 1998), 177.

48 Stiegler, *Technics and Time*, 57.

processes by which we organise primal impressions (primary retentions and protentions) into memories and anticipations (secondary retentions and protentions), are modified in specific ways when they are exteriorised into technical objects (tertiary retentions). Plato first raises this issue in *Phædrus* when he argues that “hypomnesic logography [or writing] menaces the *anamnesic* memory of knowledge,” such that “hypomnêsis risks contaminating all memory, thereby even destroying it.”⁴⁹ The issue, for Stiegler, is threefold. The first is that grammatisation—or the history of the exteriorisation and discretisation of memory—both enables the production of culture and risks a generalised prolerianisation, or the loss of our knowledges of life: *savoir-faire*, *savoir-vivre* and *savoir théorétique*. The second aspect is that technical memory organises temporality. When memory is exteriorised into inorganic matter, it structures human consciousness across generations. Stiegler thus understands primary and secondary retention as presupposing tertiary retention. This accumulated technical past is what allows an individual to have a sense of their own personal past in the first place because it anchors subjectivity within circuits of transindividuation, so rendering the technical trace the true condition of possibility for human consciousness. However, in the generalised digital condition we find ourselves in, the pathological elements of the noetic milieu reach their peak, driven by digital reticulation and automation that “penetrates, invades, parasitizes and ultimately destroys social relations at lightning speed.”⁵⁰ What this means is that we are noetic beings only to the extent that we are able to weave our individual psychic memories or secondary retentions into larger frameworks of social or collective memory. In so doing, we create “retentional funds” for futural transindividuations.⁵¹ However, and this is Stiegler’s third concern, when the epochal reorganisation of the socius becomes subjected to hyper-industrial capitalism and the hegemony of marketing and algorithmic governmentality, it can *disrupt* or short-circuit our capacities for transindividuation, producing instead collective disindividuation which triggers a radical reorganisation of our immunological commons. That is, the organological condition induced by the technical means of life brings with it new relations of normativity and pathology, or infidelities of the milieu, which can either be turned into pathos—*sense* or *reason*, as in *making reasonable that which was not*—or result in pathogenesis.⁵²

Stiegler draws on Simondon for his theory of individuation but also differs in important ways from him. Both thinkers prioritise the process of becoming over a theory of substantialised being. Accordingly, any fully formed subject, or perceivable individual that exists in reality, is understood to already have undergone processes of becoming or individuation (while continuing to be in the midst of these since they are ongoing).

49 Stiegler, *Technics and Time*, 3.

50 Stiegler, *The Age of Disruption*, 7.

51 Bernard Stiegler, *The Neganthropocene*, trans. Daniel Ross (London: Open Humanities Press, 2018), 34.

52 Stiegler, *The Age of Disruption*, 96.

To conceptualise this process, it is “necessary to define the type of reality in which individuation takes place,”⁵³ and this “reality” is called the *pre-individual* by Simondon. Pre-individual being, which is without any phase, is ontologically anterior to individuated being. When there is a division of being into phases, individuation takes place, usually because a tension has occurred in a metastable system. Individuation is thus a “partial and relative resolution”⁵⁴ to such a prior tension. One can think of pre-individual being as a metastable system with rich, unformed potentials that are laden with tensions. As the system evolves, its trajectory gets pulled towards specific tensions or basins of attraction, each of which are distinct physiological states of being, whether for an organic or inorganic individual. Once a critical threshold is reached, a symmetry-breaking event or phase transition occurs, meaning the system can no longer sustain its current state. At this point individuation is triggered.

Although what I have just described refers to biological individuation, the same holds true for psychical individuation, which becomes necessary when vital individuation runs up against its limit and cannot “resolve the problems posed to the living being.”⁵⁵ This is in contradistinction to traditional theories that reduce evolution to mere biological adaptations. According to Simondon, when vital functions reach their absolute limit, the psyche acts as a “neotenic amplification”⁵⁶ which simultaneously expands an organism’s inner potential (amplification or phase change) and acts as a retention to ensure that the system retains a malleable structure (neoteny) rather than becoming rigid, as is the case with a solid crystal. Transindividuation consists in the connection of individual psychic individuation processes with that of a multitude of living beings. “Participating in an active reality within which it is nothing but a link, the individuated being acts in the collective: action is this networked exchange between the individuals of a collective, an exchange that creates the internal resonance of the system formed in this way.”⁵⁷ For Stiegler, psychic individuation presupposes transindividuation, which is itself made possible by technical history, or the shared inheritance of culture, language and technical objects. What this exposes is the necessity, in the aftermath of a technological shock, for a “new social competence in technics,” along with required adjustments to other institutions in order that a harmony between the ethical and the technical can be established.⁵⁸ This is directly related to what Stiegler calls the “doubly epokhal redoubling,” without which we find ourselves in crisis, an *epoch without epoch*. When a novel technical system provokes a shock to the existing order, it augurs a new epoch, one which occurs in two stages—i.e.,

53 Gilbert Simondon, *Individuation in Light of Notions of Form and Information*, trans. Taylor Adkins. (Minneapolis: University of Minnesota Press, 2020), 167.

54 Gilbert Simondon, “The Genesis of the Individual,” in *Incorporations*, eds. Sanford Kwinter (New York: Zone Books, 1992).

55 Simondon, *Individuation*, 178

56 Simondon, *Individuation*, 177.

57 Simondon, *Individuation*, 244.

58 Stiegler, *Technics and Time*, 25.

it is double—because it is technological and epistemological. That is, the shock induced by novel technologies requires the formation of new “forms of life and thought” that both produce and emerge from transindividuation processes.⁵⁹ It *redoubles* because the new technological epoch individuates from a technological retentional fund that was already in this or that time and place, i.e., from shared cultural memory. Finally, it is *epokhal* because it interrupts the present era while simultaneously initiating a new epoch that is concurrently a double redoubling of the existing one. The problem, as Stiegler sees it, is that the shock inaugurated by the digital condition remains fundamentally *unthought*—and this is the very foundation of the current crisis of meaning, of our veritable immunological commons or capacity to invest in communal desire. This is why epiphylogenetic memory is both organological and *pharmacological*: because social media and other online platforms, sustained by algorithmic and cloud architectures, are geared towards the short-circuiting of the deliberate functions of the mind by capturing human attention and diverting this energy into immediate drives like consuming products or scrolling feeds. The result of this is a widespread systemic stupidity, the new stage of proletarianisation in which not only knowledge is destroyed, but also desire—the vital dynamisms that connect us to others and motivate us to create, learn and care for our world and without which there is nihilism and social toxicity. As Stiegler writes:

As it is always possible for the arrangements between the psychosomatic and artefactual organs to become toxic and destructive for the organic organs, general organology is a pharmacology. Now, today, we must project these perspectives into a broader, more encompassing, more clearly urgent and ‘relevant’ (as one says in English) consideration of what, for the last sixteen years, since Paul Crutzen proposed it, has been referred to as the Anthropocene, which I would like to consider from the point of view of what I provisionally call, with regard to Alfred North Whitehead, a ‘speculative cosmology’.⁶⁰

Such a “speculative cosmology” entails a conceptual and practical neganthropology⁶¹ as the “reconstitution of a fidelity to the milieu, and, in this milieu, to psychic individuals, technical individuals and social individuals” so that “a libidinal economy (in Freud’s sense) is established that would also be a general economy and a general ecology”⁶² of *care*,

59 Stiegler, *The Age of Disruption*, 14.

60 Bernard Stiegler, *Nanjing Lectures 2016–2019*, eds. and trans. Daniel Ross (London: Open Humanities Press, 2020), 39.

61 In *The Neganthropocene*, Stiegler describes neganthropology as a question of long circuits of transindividuation, or the condition of knowledge that is irreducible to informational entropy, instead indexing the expression of vital and noetic bifurcations promoting the art of life in general.

62 Stiegler, *Nanjing Lectures*, 47.

which is to say of transindividuation or the establishment of an immunological commons of desire.

Stiegler furthers Canguilhem's understanding of organology because rather than just reversing the relationship between mechanism and organism, he brings to light a new dimension of this relation when he argues for the co-constitution of technogenesis and anthropogenesis. Stiegler, like Canguilhem, is deeply concerned with our immunological commons, as I have named it, his pharmacology of mnemotechnologies being both a theory of technicity and a meditation on knowledge of life as the expression of care. But where Canguilhem is interested in immunity, which straddles the organic and the inorganic via technique, Stiegler's pharmacology moves the focus to transindividual relations between social, artificial and technical organs. In this, Stiegler's organology surpasses Canguilhem's. However, Stiegler's formulation of the "human condition as a technical condition *tout court*"⁶³ not only and simultaneously reduces and overdetermines human evolution in technological terms but also subjects all noetic life—and the transcendental *as such*—to the technical, which is to say he traces the transcendental (conditions of possibility) from the empirical (conditions of the supplement).⁶⁴ In this, he forecloses any possibility of an existential future since there is no thought outside of his technical transcendental. Given this, I would argue that asking why we should care whether Deleuze and Guattari have an organology should, at the very least, offer a response adequate to the task set by Stiegler, namely the formulation of an existential future.

Deleuze and Guattari's Geo-Organology(-without-Organs)

Like Canguilhem and Stiegler, Deleuze and Guattari are deeply interested in the organs, most directly via their concept of the *Body-without-Organs* (BwO) which, as they remind readers time and again, does not refer to an "empty body stripped of organs,"⁶⁵ but to one which is organised by way of multiplicities rather than by the State apparatus, faciality, fascism, or any other form of desire closed in on itself. That is, they "machine" desire, or "bind" the drives, as Stiegler would argue. Capitalism, rather than coding or overcoding

63 Pieter Lemmens, "Technologizing the Transcendental, not Discarding it," *Foundations of Science* 27 (2022): 1307–1315.

64 In *Difference and Repetition* (New York: Columbia University Press, 1994), Deleuze argues that Kant illegitimately traces the transcendental from the empirical or psychological when he models the pure conditions of thought on common sense and already-constituted experience. By presupposing the empirical self, Kant fails to discover a true genetic origin for thinking, instead subordinating the transcendental to representation, i.e., the transcendental resembles the experience of the conscious subject. For Deleuze, true thought is forced by a violent, external encounter that throws the mind's faculties into discord, rather than bringing them into a harmonious "common sense."

65 Deleuze and Guattari, *A Thousand Plateaus*, 30.

desire, *decodes* and *detrterritorialises* desire. “This amounts to saying that capitalism forms with a *general axiomatic of decoded flows*.”⁶⁶ Unlike the state, capitalism does not rely on codes, laws or cultural customs to function. Instead, the capitalist mode of production establishes itself as the overarching axiomatic, where the fundamental axiom at play is that everything is a relation of exchange. This applies not only to goods but to workers who are “free” in a dual sense: they are liberated from personal bondage or ownership of land, but also free to sell their labour-power. However, their desires become “enslaved” to capitalist demand, which requires that the drives are continuously unbound for its own purposes, as Stiegler also argues.⁶⁷

To situate the BwO, it is useful to recall that Deleuze and Guattari’s ontology consists of machinic assemblages of desire and collective assemblages of enunciation, where assemblages refer to any contingent and temporary but relatively consistent arrangement of heterogeneous elements—flows and processes like stratification and territorialisation; non-human objects like particles and technologies; discourses and codes; and animals, plants and insects—that are locked into specific dynamics at various scales. Assemblages, Deleuze and Guattari go on to argue, face *the strata* in one direction and *the BwO* in the other.⁶⁸ The strata are the most actualised phases of being, while the BwO, or *plane of consistency*, is the unformed, pre-individual metastable state of potential in which intensities are not yet systematised or structured by “organized transcendences.”⁶⁹ There is a double allusion at play in the notion of *organised transcendences*. The first is in reference to a radio play by Antonin Artaud, *To Have Done with the Judgment of God* (1947), in which the author writes that “there is nothing more useless than an organ,” and, it is only when “you will have made him a body without organs” that “you will have delivered him from all his automatic reactions and restored him to his true freedom.”⁷⁰ Deleuze and Guattari rephrase this a number of times in *A Thousand Plateaus*. First, they write: “The strata are judgments of God; stratification in general is the entire system of the judgment of God (but the earth, or the body without organs, constantly eludes that judgment, flees and becomes destratified, decoded, deterritorialized.)”⁷¹ And later: “The BwO is not opposed to the organs; rather, the BwO and its ‘true organs,’ which must be composed and positioned, are opposed to the organism, the organic organization of the organs. [...] The organism is already that, the judgment of God.”⁷² The second allusion is, of course, to Nietzsche who critiques the forces that cause our moral judgments to be transformed into

66 Deleuze and Guattari, *A Thousand Plateaus*, 453.

67 Deleuze and Guattari, *A Thousand Plateaus*, 30, 153, 158.

68 Deleuze and Guattari, *A Thousand Plateaus*, 134, 157.

69 Deleuze and Guattari, *A Thousand Plateaus*, 159.

70 Antonin Artaud, “To Have Done with the Judgement of God,” *Surrealism-Plays*, <https://www.surrealism-plays.com/Artaud.html>.

71 Deleuze and Guattari, *A Thousand Plateaus*, 40, 150.

72 Deleuze and Guattari, *A Thousand Plateaus*, 158–159.

negative judgements of good and evil. Deleuze and Guattari similarly trace the processes by which humans, other organisms and the earth itself become organised or “stratified” as “judgements of God.” They identify three main strata: the inorganic, the organic and the alloplastic or techno-semiotic, which together form a single whole. All strata are continually being both *fragmented*, or deterritorialised and reterritorialised, and *organised*, or coded and overcoded. On the inorganic level, these processes occur through *induction*. “A crystal displays this process in its pure state” since it takes place “through a set of inductions from layer to layer and state to state, or at the limit.”⁷³ In organic strata, these processes occur through *transduction*, the process by which information is relayed across physical and biological scales. In embryonic development, for example, the differentiation of unspecialised stem cells into distinct functional body parts like bones or nerve tissue is made possible by transduction, which also accounts “for the amplification of the resonance [or auto-complexification] between the molecular and the molar.”⁷⁴ Because transduction lends to the organic a higher degree of deterritorialisation, it allows for the emergence of the technosemiotic or alloplastic, so called by Deleuze and Guattari because even though techne and language arise from the organic, they evolve capacities to act on the inorganic and organic strata as autonomous forces outside of them, i.e., they become *quasi-causal*. Here, fragmentation and organisation take place via *translation* and *translatability*, which is to say that technologies and languages “translate” and “interpret” the organic and inorganic for us. We can describe, categorise and theorise the organic and inorganic strata because of the alloplastic. This has given rise to one of the most pernicious beliefs humans have, namely that the whole of existence is reducible to the limits of *our* thought, *our* language and *our* technologies—the veritable dogmatic image of human thought and the problem we are left with by Stiegler.⁷⁵

At this point, it is fair to argue that Deleuze and Guattari do indeed have an organology—and a rather sophisticated one at that. As I have shown, they clearly understand the mechanical and organic as a single whole, with the mechanical inscribed in the organic. They also have a theory of technicity, or of life as both biological and technical, to which they add relations of “the (anorganic) imperceptible, the (asignifying) indiscernible, and the (asubjective) impersonal,”⁷⁶ or then, the coordinates of *becoming*. Theirs is also an

73 Deleuze and Guattari, *A Thousand Plateaus*, 60.

74 Deleuze and Guattari, *A Thousand Plateaus*, 60.

75 Deleuze and Guattari explain this in their theory of stratification. When we are dealing with a form of expression that is linguistic rather than genetic, the form of content is no longer “homoplastic” but “alloplastic”, meaning it can modify the external world. This is because genetic *linearity* tends to be *spatial*, whereas linguistic expressions—which operate via symbols—are predominantly *temporal* and *superlinear*. This renders language the veritable translator of all nonlinguistic systems (the inorganic, the organic, the technological), which is to say nonlinguistic systems only become intelligible when they are interpreted via the medium of language, giving rise to linguistic imperialism.

76 Deleuze and Guattari, *A Thousand Plateaus*, 279.

immunological project. As they write in the chapter on the BwO:

At any rate, you have one (or several). It's not so much that it preexists or comes ready-made, although in certain respects it is preexistent. At any rate, you make one, you can't desire without making one. And it awaits you; it is an inevitable exercise or experimentation, already accomplished the moment you undertake it, unaccomplished as long as you don't. This is not reassuring, because you can botch it. Or it can be terrifying, and lead you to your death. It is nondesire as well as desire.⁷⁷

To answer the question of why it matters, a final step is required, one which relates organology back to the conditions of thought. In *What is Philosophy?* (1994) Deleuze and Guattari consider the role of philosophical thought, arguing that it is a capacity to create concepts that prompt an *encounter* between thought and the world. Such an encounter should provoke a double becoming: "the philosopher must become non philosopher" and philosophy must become non philosophy.⁷⁸ For a philosopher to become a non-philosopher is, in effect, to shift the conditions of thought outside the limitations of human thought to that of the earth and its complexly interwoven systems outside our "rational" mediations. In other words, we are asked to rethink the conditions of thought *as such* because for thought to become differential, it must be produced by something outside of its own coordinates; otherwise thinking is only ever "rearranged" within the striations of its existing dogmatic images, which cannot diagram the *untimely*, the yet-to-come. Similarly, only when philosophy becomes the expression of non-philosophy, or of impersonal geoforces, is a pause in destiny experienced and a true planetary thought of the future called into being. It is thus the "geological" orientation to the organic, inorganic and alloplastic that gets us out of the bind of technosemiotic imperialism. As Mark Bonta and John Protevi point out, Deleuze and Guattari's theorisation of geology (stratification) and geophilosophy raises "the question of emergence above the subject to the level of social (institutional, urban, State) machines."⁷⁹ By moving beyond the brain or subjective self as the "global level," and positing the brain instead as *sensation* or *pure contemplation*,⁸⁰ the brain becomes just one of many *intermediate* levels within the arrangement of machinic assemblages and assemblages of enunciation. By implication, thought *qua* thought is *more than human* because it arises not just from the human brain, but also from geological forces, making it *machinic* rather than merely *technical*.

77 Deleuze and Guattari, *A Thousand Plateaus*, 149.

78 Gilles Deleuze and Félix Guattari, *What is Philosophy?* Trans. Hugh Tomlinson and Graham Burchell (Columbia, NY: Columbia University Press, 1994), 109.

79 Mark Bonta and John Protevi, *Deleuze and Geophilosophy: A Guide and Glossary* (Edinburgh: Edinburgh University Press, 2004), 34.

80 Deleuze and Guattari, *What is Philosophy?* 212.

If Stiegler's work shows why tertiary retentions, or mnemotechnologies, are highly deterritorialised yet autocorrelated to individual and social secondary retentions and protentions which can be disrupted due to the tightly coupled interactions and feedback loops on and between the strata, it is Deleuze and Guattari who provide us with an onto-epistemological framework—or geophilosophy of organology—that can move the problem of *disindividuation* described by Stiegler *outside* of the coordinates of both human thought and language, as well as technical overdetermination. What this makes possible is an existential future, the calling forth of the untimely: the fabulation of a people-to-come, of a world yet-to-come.

Conclusion

If Canguilhem's organology aims to provide a general philosophical theory of technics, life, and knowledge, Stiegler's aims to address these more directly in terms of *mnemotechnics*. What both philosophers bring to light is that we are "living technologies," but that living is a precarious experiment. Each of us, and all of us together, are continuously taking part in sense-making activities—but these are fragile and can fail. At the heart of organology is the question of an immunological commons, of *care*—for the planet, for societies and for thought. In Canguilhem's work, this is a question of "authentic normativity" or the capacity to introduce new norms into one's milieu when faced with pathology.⁸¹ For Stiegler, it means becoming a being capable of being affected, "which presupposes that it can above all be called into question by its affection."⁸² For Deleuze and Guattari, it is a problem of geology and geophilosophy, which is to say a reorientation to the outside of thought and thought of the outside, to that which is yet to be thought: untimely, intensive, becoming.

If the shock inaugurated by the digital condition remains fundamentally *unthought*, as Stiegler maintains, it is, I would venture to argue, because the problem has not yet been raised to the transcendental level. As Deleuze says: "A solution always has the truth it deserves according to the problem to which it is a response, and the problem always has the solution it deserves in proportion to its own truth or falsity—in other words, in proportion to its sense."⁸³ The minute the limits of thought, or of the sensible, are experienced, the soul becomes "perplexed," which is to say it is forced "to pose a problem."⁸⁴ When we are

81 Canguilhem, *A Vital Rationalist*, 352.

82 Bernard Stiegler, *What Makes Life Worth Living? On Pharmacology*, trans. Daniel Ross (Cambridge: Polity Press, 2013), 120.

83 Deleuze, Gilles. *Difference and Repetition*, trans. Paul Patton. (New York: Columbia University Press, 1994), 159.

84 Deleuze, *Difference and Repetition*, 140.

forced to think, “to engender ‘thinking’ in thought,”⁸⁵ it is because something is *sensed* rather than *recognised*.⁸⁶ In fact, the term “sense” is misleading as it is in fact closer to “the imperceptible [*insensible*]”⁸⁷; that is, sense is imperceptible to the faculty of recognition because “common sense” has failed. At this point, sense *as such* raises itself to the transcendental because it can no longer rely on the empirical to respond to the problem posed. Antithetical to Kant’s position, the transcendental “cannot be induced from the ordinary empirical forms in the manner in which these appear under the determination of common sense.”⁸⁸ It is only when the faculties are in a discordant harmony—meaning that each “communicates to the other only the violence” confronting it when the orthodoxy of common sense falls apart⁸⁹—that thought can be oriented to become the expression of non-thought. That is, thought is wrested from technological, human or any other overdetermination to become *geological* and *machinic*, so that creation is made possible. To be sure, a badly posed problem or false proposition is still endowed with sense, but sense that cannot create as it is not forced to raise itself to the level of the transcendental. This is the ultimate challenge, but also the promise, that Deleuze and Guattari’s thought adds to our conception of organology.

Bibliography

- Artaud, Antonin. “To Have Done with the Judgement of God.” *Surrealism-Plays*, <https://www.surrealism-plays.com/Artaud.html>.
- Bergson, Henri. *Creative Evolution*. Translated by Donald A. Landes. London, New York: Routledge, 2023.
- Bonta, Mark and John Protevi. *Deleuze and Geophilosophy: A Guide and Glossary*. Edinburgh: Edinburgh University Press, 2004.
- Canguilhem, Georges. *Ideality and Rationality in the History of the Life Sciences*. Translated by Arthur Goldhammer. Cambridge, Mass.: The MIT Press, 1988.
- Canguilhem, Georges. *Knowledge of Life*. Translated by Stefanos Geroulanos and Daniela Ginsburg, edited by Paola Marrati and Todd Meyers. New York: Fordham University Press, 2008.
- Canguilhem, Georges. *A Vital Rationalist*. Translated by Arthur Goldhammer, edited by François Delaporte. NY: Zone Books, 1994.
- Deleuze Gilles. “Postscript on the Societies of Control.” *October* 59 (1992): 3–7.
- Deleuze, Gilles. *Difference and Repetition*. Translated by Paul Patton. New York: Columbia University Press, 1994.

85 Deleuze, *Difference and Repetition*, 147.

86 Deleuze, *Difference and Repetition*, 139.

87 Deleuze, *Difference and Repetition*, 140.

88 Deleuze, *Difference and Repetition*, 143.

89 Deleuze, *Difference and Repetition*, 146.

- Deleuze, Gilles and Félix Guattari. *A Thousand Plateaus: Capitalism and Schizophrenia* Vol. 2. Translated by Brian Massumi. Minneapolis: University of Minnesota Press, 1987.
- Deleuze, Gilles and Félix Guattari. *What is Philosophy?* Translated by Hugh Tomlinson and Graham Burchell. Columbia, NY: Columbia University Press, 1994.
- Elden, Stuart. *Canguilhem*. Cambridge, UK: Polity, 2019.
- Geroulanos, Stefanos and Daniela Ginsburg. "Translator's Note." In Canguilhem, Georges. *Knowledge of Life*, xiii–xv. New York: Fordham University, 2008.
- Grosz, Elizabeth. "Foreword." In Bergson, Henri. *Creative Evolution*, xii–xvii. Translated by Donald A. Landes. London, New York: Routledge, 2023.
- Hoquet, Thierry. "Cyborgs, Between Organology and Phenomenology: Two Perspectives on Artifacts and Life." In *French Philosophy of Technology. Philosophy of Engineering and Technology*, 257–277. Edited by Sacha Loeve, Xavier Guchet and Bernadette Bensaude Vincent. Cham: Springer, 2018.
- Hui, Yuk. *Recursivity and Contingency*. London: Rowman & Littlefield International Ltd., 2019.
- Huneman, Philippe. "'Animal Economy': Anthropology and the Rise of Psychiatry from the *Encyclopédie* to the Alienists." In *The Anthropology of the Enlightenment*, 262–276. Edited by Larry Wolff and Marco Cipolloni. Stanford: Stanford University Press, 2007.
- Kapp, Ernst. *Elements of a Philosophy of Technology*. Minneapolis: University of Minnesota Press, 2018.
- Leroi-Gourhan, André. *Gesture and Speech*. Translated by Anna Bostock Berger. Cambridge, MA: MIT Press, 1993.
- Marrati, Paola and Todd Meyers. "Foreword: Life, as Such." In Canguilhem, Georges. *Knowledge of Life*, vii–xii. Translated by Stefanos Geroulanos and Daniela Ginsburg. New York: Fordham University, 2008.
- Maturana, Humberto and Francisco Varela. *Autopoiesis and Cognition: The Realization of the Living*. Dordrecht: D. Reidel Publishing Co., 1980.
- Simondon, Gilbert. "The Genesis of the Individual." In *Incorporations*, 297–319. Edited and translated by Jonathan Crary and Sanford Kwinter. New York: Zone Books, 1992.
- Simondon, Gilbert. *Individuation in Light of Notions of Form and Information*. Translated by Taylor Adkins. Minneapolis: University of Minnesota Press, 2020.
- Stiegler, Bernard. *Technics and Time, 1: The Fault of Epimetheus*. Translated by Richard Beardsworth and George Collins. Stanford: Stanford University Press, 1998.
- Stiegler, Bernard. "Pharmacology of Desire: Drive-based Capitalism and Libidinal Dis-economy." *new formations* 72, no. 72 (2011): 150–156.
- Stiegler, Bernard. *What Makes Life Worth Living? On Pharmacology*. Translated by Daniel Ross. Cambridge: Polity Press, 2013.

- Stiegler, Bernard. *The Re-Enchantment of the World: The Value of Spirit Against Industrial Populism*. Translated by Trevor Arthur. London: Bloomsbury Publishing, 2014.
- Stiegler, Bernard. *The Neganthropocene*. Translated by Daniel Ross. London: Open Humanities Press, 2018.
- Stiegler Bernard. *The Age of Disruption: Technology and Madness in Computational Capitalism*. Translated by Daniel Ross. Cambridge: Polity Press, 2019.
- Stiegler, Bernard. *Nanjing Lectures 2016–2019*. Edited and translated by Daniel Ross. London: Open Humanities Press, 2020.
- Stiegler, Bernard. “Elements for a General Organology.” *Derrida Today* 13, no. 1 (2020): 72–94.
- Wolfe, Charles T. and Andy Wong. “The Return of Vitalism: Canguilhem, Bergson and the Project of a Biophilosophy.” In *The Care of Life: Transdisciplinary Perspectives in Bioethics and Biopolitics*, 63–78. Edited by Miguel de Beistegui, Giuseppe Bianco and Marjorie Gracieuse. Lanham, Maryland: Rowman & Littlefield, 2015.