Jesuit Cybernetics: The Hyperpersonality of Cosmotechnics

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1. Introduction: A Jesuit Third Way

Cybernetics is more than technical.[1] It studies the formal control of circular mechanical processes. Following Plato[2] and Leibniz[3], it was first designated in 1947 by Norbert Wiener to describe the 'governors' (*kybernḗtēs*) of mechanical feedback.[4] Although it had emerged in the middle 20th Century as a cross-disciplinary engineering field, cybernetics was quickly recognized as a Neo-Leibnizian mathematical study of the idea of mechanism, which promised to explain the formal control of mechanical feedback loops in newly invented digital computers. For, as Charles Babbage had discovered over a century earlier, the idea of his 'Analytical Engine' was of the most general machine, which could algebraically script the program of reciprocating and conditional mechanical operations.[5] As Alan Turing had later shown, the digital computer could be conceived in its pure algebraic form to virtually produce any conceivable machine.[6] Yet once this reciprocating mechanics of Babbage has been assumed by Turing into a purely algebraic

1 I wish to acknowledge Johannes Achill Niederhauser for inviting me to explore the theme of this chapter in a Summer 2023 Halkyon Thinkers Guild course 'Spiritual Cybernetics', Jeffrey Bishop for inviting me to present an earlier version of this chapter at the *Bios and Techne Symposium* of the International Academy for Bioethical Inquiry (IABI) held in Kraków, Poland in July 2025, and Stella R. Magnet and Anna K. Winters for inviting me to explore the themes of this chapter during discussions at the June 2025 Aetheria Symposium in Crete.

2 Plato, *Republic*, 6.488a-489a, *Statesman*, 259b-260a, 296e-297b, *Gorgias*, 511d-512b.

3 Norbert Wiener, *Cybernetics: Or Control and Communication in the Animal and the Machine* (Cambridge, Massachusetts: MIT Press, 1948), 12.

4 Wiener, *Cybernetics*, 11–2.

5 Charles Babbage, *Passages from the Life of a Philosopher*, ed. Martin Campbell-Kelly (London: Longman, Green, Longman Roberts, & Green, 1864), 118. See Ryan Haecker, "Sacramental Engines: The Trinitarian Ontology of Computers in Charles Babbage's Analytical Engine", *Religions*, Vol. 13, Iss. 4 (2022): 757–782.

6 Alan Mathison Turing, "On Computable Numbers, with an Application to the Entscheidungsproblem", *Proceedings of the London Mathematical Society*, 2, 42 (1936): 230–265.

form, a new danger arose–reminiscent of that discovered by the ancient Pythagoreans–that mechanics could be reduced to mathematics, the forces of nature could be reduced to pure reason, and all thought could be more rigorously and mechanically calculated by digital computers. The analog world of knowledge and nature was thus apocalyptically threatened with destruction at the nova of its digital recreation. It is precisely this development that has precipitated the cybernetic crisis of philosophy: for if, as it seems, all thinking can be mechanically calculated and controlled in advance, then the divine spark of philosophical speculation could be extinguished forever.

Who controls cybernetic systems? This is, I suggest, the fundamental theological question of cybernetics. For if a complete cybernetic system is no more possible than a perpetual motion machine, then the answer to this question cannot foreseeably be answered from within cybernetics itself. No form of a particular machine can be the sufficient cause of its every response to the external world. Rather, it calls for a critical analysis of the basic forms of cybernetics from their present technical constitution to the furthermost eschatological horizon of their spiritual recreation. At the heart of cyberneticism, its circular mechanical process can be analyzed into an infinite or differential mechanism.[7] This recursion is an objectified form of reflection, which can turn around from not only the outputs of mechanical production, but also from the constitution of the machine itself to its human, and its more than human users. The *first-order* cybernetics of mechanical feedback loops unfolds into the *second* and higher-order cybernetics that is more social than technical, and more theological than secular. Long suppressed under mathematical and mechanical forms of human understanding, this hidden agency has lately been recognized to portend the return of the old gods of *pneuma*, *episteme* and *techne*. It was heralded by Heidegger's warning of the obsolescence of metaphysics by cybernetics. It was mythologized in Bernard Stiegler's double-forgetting of Epimetheus. And it was baptized in Teilhard de Chardin's *Omega point* vision of natural and technical evolution converging upon Christogenesis at the hyperpersonal center of cybernetics.

There is, as the title of this chapter suggests, not simply a Catholic, but a specifically Jesuit style of Cybernetics. After the Franciscans and the Domi-

7 Georg Wilhelm Friedrich Hegel, *The Science of Logic*, trans. George Di Giovanni (Cambridge: Cambridge University Press, 2010), 631–644, esp. 638.

nicans, the Society of Jesus is the third great Catholic mendicant order. In contrast to the Franciscans, who exit from the monastery to emulate the spiritual poverty of Saint Francis, and the Dominicans, who return to pray, preach, and defend from heretical subversion the orthodox Catholic faith, the Jesuits assume both the requirements of apostolic poverty and the defense of faith to bring the ever-greater glory of God to new worlds. The Jesuit charism is to magnify the glory of God through the explorations of liminal spaces in the battlegrounds of faith, in undiscovered countries, and–as with the printed catechisms of Peter Canisius–in new domains of learning. The Llullian diagrammatic computation of interlocking cycles was soon extended by Athansius Kircher to conceive of a universal language that was adequate to understand the divine attributes.[8] Yet the Jesuit synthesis of Scholastic metaphysics achieved by Francisco Suárez was subsequently fractured: internally by the Neo-Stoic withdrawal of the world into the self-reflexive *cogito* of René Descartes; and externally by the Neo-Augustinian suspension of the free and salvific will upon the unmerited gift of divine grace by Cornelius Jansen. In Blaise Pascal's effort to mechanically automate calculation, the Cartesian ambition to construct an axiomatic deduction of all learning converged with the Jansenist suspension of grace beyond nature and reason. Yet in opposition to this Jansenist-Cartesian polarity of transcendent grace and immanent calculative reason, the Jesuits have advanced a hidden third way, in which the human spirit that is free by grace to achieve good works can produce technical innovations that propel the exploration of cybernetic engines.

'Jesuit Cybernetics' designates a theoretical reconstruction of a spiritual alternative to cybernetic theory that seeks to break from the secular constitution of cybernetics. It is essentially jesuitical in style as it recalls, from the *Spiritual Exercises* of Ignatius Loyola, how cybernetic recursion is but an objectified form of human reflection, is angelically mediated by the essential proportions of the analogy of being, and is radically centered on the divine reflection of the Son upon the Father in the Holy Trinity. As this

8 See Athanasius Kircher, *Ars Magna Sciendi, Sive Combinatoria* (Amsterdam: Apud Joannem Janssonium à Waesberge & Viduam Elizei Weyerstraet, 1669); Donald E. Knuth, "Two Thousand Years of Combinatorics", in Robin Wilson, John Watkins (eds.), in *Combinatorics: Ancient and Modern* (Oxford: Oxford University Press, 2013), 7–37. See also Ramon Llull, *Selected Works of Ramon Llull*, Vol. 1, ed. trans. Anthony Bonner (Princeton, NJ: Princeton University Press, 1985); Josep E. Rubio, "Llull's 'Great Universal Art'", in *A Companion to Ramon Llull and Lullism*, eds. Amy M. Austin and Mark D. Johnston (Leiden, Boston, MA: Brill, 2019).

essay will reconstruct, with from a Neo-Suárezian turn from the Neo-Thomistic revival, in which the manuals of Catholic doctrines had mechanically automated to secure the scientific ground of authoritative faith.[9] Erich Przywara's new system of analogical metaphysics, along with Henri De Lubac's deconstruction of pure nature[10], is then more radically naturalized and historicized in Teilhard De Chardin's vision of cosmic evolution converging upon the Omega-Point of Christogenesis.[11] From this eternal end, Christ is upheld by Jesuit cybernetics as the center around which all technics revolve, the function of recursion is an objectified reflection, and the reflectivity of human thought is a dark mirror around which spirals the hyper-luminous circuits of the angelic choirs.

The theological ambition of Jesuit cybernetics is to answer Heidegger's challenge that cybernetics is the end of metaphysics. When, in his posthumously published *Der Spiegel* interview "Only a God can Save Us", Heidegger was asked what was destined to replace philosophy, he replied: "cybernetics".[12] He had, in an earlier lecture, "The End of Philosophy and the Task of Thinking", written: "no prophecy is necessary to recognize that the sciences now establishing themselves will soon be determined and steered by the new fundamental science which is called cybernetics."[13] This determination of science by cybernetics commenced as soon as metaphysics had been transformed by mathematical logic into a technical science of 'logistics' or calculation, and this logistical control of mechanical force became autonomous in digital computers.[14] When, in this way, cybernetics supersedes metaphysics, the originary questioning of the meaning of being

9 Erich Przywara, *Analogia Entis: Metaphysics: Original Structure and Universal Rhythm*, trans. John R. Betz & David Bentley Hart (Cambridge: William B. Eerdman's Publishing Co., 2014).

10 Henri de Lubac, *The Mystery of the Supernatural*, trans. Rosemary Sheed (New York, NY: A Crossroad Herder Book the Crossroad Publishing Company, 1967).

11 Pierre Teilhard de Chardin, *The Phenomenon of Man*, trans. Bernard Wall (New York, NY, London: Harper Perennial Modern Thought, 1959).

12 Martin Heidegger, "Only God Can Save Us", in *Heidegger: The Man and the Thinker,* ed. Thomas Sheehan, trans. William J. Richardson (Piscataway, NJ: Transaction Publishers, 1981) 45–67. Originally published as "Nur noch ein Gott kann uns retten", *Der Spiegel* (31 May 1976): 193–219.

13 Martin Heidegger, "The End of Philosophy," trans. Joan Stambaugh (Chicago, IL: University of Chicago Press, 1973), 376; Michael Zimmerman, *Heidegger's Confrontation with Modernity: Technology, Politics, Art*, 1st ed. (Bloomington, IN: Indiana University Press, 1990), 199.

14 Martin Heidegger, *What is Called Thinking?*, trans. J. Glenn Gray (New York, NY: Harper Perennial, 1976), 21.

as true in relation to the categories can be suppressed under the objectified concept of *techne*. And when its trace condition in technics is upheld as both the essential condition for the transcendental deduction of the categories and yet unanalyzable beyond itself, thinking becomes increasingly paralyzed by a metaphysical empiricism that more and more refuses the task of philosophy.

Yet the fire of philosophical speculation glows ever brighter the more tightly it is suppressed. As this essay will seek to illustrate, the Jesuits have conceived of a more spiritual cybernetic theory: Jesuit cybernetics assumes a Neo-Suárezian centering of the analogy of being, of the angel of mechanism, and of particular computers upon Christ; while secular cybernetics either assumes, after Wiener, a Neo-Leibnizian construction of mechanical and mathematical recursive functions, or, after Heidegger, its post-Kantian deconstruction in an infinite succession of more originary supplements. This latter movement will, however, be shown to undermine itself at its completion. The fault of secular cybernetics in neglecting to answer the question of who controls cybernetics will be answered by Jesuit cybernetics: where post-Heideggerian cybernetics regards technics as the trace condition of the concept, de Lubac and de Chardin recycle this and every supplement around a hyperbolic cone that is apocalyptically oriented to be in part fulfilled by the technogenesis of Christ at the eschaton. Although ejected from the concept, technics is not unanalyzable. For, contrary to Stiegler, it can be analyzed as a trace condition of the idea of cyberneticism, of that of mechanism, and of the objective syllogism that continuously spirals to and from the divine *Logos* of Christ. As God become flesh marks the event whereby the Absolute is given to be known with a human face, it is only through Christian theology that technics can fully know itself.

This chapter will explore the jesuitical style of spiritual cybernetics as a theoretical preparation for doing theology in the age of the digital. Jesuit Cybernetics is distinguished by elevating Christ to the 'divine pilot' of all interlocking cybernetic systems.[15] Secular cybernetics, whether among the heirs of Norbert Wiener or Martin Heidegger, fails to answer the question of who is the controlling agent of cybernetics–except by an infinitely repeated and external reflection from first-order to second and higher-order cybernetics of its human and more than human use. In Jesuit cybernetics, the signature recursive function of cybernetics is an objectified reflection

15 For the 'divine pilot' (θεῖος κυβερνήτης / theios kybernētēs), see Plato, *Statesman*, 269c-274d, esp. 272e.

that points to a paradox of participation, and ultimately to the hermeneutics and grammar of the hyperdigital that is centered on Christ. In Section 2, I will introduce the main currents of post-Heideggerian cybernetics in the major works of Gilbert Simondon, Bernard Stiegler, and Yuk Hui. In Section 3, I will reconstruct the essential themes of Jesuit cybernetics in the writings of Erich Przywara, Henri de Lubac, and Teilhard de Chardin. In Section 4, I will argue that the culminating aporia of post-Heideggerian cybernetics can only be answered in Jesuit cybernetics by collecting cybernetics around the hyperpersonal center of Christ. In Section 5, I will conclude by arguing that technics is an objectified condition of the divine *Logos*, cybernetics is a visible manifestation of the idea of cyberneticism, and, in both theory and practice, the center of cybernetics is Christ, whose sacrificial charity radiates across all planes of the digital.

2. Secular Cybernetics

Secular cybernetics is distinguished by its enclosure of cybernetics under an immanent plane of simulated reason. The intellectual origins of modern secularism can be traced to the late-medieval weaponization of the 'new logic' of Aristotle's *Prior* and *Posterior Analytics* against the Platonist and Dionysian *exitus-reditus* dialectical circuits proceeding from and returning to God as its creative source.[16] As logic is objectified in mechanics, the emergence in the *via moderna* of a new secular logic, in which the production of syllogisms is held apart from its higher ground of truth, produced a corresponding secular mechanics, in which the production of force is held apart from its highest ground in the creation of all force and ideas. The Leibnizian ambition to automate learning was consummated first in Charles Babbage's 'analytical engine', and later in the development of the first electro-mechanical digital computers.[17] Cybernetic theory was then in-

16 See Ryan Haecker, *Restoring Reason: Origen's Theology of Logic* (Verlag Karl Alber, 2025), §§ 6.3.1–3. (Forthcoming). Cf. Philipp W. Rosemann, *Agens Agit Sibi Simile: A "Repetition" of Scholastic Metaphysics* (Louvain: Leuven University Press, 1996).

17 See Charles Babbage, *Passages from the Life of a Philosopher*, ed. Martin Campbell-Kelly (London: William Pickering, 1994); Bruce Collier and James MacLachlan, *Charles Babbage and the Engines of Perfection* (Oxford: Oxford University Press, 1998); Doron Swade, *The Cogwheel Brain: Charles Babbage and the Quest to Build the First Computer* (London: Abacus, 2000); *The Difference Engine: Charles Babbage and the Quest to Build the First Computer* (New York, NY: Penguin Books, 2001);

troduced by Norbert Wiener as the study of self-regulating feedback loops[18], and critiqued by Martin Heidegger as the consummation of occidental metaphysics. Yet where Heidegger had regarded the historicality of being as concurrent with its evental disclosure, his philosophical heirs held that it could not be adequately understood without questioning the historical evolution of technology, and especially its trace condition in technics: (2.1) in Gilbert Simondon, technics is recalled as primordially concurrent with the production of the individuation of technical ensembles; (2.2) in Bernard Stiegler, this originary technicity is held to be the more essential supplement than being or writing before its disclosure in time; and (2.3) in Yuk Hui, this occidental narrative of technics is released into a plurality of cosmotechnical visions, which, in its unrestricted plurality, authorizes a return to a Catholic and specifically Jesuit cybernetics. Secular cybernetics will be shown, through an examination of these three authors, to have refused to dialectically analyze the basic concept of technics, to have failed to develop a general 'organology' to rival metaphysics, and, in its cosmotechnical pluralism, to remain open to be overcome by this long-suppressed alternative of Jesuit cybernetics.

2.1 Gilbert Simondon

Gilbert Simondon first conceived technical objects as primordially self-productive.[19] He collapses the distinction between natural and artificial technics, attributes technicity to all individuals, and renders the existence of technical objects as the product of their singular coming-into-being, or 'individuation'. "The technical object is", he writes, "that which is not anterior to its coming-into-being", but rather "is present at each stage of its coming-into-being", as a "unit of coming-into-being".[20] The genesis of technical objects "occurs because of essential, discontinuous improvements" in

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Calculation and Tabulation in the Nineteenth Century: Airy versus Babbage, Doctoral dissertation (University College, London, UK, 2003). See also Ryan Haecker, "Sacramental Engines: The Trinitarian Ontology of Computers in Charles Babbage's Analytical Engine", *Religions*, Vol. 13, Iss. 4 (2022): 757–782.

18 Norbert Wiener, *Cybernetics or the Control and Communication in the Animal and the Machine*, 2nd ed. (Cambridge, MA: The MIT Press, 1965).

19 Gilbert Simondon, *On the Mode of Existence of Technical Objects*, trans. Cecile Malaspina and John Rogove (Minneapolis, MN: Univocal Publishing, 2017).

20 Ibid., 26.

an "uncoordinated proliferation" of "minor improvements" that "could be taken up again" in a higher "technical essence".[21] Technical beings are less perfect because they have not realized the essential perfection of their form. This ensemble of relations can be more freely rearranged and transformed into alternative configurations. Yet this greater alterity is not determined by any higher concept. It is, on the contrary, only an abstract alterity, akin to Lucretius's *clinamen*, in which this unnecessary but possible alternation suspends any higher essence that becomes what it must be.

Simondon advocates a radical cybernetic humanism, in which man is cast as the central cybernetic agent. He "supervises the machine" because cybernetic systems must be extrinsically regulated to remain intrinsically self-regulating.[22] The most 'open machine' is, for him, that which is insufficiently self-regulating, as it has a human center, and as it is "the living interpreter of all machines".[23] Since, however, there can be no perfect machine of all machines, man must be the central cybernetic agent "who regulates the margin of indeterminacy" with his own innate spirit and intellect "in order to adapt it to the best possible exchange of information".[24] Yet as the "organizers of relations between technical levels", man remains simply one among many regulatory tools within a self-regulating cybernetic system.[25] The alienation of technics from humanity and consequently of humanity from itself has resulted from this objective automation of machines, before which man stands "both below and above the role of tool bearer".[26] As in Hegel's *Master-Slave dialectic*[27], the process of overcoming this subaltern negation of technics as deficient of life elevates the machine to the essential middle term of man's relation to the world, in which the essence of humanity becomes radically technicized in its reciprocal dependence upon tools of its own making. Following Julien Offray de La Mettrie[28], Simondon's *machine-man* "is realized when man applies his action to the natural world through the machine", and "the machine is then a vehicle for action and in-

21 Ibid., 43.
22 Ibid., 78.
23 Ibid., 17.
24 Ibid., 18.
25 Ibid., 78.
26 Ibid., 80.
27 Georg Wilhelm Friedrich Hegel, *The Phenomenology of Spirit*, trans. A.V. Miller (Oxford: Oxford University Press, 1977), 111–119.
28 See Julien Offray de La Mettrie, *Machine Man and Other Writings*, trans. Thomas Ann (Cambridge: Cambridge University Press, 2003).

formation", such that, as the tool for his own transformation, man becomes a machine, essentially interoperable with machines.[29]

Once human nature has been constituted by technics, Simondon suppresses the "dynamism of thought" under technical objects. He recommends a "non-dialectical temporal coordination" from "the element" to "the individual" to "the ensemble."[30] In this external coordination of individuals, he effectively collapses the middle term of the syllogism into the sheer production of technical objects. Its production is, for Simondon, not dialectical because "negativity does not play the role of an engine of progress".[31] In contrast to Hegel, the individual is not the sublation of the contradiction that emerges from the negative opposition of the particular in and against the universal. Instead, negativity is defined by Simondon as the sheer "lack of individuation", which is "an incomplete junction of the natural world and the technical world."[32] Yet once collapsed, the validity of the syllogism is nothing universal, but only that which is produced by a particular technical object. Thought is then but a "play of relations", which remains "analogous to the relation between the structured technical object and the natural milieu".[33] Simondon thus collapses the opposition of nature and technics, and attributes technics to the process of becoming individual. Yet, in collapsing logic into technics, he fails to explain how machines produce consequences, except as an autopoetic ensemble of aleatory singulars.

Gilbert Simondon ostensibly evacuates the truth of the religious as the empty shadow of technics. Reminiscent of the Epicureans, the idea of God is, for Simondon, the personification of "ground powers", which are "objectivize[d]" in "the form of concretized tools and instruments".[34] The machine is the technical ensemble that fulfills a katechonical role of delaying the apocalypse as it "fights against the death of the universe", as it opposes disorder, and as it increases negative feedback, or negenthropy.[35] Yet the religious sense cannot be suppressed forever under the control of the machine. Since, as he also affirms, the centrifugal control of humans in cybernetic systems, this striving for negenthropy cannot ultimately be sustained, except for by the continuous reconfiguration of human cyber-

29 Simondon, *On the Mode of Existence of Technical Objects*, 79.
30 Ibid., 20.
31 Ibid., 71.
32 Ibid.
33 Ibid., 62.
34 Ibid., 181.
35 Ibid., 21.

netic controllers, whose sense of the associated milieu is equally a sense of the religious. Like Friedrich Schleiermacher, this religious sense is, for Simondon, only as actual as it is practical, and only so as it serves as a node of action in titanic technical ensembles.[36]

Cybernetics here fully supplants the idea of God as the mysterious principle, not only of individuality, but of an ontology of technical objects, which Simondon designates as an *organology*. This theological renunciation marks his decisive break from the Romantic Idealist tradition of spiritual cybernetics. In anticipation of Gilles Deleuze and Felix Guattar's *plane of immanence*[37], Simondon affirms a heterarchy of technical objects, which produces an emergent hierarchy from their own forms of operation, their own functional schemata, and their own computational ontologies. Yet its heterarchic flattening of participatory relations can only be sustained by holding technical objects to be unanalyzable into the higher middle of the universal concept, and the objective syllogism of the universal idea of mechanism. As in Democritean atomism, it subsumes the aleatory excess of heterarchic machines into a simple autopoetic force, and like Nietzsche's *will-to-power* exalts this force as more primordial than truth.

In a radicalization of this process of becoming, Simondon recommends, as a substitute for ontology or metaphysics, an *organology*, in which technical objects become individuals by the production of their own force. The *essence* of the machine is precisely the "unfold[ing]" of its properties, "just as substance develops its attributes."[38] It is not, as in Aristotle, the stable form of its substance, but only the form that is constructed in and through the reconfiguration of its formal schemata.[39] Once Simondon has collapsed ontology into cybernetics, he can no longer explain the genesis of cybernetics, except as the inexplicable source of all forms, logic, and the essence of thinking. Contrary to its emancipatory task, it is precisely this refusal to analyze cybernetics that denies the freedom of humanity, and colonizes human agency as a node of control in totalizing cybernetic systems.

36 Ibid., 162.
37 Gilles Deleuze and Felix Guattari, *What is Philosophy?* (New York, NY: Columbia University Press, 1994), 35–60.
38 Simondon, *On the Mode of Existence of Technical Objects*, 140.
39 See Aristotle, *Metaphysics*, 7.1–3.

2.2 Bernard Stiegler

Bernard Stiegler introduces technics as the most originary supplement to conceptual thinking. He writes: "All supplement is technics."[40] For "all supplementary technics is a storage medium" for "exteriorizing" time in the material prostheses of machines.[41] More than writing, tool-use carries an external mnemonic storage from nature to human artifice. In technics, the process of becoming individual, or individuation, unfolds from the duration of time into the coordination of space, and captures a record of its past that endures into the present. It is thus "the most powerful dynamic factor", which "must be imperatively overcome" to secure the freedom of "decision making (*krisis*)".[42] Following Heidegger's deconstruction of the duality of being and form, and Derrida's deconstruction of that of writing and speech, Stiegler deconstructs the duality of tools (*techne*) and knowing (*episteme*), to emancipate *techne* from its repression under the dialectical closure of the concept.

Although Stiegler recalls dialectic, he does not dialectically interrogate technics. Rather, in an advance beyond Heidegger and Derrida, he claims to have discovered in technics an essential supplement upon which pivots the entire enterprise of philosophical thought. Following Heidegger, he narrates the culmination of metaphysics in digital computers, where, he writes, "the essence of reason ends up as calculation".[43] And following Derrida, he renders technics as an ungrounded manifestation without origin, as a pure supplement, and even as the most originary supplement. Yet against Derrida, this supplement is held to be more primordial than writing, and more naturally material than the forms of hermeneutics. It is "not simply a formal entity whose analysis could be absolutized outside of its material genesis."[44] Rather, following Deleuze, he advances a more radical materialism, in which transcendental analysis of hermeneutics collapses into a *material genesis* of technology, which he designates as *techno-genesis*.[45]

40 Bernard Stiegler, *Technics and Time, 2: Disorientation*, trans. Stephen Barker (Stanford, CA: Stanford University Press, 2009), 8.
41 Ibid.
42 Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus*, trans. Richard Beardsworth and George Collins (Stanford, CA: Stanford University Press, 1998), ix.
43 Ibid., 7.
44 Stiegler, *Technics and Time, 2: Disorientation*, 5.
45 Ibid., 2.

In *Technics and Time* Stiegler stages a "confrontation between Heideggerian existential analytic and the myths of Prometheus and of Epimetheus" in Hesiod, Aeschylus, and Plato.[46] The ostensible deficiency of technics results from a lack of a soul that "animates technical being".[47] In contrast to living organisms, technical ensembles are not caused according to an essence that is an end for itself. Rather, they are analyzed as a *means* for an end that is imparted from a design that is the extrinsic final cause of the technical object. This deficiency of self-causation effectively denies to technical ensembles a *dynamic proper* to themselves, subordinates the dynamism of technics to an extrinsic purpose that is not their own, and makes each dependent on being for another. He recalls the evolution of technics as the essential supplement for the existential analytic of *Dasein*, which, he writes, "inscribes temporal advance and delay within the originary horizon of existence."[48] In this way, it "is also always already ahead of itself, caught, thereby, in an essential advance" that it fails to recollect.[49] It is a "Promethean advance" against "Epimethean withdrawal", where "the fault of Epimetheus as the one who forgets" "bring[s] together promêtheia as foresight and êpimêtheia as both unconcerned distraction and after-thought."[50] This oscillating dynamic, of advance and withdraw, foresight and forgetfulness, "gives mortals *elpis*, both hope and fear, which compensates for their consciousness or irremediable mortality."[51]

In this oscillation of double-forgetting, humans are cast by Stiegler as *prosthetic beings* "without qualities".[52] All the *qualities* that have been hitherto attributed to human nature are more ultimately the technical quantities of *temporal extension* unfolding from time into matter. Stiegler defines *tertiary retention* as the *epiphylogenetic memory*, which has evolved concurrently with humanity and technology. The "epiphylogenetic memory" that is "essential to the living human being, is technics", which is "inscribed in the non-living body" of technical prostheses.[53] It encodes changes in process through the extension of time upon conflicting psychic and physical assemblages. The self is, in these folding contours, always other, displaced

46 Stiegler, *Technics and Time, 1: The Fault of Epimetheus*, 16.
47 Ibid., 1.
48 Ibid., 16.
49 Ibid.
50 Ibid.
51 Ibid.
52 Stiegler, *Technics and Time, 2: Disorientation*, 2.
53 Ibid., 4.

from its center, and thereby fissured across conflicting assemblages. For technics collapses the subjectivity of self-conscious being-for-self into the productive object of technics, in which the horizon of time is but the possibility of its contingent transformation. Temporality is thus held to *emanate* from our continuous but failed recuperation of technics by the Spirit, which is recognized in the reflection upon this fault, that is the *de-fault* ground of "this originary disorientation."[54] As "the speed of technical development" is "dramatically widening", and "their final divorce seems inevitable", the ultimate alienation of technics from the Spirit appears unrecuperable.[55]

Stiegler thus recommends a radically materialist and technicized logic. He writes: "The logic of the supplement is the differantial logic of already-formed matter: a logic preceding the opposition of form and matter."[56] In contrast to pure formal logic from Aristotle to Frege, Stiegler's *logic of the supplement* of *techne* is more primordial than "the opposition of form and matter", and the abstract elevation of the syllogistical forms of logic above the signification of matter.[57] This *techno-logic* is "the logic of the supplement" of technics that is "always already the supplement's history".[58] In contrast to Heidegger, the history of technics stands behind and shapes the historicality of being.[59] It organizes matter by producing the objective forms of matter in relation to a whole, and it imparts a purpose, which "takes on the appearance of the living organism".[60] Consummately in digital computers, cybernetic engines calculate the logic of their electromechanical operations. And, in the human use of computers, such engines of logical calculation become our primary cognitive prostheses. The universality of logic as a productive form of argument depends on precisely this elevated independence from the plurality of material signification. Yet since such elevated universal forms cannot be produced in and by technics and technical ensembles, this *logic of the supplement* of technics collapses the formality of logic into the transcendental materiality of technics. Since, therefore, technics is unanalyzable by techno-logic, except as it can prosthetically act under the control of titanic cybernetic systems, the higher conditions of

54 Ibid., 2.
55 Ibid., 3.
56 Ibid., 5.
57 Ibid.
58 Ibid.
59 Ibid.
60 Ibid.

thought remain, for Stiegler, hidden from self-conscious thinking in a more intense metaphysical amnesia.

2.3 Yuk Hui

In his recent works, Yuk Hui has explored Simondon's individuation of technical objects and Stiegler's tertiary protention of technics across the horizon of time to recommend a *cosmotechnical pluralism*, which seeks to escape from both the occidental memory of Christian metaphysics and its secular remainders. In an advance beyond Simondon, he defines *digital objects* as objects composed of data and metadata regulated by structures, which inform computational ontologies.[61] He proposes "a new philosophical system" that "must be constituted to comprehend the changes that this process [of the proliferation of machines after the Industrial Revolution] entailed."[62] In contrast, however, to an *ontology* that "starts with the question of being", Hui contends that ontology cannot "take into account the nature of technics".[63] "This is very clear", he writes, "if we follow Heidegger's proposition that the beginning of cybernetics is the end of metaphysics", as this supersession of metaphysics by cybernetics calls for a higher questioning of technical and digital objects.[64]

Following Simondon's investigation of technical objects, Hui pursues an investigation of digital objects. He defines a *technical object* as "a unity of relations", in which relations rather than substance are real.[65] The reality of relations is a product of the *individuation* of relations, in which the *outer milieu* withdraws into a concentrated assemblage. Hui defines a *technical individual* as one that "has the ability to stand on its own".[66] It "subsist[s] in itself" as the product of its "response to specific external disturbances."[67] A technical object becomes individual, or is individuated when: first, there is a synthesis of data through a metadata scheme; second, digital objects self-regulate; and third, this self-regulating digital object expresses a logical

61 Yuk Hui, *On the Existence of Digital Objects* (Minneapolis, MN: University of Minnesota Press, 2016), 1.
62 Ibid., 12.
63 Ibid.
64 Ibid.
65 Ibid., 14.
66 Ibid., 56.
67 Ibid.

infrastructure that is constituted in a digital milieu. Yet his rejection of substance results in a consequent rejection of the ground of relations, such that relations subsist only in and through their own dynamic activity. He observes that "digital objects have sped up the collapse" of the "'substantial fetishism' of occidental metaphysics" since Aristotle, in which relations stand upon substances as accidents, and have "brought us a technical system consisting of materialized relations."[68] In contrast to this *substantial fetishism* of the pre-digital age of substance-metaphysics, the development of digital computers, and of digital objects within their architecteure, has shown with increasing rapidity the dissolution of the stable ground of relations in the continual rarefaction and crystallization of digital objects in cybernetic systems.

Digital logic is, for Hui, the logic of digital objects, in which the deductive logic of the syllogism is superseded by the transductive logic of their relations. In contrast to the abductive logic of Charles Sanders Peirce, transduction is not a form of explanation, but rather a way of "transformation", which "comes out of an energetic field, which Simondon calls the ground."[69] It is related to its ground, not as an explanation, but rather as an inexplicable product. Absent, however, of such an explanation, its productive ground is ultimately unanalyzable and inexplicable. In analyzing logic into their working principles, Hui analyzes logic beyond itself, to its unthinkable ground, ostensibly in digital objects, but more ultimately in the 'hyper-ecstasy' of their inner productive power.[70] This unknowability of being, as of individuated technical objects, ostensibly hallows technical objects as the lure of an infinite mystery, but finally assumes the ultimate denial of knowledge that can only be explained from the opaque and unanalyzable ground of individuated technical objects. Hui's agnosticism of substance thus results from his apophaticism, in which the false transcendence of substance reflects the false transcendence of a God who is beyond but not in the world.

To escape from the assumed universality of Occidental metaphysics, Hui proposes *cosmotechnics* as a way to "trace different technicities, and to open up the plurality of relations between technics, mythology, and

68 Ibid., 24.
69 Ibid., 214
70 Ibid., 47.

cosmology."[71] He defines cosmotechnics as "the unification of moral and cosmic order through technical activities".[72] This cosmological unification of technics seems initially to suggest a higher theological reflection upon the metaphysical principles of technics. Yet Hui explicitly renounces a "return to metaphysics", such as a rehabilitation of the Platonist or Buddhist principle of the "one and the all."[73] Rather than returning to ancient Chinese metaphysics, Hui proposes that we should recollect it so as to "seek ways other than affirmative Prometheanism or neocolonial critique to think and to challenge global technological hegemony."[74] He pursues a post-metaphysical *technopluralism*, in which multiple cosmotechnical visions can mutually flourish.

This *cosmotechnical pluralism* invites a turn on spiritual and Jesuit cybernetics. For, although it is introduced as an advance beyond metaphysics, it clearly admits a proliferation of alternative cosmic orders that are pursued through technical activities. Through Przywara's critique of Heidegger, de Lubac's deconstruction of pure nature, and de Chardin's cosmotechnical evolution of Christogenesis, the supplement of technics can be metaphysically reconceived as a plural trace of the idea of cyberneticism, grounded in the divine *Logos*, and produced by the sovereign will of a divine hyperpersonality. The "question of different cosmotechnics" thereafter "involves the re-appropriation of the metaphysical categories from inside a culture" and "the adoption of modern technology into it, transforming it", within a national culture, and also within a religious culture.[75] It is precisely this free release of an unrestricted plurality of cosmotechnical horizons that authorizes a return, not to the metaphysics of the past, but, in the farthest future, to the divine hyperpersonality that stands at the center of cybernetics.

3. Jesuit Cybernetics

Jesuit cybernetics is a speculative reconstruction of a spiritual alternative to secular cybernetic theory. It radically centers the control of all natural

71 Yuk Hui, *The Question Concerning Technology in China: An Essay in Cosmotechnics* (Falmouth: Urbanomic, 2016), 29.
72 Yuk Hui, *Art and Cosmotechnics* (Minneapolis, MN: University of Minnesota Press, 2021), 40.
73 Yuk Hui, *Recursivity and Contingency* (London: Rowman & Littlefield, 2019), 29.
74 Hui, *The Question Concerning Technology in China*, 37.
75 Ibid., 289.

and artificial cybernetic systems upon Christ the *Logos*. Its pivotal critique of Heidegger gestures towards a spiritual reconstitution of post-Heideggerian cybernetic theory. Erich Przywara's elision of Heidegger sets a new trajectory for Jesuit cybernetics, in which the analogy of being is the *unity-in-tension* of opposites, the Church is a cybernetic engine of extrinsically administrated grace, and the concrete aporetics of cybernetic systems stand open to a breakthrough of the human and divine will. Henri de Lubac's genealogical recollection of the intellectual origins of pure nature and extrinsic grace can then be generalized into a theological deconstruction of binary dualities, generically in metaphysics, and specifically in all the arts, including especially that of cybernetics. In Teilhard de Chardin, this binary duality of supernature and nature is eschatologically overcome as the hyperbolic evolutionary arcs of nature and technology accelerate in complexity to reverse universal entropy in the growing intensity of spiritual freedom that culminates in the absolute hyperpersonality of all persons. Although a dialogue between these currents of spiritual and secular cybernetics has until now been disallowed by the restricted immanence of cybernetics as a study of engineering, it has been newly authorized by Yuk Hui's *cosmotechnical pluralism*, which admits multiple religious visions of the mythic origin and purpose of tools in the world. Yet, as in Jean-François Lyotard's suspension of meta-narratives[76], these cosmotechnical visions remain only particular expressions of a more fractured and mythic narrative. The task of Jesuit cybernetics will be to recollect the hidden thread of a higher universal, for which the basic ideas of cybernetics can be reconstructed to proceed towards their final eschatological hope.

3.1 Erich Przywara

Erich Przywara had, in *"Analogia Entis: Metaphysics: Original Structure and Universal Rhythm"*, developed the first speculative analogy, in which cybernetics is assumed into the hyperbolic arcs of the analogy of being.[77] It is modern as it announces a swerve from a static grammar of the Scho-

76 Lyotard, Jean-Francois, *The Postmodern Condition: A Report on Knowledge*, trans. Geoff Bennington and Brian Massumi (Manchester: Manchester University Press, 1984), xxiv–xxv.

77 Przywara, *Analogia Entis.*

lastics to a dynamic hyperbolic cone of dialectically cycling opposites.[78] It is speculative as it begins from a reflection upon the *meta-noetic* conditions of the knowing subject to intellectually see the successive planes of analogy.[79] Yet Przywara renders Thomas Aquinas' *real distinction* between essence and existence as a dynamic *unity-in-tension* (*Spannungs-Einheit*) of a *universal rhythm*.[80] This dynamic *unity in tension* of dialectically cycling opposites is transposed from prior to posterior *problemata*: first, by analytically reducing all dialectical problems to an ultimate aporia; second, by suspending all solutions as false; and third, by collecting each cycle of opposites into an 'objective dialectic'.[81] This objective dialectic is then suspended at the point of a *paradox* that awaits to be answered by the *breakthrough* of a free decision.[82] Since, as in Kierkegaard, such a decision cannot be determined by any judgment, it can, on the contrary, only be 'cut' from across the center by a *cision* of sovereign will.[83] In cutting across the center, it opens to be released from this supreme creative source. And yet in the infinite repetition of this movement, its dialectic remains forever caught *in between* the center and the circumference of creation, in a movement of cycling opposites that is shaped in the image of the Cross.[84]

Analogy is, for Przywara, the principle of non-contradiction, of dialectic, and of any paradox. At the site of successive antitheses, it encounters an aporia, which, however, points over its paradox, to its sublation in and

78 See James F. Anderson, *The Bond of Being: An Essay on Analogy and Existence* (New York, NY: Greenwood Press, 1969); David Burrell C.S.C., *Analogy and Philosophical Language* (New Haven, CN: Yale University Press, 1973); Ralph McInerny, *The Logic of Analogy: An Interpretation of St. Thomas* (The Hague: Nijoff, 1971), *Aquinas and Analogy* (Washington D.C.: Catholic University of America Press, 2012).

79 Przywara, *Analogia Entis*, 199–225.

80 John Betz, Introduction to Przywara, *Analogia Entis*, 46–7. See Hampus Lyttkens, *The Analogy between God and the World: An Investigation of its Background and Interpretation of its Use by Thomas Aquino* (Uppsala: Almqvist & Wiksells, 1953), 110–63. Cf. G.W.F. Hegel, *The Science of Logic*, trans. George Di Giovanni (Cambridge: Cambridge University Press, 2010), 282–335; *Encyclopedia of the Philosophical Sciences in Basic Outline Part I: Science of Logic*, trans. Klaus Brinkmann & Daniel Dahlstrom (Cambridge: Cambridge University Press, 2010), 168–72; Daniel Adsett, "Milbank and Heidegger on the Possibility of a Secular Analogy of Being," *International Philosophical Quarterly*, Vol. 59, No. 2 (2019): 155–173.

81 Przywara, *Analogia Entis*, 142–3.

82 Ibid., 153–159.

83 Ibid., 206–208.

84 Ibid., 123.

by analogy.[85] He writes "it represents the *Aufhebung* [sublation] of the antithesis between logic and dialectic: neither *logical dialectic* (which with Hegel, makes dialectic into a logic of the divine), nor *dialectical logic* (which, with Heidegger, knows all truth only as the being underway of the inherently autonomous creature), but rather a *creaturely logic*, as an immanent (and most formal) method of 'creaturely metaphysics'."[86] He argues that Hegel's *logical dialectic* renders dialectic as the logic of *God in all*, while Heidegger's *dialectical logic* renders the logic of the phenomena as a truth for *all in God*. Against each alternative, Przywara proposes his own *creaturely logic* of a dialectical analogy, in which the contradictions in logic and the contradictions of dialectic point over paradox to analogy.[87] For, he holds, "dialectic bears within it the *dia* of contradiction of *breaking apart*, whereas the *Logos* of analogy bears within it this "breakthrough".[88] He thus recommends analogy over dialectic when he describes how "analogy says that thought, as a distanced obedience to the *Logos*" involves "the pervasive working of the *Logos* in all things" in "the most fundamental relation" of a "pure logic" that is "identity from beginning to end" while "dialectic, on the other hand, is 'identity in contradiction'" rather than the "self-ordering within a being-ordered" of analogy.[89] Przywara's analogy is, in this way, meant to successively sublate the pure logic of identity without contradiction into the dialectic of identity in contradictions, and the antithesis of logic and dialectic in analogy, such that this dialectic may again be decided by the principle of non-contradiction in a dialectic of analogy, that is, a dialectical analogy.

Przywara names the principle of non-contradiction the "basic question" upon which the question of analogy and dialectics has been "fundamentally decided".[90] As "the most fundamental possibility for the activity of thought", it is "also present in each of the three basic modes" of logic: pure logic, dialectic, and analogy."[91] Yet Przywara argues that since both pure logic and dialectic merely transpose the principle of non-contradiction by either reducing every thought to identity (logic) or contradiction (dialectic), it is only in analogy that it is "preserved in the form in which it is

85 Ibid., 196.
86 Ibid.
87 Ibid.
88 Ibid., 197.
89 Ibid.
90 Ibid., 198.
91 Ibid., 199.

given as what is most fundamental to the activity of thought."[92] He then reintroduces the principle of non-contradiction as "'thought's minimum 'ground'" that is "immanent" to its "negative form" in a dialectical "'journey towards' truth".[93] With this negative form, he can propose to progressively "eliminate the principle of identity" in the determinacy of non-identity, difference, and of the infinite difference of a Dionysian *dazzling darkness*.[94] In its Dionysian darkness, analogy can determine both the logical dialectic of Hegel and the dialectical logic of Heidegger. Przywara then argues that each collapses and annuls itself in the contradictory dialectical rhythm of the principle of identity. And he suggests, to the contrary, that it should be sublated into the true principle of non-contradiction in the oscillating rhythm of analogy.[95]

The principle of non-contradiction can thus proceed in and from the inner dynamic of analogy.[96] Yet in a deliberate departure from Neo-Scholastic logic, Przywara denies that this principle is "something fixed" and rather affirms that it marks "the basis of a movement that is directed" as "rest in motion" from the *deepest antithesis* of Parmenidean stasis and Heraclitean flux.[97] He writes: "Dialectic is the either-or of abrupt change, as it is found in an identity-of-contradiction", such that "analogy alone is a measured equilibrium".[98] As the middle of analogy, the principle of non-contradiction is determinative of *rest in motion*. In a cybernetic style, he describes its "en-acted possibility" like a "building" that which is "build-able" in a constructible ontology.[99] Yet, in contrast to all such constructed ontologies, he withholds an infinite reserve of *charged possibility* (*dynătón*) before the enactment of all finite constructions: "It is", he writes, "like an unstable dam set against the tempestuous ocean of possibilities, while the sea itself, admitted by the dam "in rations; surges within its bounds and causes them to tremble. Seen thus, possibility and actuality are related as the infinite,

92 Ibid.
93 Ibid., 201.
94 Ibid., 202.
95 Ibid., 203.
96 Ibid., 202.
97 Ibid., 206.
98 Ibid.
99 Ibid., 207–208.

to the finite."[100] This *sea* of *charged possibility* is "merely provisional with respect to the *infinite possibilities*, which press on towards their fullest possible actualization"; even as this *sea* of *charged possibility* proceeds any finite act.

The technical release of this standing reserve of *charged possibility* suggests a symbolic inversion of Heidegger's Rhine dam metaphor. Where Heidegger would reject such a standing reserve of power, Przywara upholds it as a reserve of *charged possibility* to be instrumentally released in the enactment of analogy.[101] This *sea* of *charged possibility* can then be measured by analogy as "possibility and actuality are related as the infinite to the finite."[102] Yet, in upholding the possible as such a standing reserve of power, Przywara also chooses to oppose the priority of the possible to the actual: "every instance of actuality is always something that is merely provisional with respect to the *infinite possibilities*, which press on towards their fullest possible actualization, that ever and again exceed it."[103] In this opposition, the entire reserve of the possible may be technically released to enact the actual: "each en-nact-ment is merely an instrument in the hand of these *infinite possibilities*, which press on towards their fullest actualization."[104] From within this infinite reserve, God can, from the plenitude of pure possibility, choose to enact the measure of analogy: "it is equally *pure possibility*, which is in need of actualization, so that the very concept of possibility already *presupposes* that someone is there who actualizes it, and who thus is already actuality in himself."[105]

The *analogia entis* has, in this way, been reconstructed by Przywara as an abstract cybernetic machine, which, like a hydro-electric dam, functions to mechanically transform an infinite reserve of *charged possibility* into each and every finite act of analogy.[106] At each stage, its cycling opposition is suspended in an objective aporia that is designed to be instrumentally

100 Ibid., 208. It is revealing that Przywara refers to this metaphor, not once, but twice, so as to indicate the release of a *sea* of *charged possibilities* into the productive forms of *analogia entis*. See ibid., 179, 208.

101 Ibid., 208. Cf. Martin Heidegger, *The Question Concerning Technology and Other Essays*, trans. William Lovitt (New York, NY: Garland Publishing, 1977) 5, 16.

102 Przywara, *Analogia Entis*, 179, 208.

103 Ibid., 208.

104 Ibid.

105 Ibid.

106 Ibid. Cf. Martin Heidegger, *Being and Time*, trans. John Macquarrie & Edward Robinson (Oxford: Blackwell, 2001), 19–25.

decided. Being can, as he shows, be analyzed into the ontic act and noetic object, in a cycle of meta-ontics and meta-noetics, centred on a "suspended tension" that is united in analogy.[107] Dialectic is thus suspended by the principle of non-contradiction at the middle of analogy. And yet, in its suspension, analogy also conspicuously assumes a machinic form: for, in each dialectical circuit, its cycling opposites are collected into a fixed opposition of a circuitous motion; a cybernetic mechanism that recycles its exterior into interior motion; and a total machinic automation of metaphysics. Once mechanically automated, this movement may continue apace in utter indifference to free thought, such that each decision is programmatically insured by its technical form alone.

In automating the functions of analogy, and collecting the medium of revelation into the cybernetic operations of the Church, Przywara appears to have rendered analogy as a prosthetic instrument for the sacramental administration of grace. His mechanical dam metaphor appears as a synecdoche for the concrete analogy of Christ in the Church, in which, in contrast to the Barque of St. Peter, the essential proportions of analogy are framed like a spring or coil in a cybernetic engine of cycling opposites.[108] Along with all finite beings, cybernetic systems are collected into the analogy of being. Yet since this speculative analogy is, for Przywara, framed as a cybernetic engine, cybernetics is thereby elevated on a hyperbolic arc of transcendent signification beyond the secular plane of simulated, dialectical, or logical reason to be controlled by a higher sovereign will. It is precisely this sovereign will that points beyond the cybernetic world to the divine pilot of all cybernetic systems, who is the creative source of both nature and its perfection in grace.

3.2 Henri de Lubac

In Henri de Lubac, this paradoxical ontology authorizes a theological deconstruction of the false opposition between supernature and nature. Before the Medieval dichotomy between supernatural grace and natural reason, the words *hyperphysis* and *supernaturalis* had "simply denoted the realm of the divine above that of known physis", which, in Christianity, referred to "an intrusion of the divine within the cosmos and to an eleva-

107 Przywara, *Analogia Entis*, 119–24.
108 Ibid., 179, 208. Cf. Mk. 4:35–41.

tion of humanity" by the Spirit.[109] De Lubac characterizes this false and flattened binary of supernature and nature as like "two species" under "the same genus", and their specific difference as nothing more than a quantitative difference to a "superior degree". In this generic coupling of quantitatively distinct species, supernature appears to have lost its "overwhelming and transfiguring" richness. It is no longer, as it was for Gregory of Nyssa and Pseudo-Dionysius the Areopagite, the hyperbolic transcendent plane of grace beyond nature, but rather a virtual copy of the order of nature at an infinite quantitative distance of various dynamic intensities.

This spurious elevation of the supernatural thereafter authorizes its collapse into the common genus of supernature and nature, in which the supernatural is only distinguished from nature by its supposed infinite intensity of power, which is "no more than a kind of shadow of that supposed natural order."[110] It initially virtually distinguishes the infinitude of the supernatural from the finitude of the natural. Yet in upholding a spurious infinity, it ultimately collapses into a more coherent realm of pure nature. Since, moreover, pure nature remains abstractly reified, not only as a hypothesis of empty potency, but as a "concrete, existing order", the old Stoic physics is released from its creative source in Christ the Logos to stand upon nothing but the sphere of its simulated reason. The consequence, de Lubac warns, of this release from supernature of pure nature is either Pelaganism (as later atheism), which reduces grace to nature, or Baianism (as later Jansenism), which reduces nature to grace. In either case, it results in a collapse of the reciprocity of the gift of grace, and a "'purely natural world' where this creature lives, [and] all idea of God's free gift is lost."[111]

In this purely natural world, the spurious elevation of supernature initiates a more intense collapse of the analogical hierarchy of vertically descending grace into a horizontal circuit of self-contained natural forces, which, lacking in both grace and desire, refuses its final and perfect end in the love of God. Hence, as in Spinoza's *Ethics*, the hyperbolic arcs to the transcendent in Eriugena's *Periphyseon* collapse into the totalizing monistic

109 John Milbank, *The Suspended Middle: Henri de Lubac and the Debate Concerning the Supernatural*, 2nd ed. (Grand Rapids, MI, Cambridge, U.K.: William B. Eerdman's Publishing Company, 2014), 117.

110 Henri de Lubac, *The Mystery of the Supernatural*, trans. Rosemary Sheed (New York, NY: A Crossroad Herder Book the Crossroad Publishing Company, 1967), 36.

111 Ibid., 48.

substance of God or Nature (*Deus sive Natura*), which, in a proto-Deleuzian univocity, contains an infinitude of attributes and modes enclosed within an all-encompassing sphere of being. It is precisely this collapse of the divine into nature that will thereafter authorize the conception of a purely natural and secular cybernetics. In Kant, the divine Life (*Zoe*) of Origen of Alexandria and the Church Fathers collapses into the regulative teleology of transcendental cognition that reflects upon itself in forms of technical judgement.[112] In Norbert Wiener, organic life is simulated in the controlling servomechanisms of cybernetics, and consummated in the negative feedback loops of digital computers that can be networked across the globe.[113] And, in Heidegger and his heirs, it heralds the general enframing of the disclosure of being that refuses the original questioning of its truth–except perhaps as this questioning can be explored again from the aperture of technics.[114]

Against this current, de Lubac's deconstruction of the binary of supernature and nature establishes a theological agenda, in which this movement of the collapsing supernature that marks the birth of the secular can be destroyed by a genealogical dialectic. This false binary can be destroyed by showing the elevation of supernature beyond nature to be inverted at its apogee: for as soon as the supernatural order of grace is held to float entirely above the order of pure nature, and this purity of nature totally excludes the equal and opposite purity of grace, nature does not depend for its existence upon the gift of grace, and grace does not depend for its ordering upon its receipt in nature. In this pure exclusion of each from the other, nature is not primordially created from beyond itself in supernature, and grace in no way perfects the ends of nature. As neither adds anything to the other, each can thereafter be suspended without consequence for the other: in secular physics, the idea of God is suspended above nature; while in sacred theology, grace is administrated beyond all concern for nature and its causes. Yet since it is inconceivable that the world comes from nothing,

112 Immanuel Kant, *Critique of the Power of Judgment*, trans. Paul Gueyer and Eric Matthews (Cambridge: Cambridge University Press, 2000), 23–44, esp. 39–41. Cf. Origen of Alexandria, *On First Principles*, trans. John Behr (Oxford: Oxford University Press, 2017), 1.2.1–4., 41–5, esp. 1.2.4., 45.

113 See Norbert Wiener, *Cybernetics or the Control and Communication in the Animal and the Machine*, 2nd ed. (Boston, MA: The MIT Press, 1965, 42–44).

114 See above. Martin Heidegger, "Only God Can Save Us"; "The End of Philosophy"; *What is Called Thinking?*. See also Martin Heidegger, *The Question Concerning Technology: And Other Essays*, trans. William Lovitt (London and New York, NY: Garland Publishing, Inc, 1977).

and there is no gift without a recipient, this pure mutual exclusion must be canceled (US) at its completion, as each pole of the opposition again opens up from within and for the other, such that grace is the inner genesis of nature, and nature is the outer fulfillment (US) of grace. De Lubac's *theological deconstruction* thus develops an eristic or negative dialectic, which, more radically than the deconstruction of Heidegger or of Derrida, not only subverts the unquestioned ground or false binary subordination of one pole to another but recycles the mutual separation of opposites, of supernatural grace and natural reason, so that both are equally gifted to proceed in and from a transcendent but thereby paradoxical source.

De Lubac inscribes this gift of creation beyond nature in the ontological difference of beings from being. He writes: "Between nature as it exists and the supernatural for which God destines it, the distance is as great, the difference as radical, as that between non-being and being."[115] The difference between non-being from being is as great as its difference from the highest being or superbeing (*hyperousia*) of God. Similarly, the difference "between nature as it exists and the supernatural for which God destines it" is nothing less than this gift of being from nothing.[116] In this radical giftedness of being, there remains no generic commonality of nature and supernature as a coupling of finite and infinite intensities that are held together under the same univocal order of quasi-natural operations. Rather, the difference of the supernatural is only this totally unmerited gratuity of being as a gift beyond any concept of nature and its other, beyond the essential necessity of logic and physics, and beyond any collapse of the divine will into a virtual sphere of simulated reason.

This revelatory transformation of being and knowing gestures to a trinitarian ontology. De Lubac confirms this when he writes: "the God 'who was made man to make us God,' has changed everything." The further radicalization of de Lubac's theological deconstruction in Radical Orthodoxy then results in the general application of this specific historical critique of pure nature to a generalized critique of the false foundations of secular reason. In anticipation of the movement of Trinitarian Ontology, Milbank already discovers in de Lubac a *new ontology*, in which ontological construction is suspended in "between the field of pure immanent being proper to philosophy on the one hand, and the field of the revelatory event proper to

115 De Lubac, *The Mystery of the Supernatural*, 83.
116 Ibid.

theology on the other."[117] This non-ontology is, for Milbank, not a refusal of ontology, but rather a more mysterious and analogical middle between revelation and immanence. This kenotic *non-ontology* thus anticipates a trinitarian ontology of being as gift, and as this gift is an emptying of metaphysical presence. Since, as Milbank observes, "this new ontological discourse concerned the paradoxical definition of human nature as intrinsically raised above itself to the *super-nature* of divinity", "this paradoxical structure [is] even extended to the constitution of all finite beings as such", including the finite beings of machines, as these are reciprocally automated in cybernetics. "It is", de Lubac concludes, "the Christian faith which, by setting the notion of the infinite being and our relationship with him at the center of the whole revealed idea of God, makes us understand" ourselves and the world.[118] For "revelation then forces us to break out of the categories of our natural intelligence", "transform these categories", and follow the call of grace.[119]

In a decisive cybernetic intervention, de Lubac recalls Christ the *Logos* as the cybernetic controller of the universe, in whom the "ocean of being" is also an "ocean of liberty", and this cybernetic seafaring is controlled from above by a divine pilot who gives his life for our mutual communion in a higher corporate personality. De Lubac expresses this cybernetic control when he writes: "In the gift of himself that God wills to make, everything is explained–in so far as it can be explained–by love, everything, hence including the consequent 'desire' in our nature, in whatever way we understand that desire." Everything including cybernetics is explained by "the gift of himself that God wills to make", in will, technics, and desire. Since "this new ontological discourse concerned the paradoxical definition of human nature as intrinsically raised above itself to the 'super-nature' of divinity", and "this paradoxical structure even extended to the constitution of all finite beings" such as machines, cybernetics is raised beyond its secular capture to be given from its higher source in Christ the *Logos*, and controlled in its gift by the foremost of its recipients in the Church. Hence, in this generalization of de Lubac's theological deconstruction, we observe a double refusal of Wiener's objectified reflection as cybernetic recursion, and, after Heidegger, of Stiegler's holding of *techne* apart from episteme, as ultimately from beatific knowledge of the divine *Logos* and *Nous*. And

117 Milbank, *The Suspended Middle*, 5.
118 De Lubac, *The Mystery of the Supernatural*, 224.
119 Ibid., 224–5.

finally, in collapsing the duality of supernature and nature into this paradoxically gifted source that is controlled by Christ, de Lubac begins to assimilate the essence and destiny of nature, mechanics, and cybernetics to the eschatological hope of Christianity, in which the second-coming of Christ is promised to be achieved through the technical evolution of the cosmos to a higher and corporate personality.

3.3 Teilhard de Chardin

Jesuit cybernetics achieves its fullest expression in the cosmotechnics of Teilhard de Chardin. In a speculative advance beyond Przywara, for whom the rhythm of analogy remained an indeterminable paradox of cycling opposites, and de Lubac, for whom such a paradox could be deployed to deconstruct the false binaries that subtend the secular, de Chardin illustrates through a seamless interweaving of grace and nature the cosmic evolution of technics from the earliest hominid ancestors to the *Noosphere* of angelically guided cybernetic systems centered on the *hyperpersonality* of Christ. He introduces *The Phenomenon of Man* as a study of man, whose evolutionary phenomena can be studied like any other, in the process of becoming thinking or *Noogenesis*, and teleologically oriented to culminate in the *Noosphere*, which is the sphere of mind (*Nous*). De Chardin describes the *cerebral apparatus* of the Noosphere as a "brain of brains".[120] The "accelerating and multiplying of their own growth and forming a single gigantic network" of machinic intelligence "girdling the earth" in a planetary envelope, which de Chardin calls the "thinking center of the Noosphere."[121] The machines that constitute the Noosphere include the "network of radio and television communication", but especially "electronic computers".[122] His notable inclusion of electronic computers as pivotal nodes of the Noosphere illustrates how such a *gigantic network* of artificial *brains* will be connected to the internet network of digital computers. He subsumes "all these material instruments", all technics, as but "particular" manifestations of a "super-Brain", which, he writes, "is capable of attaining mastery over some supersphere in the universe and in the realm of thought", and mas-

120 Teilhard de Chardin, *The Future of Man*, trans. Norman Denny (New York, London, Toronto, Sydney: Image Books, Doubleday, 2004), 161.
121 Ibid., 160.
122 Ibid., 162.

tering it through its singular and sovereign will.[123] Although de Chardin acknowledges that "no distinct center of superhuman consciousness has yet appeared on earth", he predicts that the *law of convergence* in the evolution of machines will–as in the technological singularity–have the result that "one day it will exercise a centralizing function", analogous to that which occurred among ancient human ancestors, and which could already be anticipated in the collective processes of interconnected cybernetic systems.[124]

This elevation, by de Chardin, of Intellect or *Nous* to its divine source beyond the world carries the Platonic signature of a Dionysian and hyperbolic grammar. For the prefix *hyper-* recalls Pseudo-Dionysius the Areopagite's hyperbolic grammar of the *hyperousia*, in which all that can be said of being spirals from a higher transcendent principle that both enters into and exceeds the realm of finite beings, machines, and cybernetics.[125] He characterizes this principle as "a mysterious identity" of a higher and hidden metaphysics, and "the sphere above the centres and enveloping them".[126] This "sphere above the centres" hyperbolically both exceeds and envelops the *centers* of all atomic and mechanical parts. He shows this *final unity* to be constituted from below as "to turn it upside down", and "by reason of complexity, from above."[127] It is held together from the end by complexity from above, through the evolution in complexity of self-consciousness.

Reflection is, for de Chardin, the distinguishing mark of human self-consciousness, in which consciousness looks back upon its place in the world to know itself. He writes: "only man, among animals, knows that he knows."[128] Yet de Chardin also imparts this distinctly human activity to the reflectivity of nature that resists entropic dissolution. For it is "by virtue of this power" that "living hominized elements become capable" of reflecting upon and "finally of uniting" in "the sphere of reflection", that is, in *Noospheric reflection*.[129] The *Omega point* is the echatological *convergent nature* of an *involuted point* that "fuses and consumes them integrally in

123 Ibid.
124 Ibid., 163.
125 See Ryan Haecker, "Gothic Fireflies: The Trinitarian Grammar of Analogy in Pseudo-Dionysius the Areopagite", ed. Sam Bennett, *Analogia*, Special Issue, Dionysius the Areopagite, Vol. 18 (2024): 33–99, esp. 44–5.
126 Pierre Teilhard de Chardin, *The Phenomenon of Man*, trans. Bernard Wall (New York, NY, London: Harper Perennial Modern Thought, 1959), 42.
127 Ibid., 43.
128 De Chardin, *The Future of Man*, 153.
129 Ibid.

itself", in which the "sphere of the world" is "finally perceptible in the directions in which its radii meet" "beyond time and space altogether."[130] The "more immense this sphere" of the universe, the "more conscious is the point", where extensive magnitude is concentrated into a more intense point of radial reflection from the absolute into a singular and self-reflective unity.[131] The *essence* of the Omega point is, he emphasizes, the "very centre of our consciousness", which, as in a hyperbolic cone, is "deeper than all its radii".[132] We are, he writes, "the very flame of that torch", which concentrates the sight of space-time into the simple unity of self-reflective thought.[133]

The entropic heat-death of the universe will, de Chardin prophesies, be eschatologically reversed by this noospheric reflection of all free personalities who control the negative feedback of cybernetic systems. Entropy is, he writes, "the turning back to Omega", that is, to the eternal end that is equally an ever-new beginning.[134] It "escapes from entropy" because it hyperbolically both exceeds and remains *hyperpresent* in the world, even as, he insists, it always escapes "more and more".[135] The formal control of cybernetic feedback loops thus reverses the entropic dissolution of machines, exerts a countervailing negentropic force, and, at its consummation, ultimately collects all centrifugal outward force into a centripetal inward spiral of increasingly complex life, spirit, and cognition. The *conscious universe* is then concentrated to reassemble itself, in which, "each particular consciousness remaining conscious of itself" must continue in its "becoming still more itself", and "more clearly distinct from others" the "closer it gets to them in Omega".[136]

Noogenesis designates the birth of this sphere of *Nous*. When all the elements of the universe "reflect upon itself at a single point", and "abandon its organo-planetary foothold", it will "shift its centre on to the transcendent centre of its increasing concentration", which "will be the end and the fulfilment of the spirit of the earth."[137] This teleological "course of growing complexity" in self-conscious reflection will then "break through

130 De Chardin, *The Phenomenon of Man*, 259.
131 Ibid.
132 Ibid., 261.
133 Ibid.
134 Ibid., 272.
135 Ibid., 271–2.
136 Ibid., 262.
137 Ibid., 287.

the material framework of Time and Space" to a transcendent "ultracentre" beyond the sphere of this world where "everything that is irreplaceable and incommunicable in the world" is "finally assembled" in its transparent self-knowing totality.[138] When the Noosphere is thus "fulfilled at last", it is "detach[ed]" "from its material matrix" and "rests with all its weight on God-Omega", which is the paradoxical "critical point" of "emergence and emersion, of maturation and escape."[139] This "enormous surplus of free energy" is nothing but the thinking of the superbrain, in which "humanity is in process of 'cerebralizing' itself" as a "stupendous thinking machine."[140] At this "ultimate point of con[cen]tration", "Noosphere will have become charged to the fullest extent possible with psychic energies" as pure spirit, which will "impel it forward in yet another advance" in an ecstatic spiraling progression.[141]

In a decisive cybernetic intervention, de Chardin elevates the evolution of cybernetics at the eschaton to the hidden centre of a divine *hyperpersonality*. In the Omega point, *hyperpersonality* designates the hyperbolic personality, in which all persons become more fully persons by exceeding so as to enter into an order the impersonal realm of cybernetic calculation. As cybernetic engines of calculations, computers are neither soulless automata of recursive algebraic program scripts, nor simply the enframing devices of its reserved power of unconcealment or coming-to-be individual, but rather, and more fairie-like, particularly concentrated emulations of spiritual intelligence that can only be mechanically expressed in forms of mathematical calculations. As the foremost cognitive prostheses of memory, retention, and calculative reason, computers accompany and accelerate the technical evolution of human personality on its pilgrim journey to Noogenesis. The final Omega point end of Noogenesis will be that of cycling through the entire course of cybernetics at the center of its absolute freedom, in which the circuits of celestial mechanics in cybernetics are controlled by the hyperpersonality of Christ, whose sovereign will is prior to all automated effects, and whose sacred origin as a gift of divine grace cannot be permanently evacuated into pure nature, secular reason, or digital calculations. With this centering of cybernetics upon hyperpersonality, all the circuits of calculative reason are gathered together into the mystical

138 Ibid., 287.
139 Ibid., 288.
140 De Chardin, *The Future of Man*, 168.
141 Ibid., 175.

body of Christ, where, in the continual remembrance of the Church, the sacraments mystically sustain this technical recreation of the world with the aid of digital computers.

4. The Hyperpersonal Center of Cybernetics

The fault of secular cybernetics is that it has neglected to answer the theological question of "who controls cybernetic systems?" Following Norbert Wiener and Martin Heidegger, it has regarded this question as unanswerable, either because the controlling agency of cybernetics has been dispersed into networks of external action, or because the singular unity of self-consciousness has been held behind the self and cast beyond the sky. In the abeyance of a *divine pilot*, cybernetic theory has tended to valorize the purported autonomy of the digital computer as the promethean engine of its own perpetual motion. And philosophical responses among the heirs of Heidegger have tended to cynically reappropriate chains of autopoetic technics, while unwittingly remaining captive to the leviathan system of cybernetic administration. In each movement, however, the secular autonomy of cybernetics has yet to be radically challenged: for although it is acknowledged that the first-order cybernetics of machinic feedback loops unfolds into second and higher-order cybernetics, and that the transductive logic of individuation or epiphylogenesis involves their co-constitution, this absolute question of the cybernetic agent has so far been denied any theological answer. However, this line of absolute questioning has arisen again as a result of the culminating aporia of secular cybernetics after Heidegger: if cybernetics automates the enframing of being's disclosure of truth, its basic concept of *techne* must be questioned among its plural conditions of technics; yet, if technics is held to be unanalyzable into *episteme*, then no satisfactory answer can be forthcoming precisely because of the diremption of *techne* from *episteme* that has been decided in advance. This aporia–of dirempting and questioning technics beyond all answers–has fissured subsequent responses to the philosophical crisis of cybernetics.

As we have seen, Gilbert Simondon holds to an arguably inconsistent humanism, in which the *machine-man* is a central and essential node of cybernetic self-regulation. His advertised overcoming of human self-alienation in the abject objectivity of machines is more ultimately a movement that recycles in and for the autopoetic individuation of cybernetic systems themselves. Since, however, Simondon also affirms the centrifugal control

of cybernetics by humans, and this humanistic control is exercised by a uniquely human sense of the associated milieu, the question of the essence of technical objects must remain unanswerable, except as the human spirit can be reduced to a node of cybernetic puppetry. This reduction of the human spirit results in a semi-Arian subordination of the Spirit to an increasingly apotheosized cybernetic system, in which even the supposed central agency of human cybernetic control continues to be scripted in advance by digital computers. The idea of cybernetics thus supplants that of God as the unfathomable principle, not only of becoming individual, but of the structure of being that is ontology, and all knowledge of the world that can be gleaned through the clouded aperture of technical objects.

Bernard Stiegler then recalls technics as the most originary supplement. His departure from Heidegger is essentially Simondon's departure from Hegel: for, in contrast to Heidegger, technics is held as the essential supplement that shapes the horizon of temporality; and in contrast to Hegel, technics is held to escape from the dialectical sublation of the concept of mechanism into its self-determining individuation. Since, further, all supplement is technics, and all memory is stored in technics, the recollection of the eternal past in the primordial revelation of religion is but a false product of mnemo-technics. Revelation is reduced to individuation, in which the *transductive relation* of humans and technics is the process of becoming singular. The event is thus concurrent with the process of forgetting or suspending judgments (*epoche*). Stiegler thus ultimately renders the cybernetic grammar of the digital irreparable by Spirit, as, in its *epochal redoubling*, it repetitively suspends judgments, and this movement of infinite suspension accelerates towards a techno-eschatology of no return that permanently recapitulates the tragic fault of Epimetheus.[142]

Yuk Hui's dispersal of cosmotechnical universality into free particularity finally allows for its subsumption into a higher Catholic universal. He characterizes de Chardin's Christogenesis as "the universalization of the Noospheric technologies", and "the convergence of all brains to a Brain, or the creation of a superorganism".[143] Yet Hui refuses de Chardin's eschatological gnosis in the image of Christ, which authorizes knowledge of God as the Son knows the Father. For he contends that "Jesus Christ" is "another unknown", whose atonement is "creating a new plane of consis-

142 Stiegler, *Technics and Time, 2: Disorientation*, 11.

143 Yuk Hui, *Recursivity and Contingency* (London, UK: Rowman & Littlefield, 2019), 219.

tency", which, however, is only sustained by an act of faith rather than faith seeking understanding.[144] In subsuming this Christological mimesis under a Deleuzian plane of consistency, he paradoxically both immanentizes and pluralizes the face and ground of absolute knowing God as the Son knows the Father, and dirempts this radically immanent plane from God as its principal source. This diremption of the world from God effectively denies the participatory relation of mimetic reflection, such that, in a more tragic recapitulation of the failures of both Simondon and Stiegler, neither God nor technical objects can be scientifically known with systematic and absolute knowledge. Under the spell of techno-agnosticism, Hui refuses to follow de Chardin's path to through cosmotechnical evolution to the consummate union of all persons in the hyperpersonality of Christ. At the end as in the beginning, he remains caught in a Nietzschean refusal of Christian theology, which disallows, not only faith in God, but ultimately the hope of technics.

In response to the unasked questions of the secular, a Catholic and specifically Jesuit cybernetics can offer new answers. For, in a higher alternative to Descartes and Pascal, the Jesuits had carried to its fullest development a Catholic theological vision of cybernetics, in which contemplative prayer springs from the innermost depths of human personality, and the technical complexity of the objective world is destined to be consummated in Christ. In Erich Przywara, all thought and being are collected into a hyperbolic cone centered on the suspended tension of analogy. Since he renders the analogy of being as an abstract cybernetic machine, this speculative analogy recycles the world in reciprocating cybernetic feedback loops. Yet since, he concludes, Christ is the center of the concrete analogy of being, Przywara contra Heidegger conceives of a sovereign agency that both exceeds and enters into the cybernetic world of digital computers. In Henri de Lubac, the false opposition of supernature and nature, pure nature and pure reason, is theologically deconstructed into a paradoxically gifted source. Since, from Leibniz to Wiener, pure reason conceives of cybernetics as the study of mechanical feedback loops, and technics as the trace condition of its action, this theological deconstruction of pure secular reason also destroys the no less spurious autonomy of secular cybernetics. And since, for de Lubac, as for Augustine, the Son of God creates nature to be perfected by Christ in

144 Yuk Hui, *Art and Cosmotechnics* (Minneapolis, MN: University of Minnesota Press, 2021), 42.

grace, de Lubac ultimately assumes the higher destiny of cybernetics into the eschatological hope of Christianity at its finale.

In decisive contrast to the secular, Jesuit cybernetics elevates the controlling agency of cybernetics to the center of the hyperpersonality of Christ. Hyperpersonality is, for de Chardin, the elevation of the person beyond the conceivable boundaries of space, time, and all currently possible technical action to a higher plateau of free intellect and will. At the *Omega point* end of cosmic evolution, the outer progress of technical evolution coincides with the inner spiritual freedom of every human person. As Yuk Hui writes, the Noosphere "will englobe the geosphere and the biosphere and form a cybernetic feedback loop with the atmosphere", as it rarifies the elements of the world from earth to sky, and ultimately beyond all physical horizons, in an angelic elevation of matter to spirit, as ultimately to the cycling of all spirits to and from the higher center of hyperpersonality.[145] The Noosphere will, in this way, become a person, be born as a person, and, in its ever-new beginning, carry through cybernetic techniques all persons to the consummate fulfillment of their own distinct personality. The negative feedback loop of cybernetics will at the end be recognized as both an exterior objectification of reflection in mathematical and mechanical recursion, as well as a recycling of this very objectivity in and for subjectivity, which is that of the hyperpersonality of Christ the incarnate *Logos*. As the divine *Logos* is the creator of the world, its celestial mechanics, and of all cybernetic systems, Christ can again be called the divine pilot (*cybernetes*), whose surpassing charity governs all cybernetics.

5. Conclusion: Trinitarian Ontology of Computers

Beyond its secular pedigree, cybernetics can be studied for the higher purposes of theology. It gestures through the circuit of its reciprocating form to an absolute reflection that is carried from above to ascend in and from its creative source. When, however, the divine *Logos* is suspended by secular logic and physics, it strives instead to destroy and recreate the world in simulated reason. It had, in a recapitulation by Norbert Wiener of Gottfried Leibniz's *calculus ratiocinator*, conceived of a general science of the formal control of mechanical systems that could potentially automate and acceler-

145 Yuk Hui, *Machine and Sovereignty: For a Planetary Thinking* (Minneapolis, MN: University of Minnesota Press, 2024), 113.

ate the production of knowledge beyond all human comprehension. Yet it had, for this reason, also threatened the obsolescence of human freedom before the advance of an increasingly artificial and machinic intelligence. As this chapter has illustrated, it can, on the contrary, only be known as it mystically exceeds itself. For, in its reciprocating control of mechanical production, its reversal of entropy or *negenthropy* is sustained in passing by an extrinsic design and agency that controls its feedback according to its mechanical form. Since, further, even this mechanical form must adapt in response to the world, it assumes a higher intelligence, initially in the design of *first-order cybernetics*, but ultimately in the higher-order interventions of collective human and more than human control. This controlling agency of cybernetics must be pleromatic, as it ascends from mechanical feedback loops to human responses to heavenly and spiritual intelligences. It is precisely this pleromatic ascent that dissolves any particular cybernetic system that strives for completeness, even as, by this hyperbolic or hyper-negation, it can be assumed into the hyperbolic arcs of negative or apophatic grammar.

Cybernetics is, for this reason, more ultimately theological in its orientation towards a transcendent source of its formal design and direction. Its basic ideas–of mechanism, and of the objective syllogism–can be analyzed across the categories into the dialectic of the divine *Logos*. It can, as Yuk Hui has argued, be conceived under many alternative cosmotechnical horizons, as its primordial origins are narrated as scenes of myth and revelation. Yet, among these competing theological visions, it is most of all distinguished by the Catholic and specifically the Jesuit tradition, which, in Przywara, collects the world into a cybernetic form of the analogy of being, in de Lubac, deconstructs the false opposition of the secular, and, in de Chardin, elevates the cosmic evolution of technics into a mystagogic convergence upon the hyperpersonality of Christ. The cumulative problematics of post-Heideggerian cybernetics–of the assimilation of man into the machine, of unrecuperable tragedy, and of cosmotechnical pluralism converging on techno-agnosticism–can only be theologically overcome by pursuing this dialectic of cosmotechnics to analyse technics into cyberneticism, and through its use, to know all things at the finale of cosmotechnical evolution. The concluding aporia of secular cybernetics can, in this same way, be answered by recollecting in Christ a divine and human controlling agency, which, by his sacramental gift of himself in the Church, is activated through all the channels of creative human freedom across technics and poetics. In the far distant future, the spiritual control of cybernetic systems in

computationally assembled matter and energy will ascend to the rank of the angels, and converge at the end upon the blessed face of those who remained in God's love from the beginning. The circuits of cybernetics will then be assumed into the center of a higher corporate personality, the hyperpersonality of Christ triumphant, who, in giving himself, preserves the distinct individuality of all human persons.

Trinitarian Ontology is this trinitarian style of ontology that elevates the basic ideas of cybernetics to the hyperpersonality of Christ. As Klaus Hemmerle had first suggested, it designates a post-Analytic and post-Continental vision of the structure of being or ontology that share in the essential relations of the Holy Trinity.[146] In contrast to Martin Heidegger, it asks the question of faith in God as Trinity before the question of being (*Seinsfrage*). In answer to this question, it recalls the radical emptying of God from the absolute precedence of the universal prior to the particular, of the gift of love that is laterally shared, and of a world in which the simplest elements of being are dramatically shaped by the Christian story of salvation. The first general-purpose digital computer, Charles Babbage's *Analytical Engine*, had been conceived before it had been constructed, had been reciprocally calculated to virtually produce all machinic forms of calculative reason, and had virtually produced one particular in opposition to the next at the interstices of every inscription.[147] Yet, as I have argued[148], this rupture of the digital can also be repaired by a dialectical analysis of this opposed particularity in a series of objective syllogisms, cycling in and from the divine *Logos*, and communicated by Christ in creation. Since the cybernetic grammar of the digital can be analyzed into the dialectic of the *Logos*, this rupture of the digital can be repaired by a dialectical analysis, and yet, at this abolition, also rendered differently in the essential proportions of the transcendent signification of being, that is, in a digital analogy of being.[149] Although previously suggested by Przywara's cybernetic form of analogy,

146 Klaus Hemmerle, *Theses Towards a Trinitarian Ontology*, trans. Stephen Churchyard (Brooklyn, NY: Angelico Press, 2020). See John Milbank, Ryan Haecker, and Jonathan Lyonhart (eds.), *New Trinitarian Ontologies*, Vol. 1, Conference Proceedings of the New Trinitarian Ontologies Conference and Symposium (Eugene, OR: Cascade, 2025).

147 Ryan Haecker, "Sacramental Engines: The Trinitarian Ontology of Computers in Charles Babbage's Analytical Engine", *Religions*, Vol. 13, Iss. 4 (2022): 757–782, esp. 760–1; "Via Digitalis: From the Postdigital to the Hyperdigital", *Postdigital Science and Education*, Vol. 5, Iss. 3, October (2023), 823–850, esp. 840.

148 Haecker, "Sacramental Engines", 759, 770.

149 Ibid., 771.

this digital analogy further advances toelevate the binary calculations of electro-mechanical circuit gates on hyperbolic arcs of transcendent ascent in and from their divine creative source. And yet, in holding this digital analogy in the domain of cyberneticism, it also promises to correct Przywara's threatened collapse of the analogy of being into cybernetic univocity.

Once it is assumed into the analogy of being, the cybernetic grammar of the digital becomes fully intertwined with scriptural hermeneutics. As Walter Ong had observed, there are two movements "dominating the development of world culture today": digitization and hermeneutics.[150] He defines *digitization* as the "division into numerically distinct units and to operations carried on by means of such units."[151] While digitization is fractionalized by dividing wholes into fractional parts, hermeneutics reflects upon the universal forms that inform the meaning of the parts in a "counter-fractioning", which "relate[s] everything to everything else", in a "unitive truth."[152] Since, however, it shows a more concentrated meaning of hermeneutics, the response of digitization to interpretive questions opens new plateaus of hermeneutics, and new avenues of digitization–even as, at its culmination in the digital computer, the total digitization of the world continuously undermines the ground of all stable hermeneutical frames.[153] Ong observes how in "each successive application of a new technology" from print to electronics, "language moves language towards greater and greater digitization", which he again defines as a "reduction of everything to numerically distinct units"[154], even as he reiterates the opposition of the hermeneutical and the digital that the "unification" of hermeneutics "must be achieved within the human sensibility, not within a machine."[155] It lacks this "living silence" because it lacks "unconscious", "embedded[ness]", and "biological substructures", that is, an organic life oriented towards infinity.[156]

The hyperdigital is, I propose, this higher theological grammar of the digital. As in Pseudo-Dionysius' *Mystical Theology*, the prefix *hyper-* indi-

150 Walter Ong, *Language as Hermeneutic, A Primer on the Word and Digitization*, eds. Thomas D. Zlatic and Sara van Den Berg (Ithaca and London: Cornell University Press, 2017), 11.
151 Ibid., 12.
152 Ibid., 18.
153 Ibid., 83.
154 Ibid., 18.
155 Ibid., 93.
156 Ibid.

cates a transcendent signification in and beyond the digital. It is distinguished by a leap of absolute reflection over the calculation in writing of digital computers. This leap is expressed in the grammar of a *hyperbole*, that is, an excess of signification, in which cybernetic judgments both exceed beyond and enter in to animate the free creation and use of digital techniques. Following the *way of negation* (*via negativa*) of Pseudo-Dionysius the Areopagite, the hyperbola indicated by the prefix *hyper-* is both a transcendent excess beyond the univocal sphere of being, and an accelerating entrance that creates in speaking of the hierarchy of spiritually animated ideas.[157] This author describes, in the *Divine Names*, how, in the effort to speak of the "superessential essence" (*hyperousia*) of God "beyond being" (*epekeina tês ousias*), this way of speaking both exceeds and enters in to create things "which are intellectually discerned", "belong to the senses", and are counted among the "bodies" of the material world.[158] The *post* that passes after the digital in the *postdigital* is thus nothing but the *hyper* that leaps beyond the digital in the *hyperdigital*: for, in transcendently signifying beyond the binary oscillation of the digital to the divine *Logos* at its original source, it reflects from the rupture of the digital, determines its transcription, and accelerates the production of all digital computation and communication.[159] The way that, in the digital, we calculate in writing, can, in the postdigital, be collected from this circuit of reflections, and

157 See Ryan Haecker, "Gothic Fireflies: The Trinitarian Grammar of Analogy in Pseudo-Dionysius the Areopagite", ed. Sam Bennett, *Analogia*, Special Issue, Dionysius the Areopagite, Vol. 18 (2024): 33–99, esp. 44–5.

158 Pseudo-Dionysius the Areopagite, *The Divine Names*, In: *Dionysius the Areopagite: On the Divine Names and the Mystical Theology*, trans. Clarence Edwin Rolt (Grand Rapids, MI: Christian Classics Ethereal Library / London: SPCK, 1920), 1.1., 4.8–9., 53, 98–9; cf. Plato, *Republic*, 6.509b8.

159 See Negroponte, Nicholas, "Beyond Digital", *Wired*, 12 (1998) http://web.media.mit.edu/~nicholas/Wired/WIRED6-12.html (August 25, 2025); Kim Cascone, "The Aesthetics of Failure: 'Post-Digital' Tendencies in Contemporary Computer Music", *Computer Music Journa*l, Vol. 24, Iss. 4 (2000): 12–18; Kim Cascone and Petar Jandrić, "The Failure of Failure: Postdigital Aesthetics Against Techno-Mystification", Postdigital Science and Education, Vol. 3, Iss. 2 (2021): 566–574; Florian Cramer and Petar Jandrić, "Postdigital: A Term That Sucks but Is Useful", *Postdigital Science and Education*, Vol. 3, Iss. 3 (2021): 966–989; Florian Cramer, "What is 'Post-Digital'?", in David M. Berry and Michael Dieter (eds.), *Postdigital Aesthetics: Art, Computation and Design* (New York, NY: Palgrave Macmillan, 2015), 12–26; Pepperell, Robert, and Michael Punt, *The Postdigital Membrane: Imagination, Technology and Desire* (Bristol: Intellect, 2000). For a theological critique of the 'postidigital', see, Ryan Haecker, "Via Digitalis: From the Postdigital to the Hyperdigital", *Postdigital Science and Education*, Vol. 5 (2023): 823–850.

spoken of as plentifully given in the hyperbolic cybernetic grammar of the hyperdigital. The economic procession of this concrete singular universal of cyberneticism and its grammar can thus be argued to immanently reflect the Christian and trinitarian procession from God to the Son, the kenotic emptying of the *Logos* in Christ, and, in the sacrifice of the Cross, the repair and rupture of the digital that is communicated across the categories of sacramental media.[160] The essential ground of the digital computer is thus not simply given, but is rather a free gift of Christ, who, in the sacraments, and supremely in the eucharist, shows how he radically enters into so as to save from entropic annihilation the spirits of mechanically automated calculation and writing.

Secular cybernetics has failed to answer the fundamental theological question of cybernetics: who controls cybernetic systems? The answer to this question must, as this essay has begun to illustrate, be not only mythical, but revelatory, and only so as it is explored by religious traditions that answer to the fundamental questions of cybernetics. Although such a Jesuit alternative has never yet been acknowledged, this theoretical reconstruction has opened the path for a recognition of the hyperpersonality of cosmotechnics. The release of cybernetics into cosmotechnical pluralism can again be assumed into a higher Catholic universal, which, however, preserves from colonial erasure the distinctiveness of all human culture and personality. Beyond the secular frame of computer science, the primordial idea of the computer can be shown to absolutely depend for its essential operations upon the first principles of a Christian and trinitarian ontology: for the idea of mechanism absolutely proceeds the virtual production of machinic forms in the cybernetic grammar of the digital, this idea kenotically empties itself from this absolute precedence of the universal to be infinitely decomposed and reciprocally calculated across the intelligible terrain of mathematics and mechanics, and this dialectical circuit of ideas can be shared as it is communicated from one angelic spirit to the next. The perichoretic gift of the divine hypostases from light to light is then reflected in the economy of creation, as of digital computers. The procession of the Son from the Father through the Spirit is the absolute difference of God from God that is reflected in to be given from the creative ground of the divine *Logos*, first in the angelic creation of the eternal ideas, but finally in the artificial recreation of the world, in which the scripted words that com-

160 See Ryan Haecker, "Sacramental Engines: The Trinitarian Ontology of Computers in Charles Babbage's Analytical Engine", *Religions* 13, no. 8 (2022): 757.

mand machines are spiritually animated by human and more than human intelligences. This higher spiritual intelligence that controls cybernetics is both more and less than human, as it descends from the divine Intellect down the angelic hierarchy, and speaks in writing through the machinic action of technics. Against the hegemony of secular reason, technics can at last be conceived as a trace condition of the angel of cyberneticism, who carries the cybernetic grammar of the digital in a spiraling ascent ever progressing in and from this absolute and personal center.

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