

# A MODERN GENEALOGY OF THE METAPHYSICS OF INFORMATION

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“[T]he ultimate outcome of the project of mastering nature is not simply to humanize the world but more deeply to remove any reference to transcendence from the horizon of history.”



1.

On the occasion of a recent lecture delivered at the Catholic University of the Sacred Heart of Milan, the philosopher Luciano Floridi concluded his presentation, “Digital Times: Toward the Construction of a Responsible Future,” with the following two questions: “Will the digital age expand or shrink our horizon of transcendence? Will the digital age make a fully immanent semantics possible (an atheist humanism)?” He explained further, “By this I mean the capacity to give sense and meaning to life entirely within human history, without flaws, without doubts, without alternatives, without saying, ‘But maybe. . . .’ The total, ironclad closure of an immanent semantics. Will the future be like this or not?”<sup>1</sup> It is

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1. Luciano Floridi, “Tempi digitali: per la costruzione di un futuro re-

unclear to me whether Floridi sees this hypothetical outcome as a hell or a heaven.

Although I am in no position to answer the two questions, Floridi challenges us with a problem worthy of the greatest attention. Hegel and Heidegger have taught us that each age is characterized by a specific, world-shaping metaphysics, and that the role of philosophy is to try to bring such a metaphysics into the clarity of thought.<sup>2</sup> One does not have to abide by the historicist implications of their view to understand that their idea is insightful and heuristically powerful. What is, then, the metaphysics of our time? It seems almost impossible to deny that our age is, as Floridi suggests, a digital age. Speaking of a digital age means appealing to the notion of “information” as fundamental. Thus, ours is the age of the metaphysics of information.<sup>3</sup> According to MIT engineer and physicist Seth Lloyd, the universe is an information-computing machine.<sup>4</sup> Mathematician, philosopher, and theologian William A. Dembski has gone so far as to propose a metaphysics and theology of information.<sup>5</sup> Many today are

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sponsabile” (lecture, Università Cattolica del Sacro Cuore, Milan, September 30, 2021). Translation mine. Floridi makes a similar point in *The Philosophy of Information* (New York: Oxford University Press, 2011).

2. G. W. F. Hegel, *Elements of the Philosophy of Right* (Cambridge: Cambridge University Press, 1991), 21; Martin Heidegger, “The Age of the World Picture,” in *Off the Beaten Track* (Cambridge: Cambridge University Press, 2002), 57.

3. Floridi distinguishes between the digital and the informational. He proposes what he calls “informational structural ontology” but claims, by relying on a sort of Kantian representationalism, that the distinction between “digital” and “analogue” belongs to the domain of representation (i.e., modelization) and not to things in themselves. See Luciano Floridi, “A Defense of Informational Structural Realism,” *Synthese* 161, no. 2 (2007): 219–53; “Against Digital Ontology,” *Synthese* 168, no. 1 (2009): 151–78. While interesting, such technicality is not relevant to the argument developed in this essay, for the simple reason that I understand “digital” in a broader sense—not as the contrary of “analogue” (in the sense that “discrete” is contrary to “continuous”), as Floridi does, but as the technoindustrial point of view, grounded in the idea of information, from which the world is mostly conceptualized today.

4. Seth Lloyd, “The Computational Universe,” in Paul Davies and Niels H. Gregersen, eds., *Information and the Nature of Reality: From Physics to Metaphysics* (New York: Cambridge University Press, 2010), 92–103.

5. William A. Dembski, *Being as Communion: A Metaphysics of Information* (Burlington, VT: Ashgate, 2014).

following in their footsteps.<sup>6</sup> How should one understand these proposals vis-à-vis Floridi's questions?

Since prophecy about the future is unavailable, a way to shed light on the problem might be to trace a philosophical genealogy of the contemporary metaphysics of information. What I aim to show in this essay, though only inchoatively and by way of hypothesis, is that the metaphysics of information is the most advanced result of the so-called "modern project."<sup>7</sup> If the argument proved to be sound, it would introduce an important element that Floridi's recounting and questioning of the digital era does not take into account: the metaphysics of information itself would be the most advanced stage of that modern project which is in its essence an attempt to resolve history into pure immanence. Such a genealogy of the metaphysics of information could show that the realization of a fully immanent semantics does not simply lie ahead as one of the many possible outcomes of the digital age but rather constitutes the propelling force and end goal of a process of immanentization that started some centuries ago and of which the metaphysics of information is nothing but the contemporary outpost. Although the future is not deterministically necessitated by our past and present, a genealogical work of this type could give us sufficient reasons, if not to despair, at least to proceed forward with the greatest caution.

My approach to the problem of information is philosophical and cultural, not scientific. As a consequence, the genealogy attempted here is not a history of science but a history of metaphysics and philosophical critique of culture. I leave to other, more competent people the work of tracing an accurate account of the scientific history of the digital. However, since Floridi's question about the possibility of a purely immanentist semantics is hardly a scientific question, and since information

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6. See, e.g., Davies, *Information and the Nature of Reality*; Caleb Scharf, *The Ascent of Information: Books, Bits, Genes, Machines, and Life's Unending Algorithm* (New York: Riverhead Books, 2021); Seth Lloyd, *Programming the Universe: A Quantum Computer Scientist Takes on the Cosmos* (New York: Alfred A. Knopf, 2006).

7. Jürgen Habermas, "Modernity: An Unfinished Project," in Maurizio Passerin d'Entrèves and Seyla Benhabib, eds., *Habermas and the Unfinished Project of Modernity: Critical Essays on The Philosophical Discourse of Modernity* (Cambridge, MA: MIT Press, 1997), 38–55.

today is hardly the prerogative of a few technology specialists, I am less worried about the fact that the scientific reader will almost inevitably find the following pages at best unpalatable and at worst an essay in scientific illiteracy.

2.

The argument sketched in this essay relies on four premises. First, modernity cannot be reduced to the modern project, and modern science cannot be reduced to the scientific, promethean attempt to violate and transform nature. What I argue in these pages relates to the modern project understood as the attempt to establish what Francis Bacon called the “kingdom of man.”<sup>8</sup>

Second, when I say that the metaphysics of information provides the most coherent and advanced framework for the realization of the immanentist goal of the modern project, I am not claiming that this is a historical necessity. For one, the Christian point of view on history (which is the point of view I assume) should never forget, first, the effectiveness of “chance,” that is, grace; second, the reality of human freedom; and third—something that is often forgotten even when the first two points are stressed—the fact that history is not ultimately decided by the masses, by the powerful, or by the mainstream decisions of a certain age, but by the “little flock” (Lk 12:32), the few individuals who are truly “free,” the people of good will and the poor in spirit.<sup>9</sup> Nevertheless, what the metaphysics of an age provides is, to use an Aristotelian category, the real potentiality for a certain outcome: the potentiality would not be real, would not be readily available, if the background metaphysics had not been actual, had not been in place; nevertheless, insofar as it is a potentiality, it is neither an actuality nor a necessity. It is neither an abstract, remote possibility, nor an actual necessity. Rather, as I have explained, it is a real potentiality.

Third, one should appreciate the fundamental principle that there is an essential relation between quantity and quality

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8. See Rémi Brague, *The Kingdom of Man: Genesis and Failure of the Modern Project* (Notre Dame: University of Notre Dame Press, 2018), 68–70.

9. Cf. Joseph Ratzinger, *Introduction to Christianity* (San Francisco: Ignatius Press, 2004), 19–20.

when it comes to modern technology, its contemporary digital variant, and its meaning for human life and our view of reality. As Hegel points out, quantitative changes determine changes in quality once they cross a certain threshold or measure.<sup>10</sup> It seems that in order to assess adequately the ethical and metaphysical implications of modern technology we have to take this principle into account. In other words, the essential, qualitative difference between, on the one hand, a world made of things recognized in their nature, which nevertheless contains some useful technological resources, and, on the other hand, a technological globe in which the once-natural is conceived as a primordial variation of the digital—this qualitative shift, I say, is determined by the omnipresence of technological mediation in our engagement with reality, a presence testifying that a certain quantitative threshold has been crossed. It is in the essence of technology to bring about the qualitative transformation of the world, whereby “being” becomes “information,” through the indefinite and quantitatively inordinate multiplication of its technological products.<sup>11</sup>

Finally, the genealogy I propose is the sketch of an interpretative hypothesis rather than a conclusive argument, which would require a more detailed and patient reconstruction. Nevertheless, I do not deem such a sketched interpretation to be without value, insofar as I believe that when it comes to philosophical-historical reconstructions of present phenomena, orienting hypotheses are all we have.

### 3.

As I have mentioned, while modernity is a broad, complex, and multifaceted phenomenon, what has been called the “modern

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10. G. W. F. Hegel, *Science of Logic*, ed. and trans. George Di Giovanni (New York: Cambridge University Press, 2010), 288–91.

11. Cf. Hegel’s insightful comment in *Science of Logic*, 291: “Quantum, when it is taken as indifferent limit, is the side from which an existence is unsuspectingly attacked and laid low. It is the *cunning* of the concept that it would seize on an existence from this side where its quality does not seem to come into play—and it does it so well that the aggrandizement of a State or of a patrimony, etc., which will bring about the misfortune of the State or the owner, even appears at first to be their good fortune.”

project” is defined by a clear goal. It implies the realization of a new anthropology and a new sense of history. Eric Voegelin speaks of the modern project as the “immanentization of the eschaton.”<sup>12</sup> This project is realized, first and foremost, through a rejection of transcendence, that is, through the rejection of the openness to transcendence typical of the human psychology initiated by Plato and fulfilled in Christianity. For Voegelin, the essential and perennial contribution of Socratic and Platonic philosophy is the discovery of the human soul as that which grants a structural openness to transcendence from the depth of man’s natural, political, and historical immanence—the soul as the “sensorium of transcendence”<sup>13</sup>—and therefore the reliance on the soul as the stable possibility for a critical point of view on any political power that claimed to be absolute and ultimate. What is crucial in Voegelin’s reading is the idea that the modern project of the immanentization of the eschaton in history must happen by discrediting the sense of openness to transcendence present in the human being. Friedrich Nietzsche seems to confirm Voegelin’s reading. He explains that, to do away with the Platonic and Christian identity of the West, he must find a solution to the idea that the human being is essentially a “venerating animal” with a “need” for God.<sup>14</sup>

How can this be done? How has modernity attempted to bring about such an anthropological transformation? The general idea here, which is the main premise to my argument regarding the modern genealogy of the metaphysics of information, is that modernity has attempted two strategies in order to attempt to immanentize the human soul and the meaning of history. One is the way of the radical Enlightenment, which claims that we are just matter; that there is no such thing as a “desire for God,” and that whatever we call desire for God, as a transcendental reality, is just illusion, superstition, projection, etc. Schematically, this is the line that goes from d’Holbach and Diderot to Feuerbach, with modern anticipations in Hobbes and Hume and late

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12. See Eric Voegelin, *The New Science of Politics: An Introduction* (Chicago: The University of Chicago Press, 1987), 118ff.

13. *Ibid.*, 75.

14. Friedrich Nietzsche, *The Gay Science* (Cambridge, UK: Cambridge University Press, 2001), 204n346.

epigones in the many contemporary advocates of biologism, naturalism, and so on. Here, transcendence is abolished through a complete discrediting of the so-called desire for God, which is reduced to illusion and superstition.<sup>15</sup>

The other way is that of Romanticism: what we call “desire for God” is neither an illusion or superstition nor a pure nothing; rather, it is the voice of a purely immanent, natural, or historical divinity speaking through us and inviting us to recognize what we are: the divine self-consciousness of the divine. The lineage here would go roughly from Goethe to Schelling, von Baader, and Hegel, with obvious anticipations in premodern and modern forms of pantheistic naturalism and contemporary manifestations in quasi-spiritualistic versions of ecologism. In Romanticism, then, the desire for God is not discredited,<sup>16</sup> as in radical Enlightenment, but is given a radically immanentist interpretation.<sup>17</sup>

In both cases, the gap between history and transcendence, man and God, representation and truth, is closed; what we are left with is pure immanence. Once again, Nietzsche puts it correctly: the process of the immanentization of the eschaton is

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15. See, e.g., Philipp Blom, *A Wicked Company: The Forgotten Radicalism of the European Enlightenment* (New York: Basic Books, 2011), xi: “Instead of sacrificing their desires to the vain hope of reward in the afterlife, they [the Enlightenment radicals] would be able to walk freely, to understand their place in the universe as intelligent machines of flesh and blood. . . . Desire, erotic and otherwise, would make their world beautiful and rich. . . . The Enlightenment radicals saw it as their duty to convince their contemporaries that there is no life after death, no God and no providence, no divine plan, but only a physical world of life and death and struggle to survive—a world of ignorant necessity and without higher meaning, into which kindness and lust can inject a fleeting beauty.” Note how the denial of the desire for God determines a transformation of desire into a merely immanent dynamic, “erotic and otherwise.”

16. See, e.g., Jochen Schulte-Sasse, ed., “General Introduction” to *In Theory as Practice: A Critical Anthology of Early Romantic Writings* (Minneapolis: University of Minnesota Press, 1997), 22: “The Romantics constantly and persistently speak of a desire for the infinite.”

17. The two trends of modernity here discussed correspond roughly to the two forms of “rationalism” identified by Augusto Del Noce: radical Enlightenment is the rationalism of the “death of God,” while Romanticism and idealism are the rationalism of the “purification of the idea of God in divine immanence.” See Augusto Del Noce, “The Idea of Modernity,” in *The Crisis of Modernity* (Montreal: McGill-Queen’s University Press, 2014), 3–18.

ultimately realized in what he calls the “eternal return.”<sup>18</sup> In fact, Nietzsche’s eternal return simply means pure immanence: the metaphor of the cycle should be read as pure self-referentiality. That is, there is no gap between the meaning that the present moment allows for and what my soul aspires to; all transcendence is denied; I want what has been, because both my desire and what has been are closed in on themselves; immanence is the ultimate horizon of life and history.

The modern materialization of man’s soul initiated by the radical Enlightenment—at first within a mechanistic framework, but then conducted more and more within a nonmechanistic understanding of matter<sup>19</sup>—serving the project of the mastery of nature for the betterment of man’s condition, and the spiritualization or divinization of nature performed by Romanticism, are both at the service of history’s emancipation from transcendence. This emancipation must occur critically, as I have just said, as an emancipation of history from what Nietzsche calls the “venerating animal” or what the master of his youth, Arthur Schopenhauer, calls the “*animal metaphysicum*.”<sup>20</sup> In the entire universe, man is the open window to the transcendent. In discussing secularity, Charles Taylor has focused precisely on the modern undermining of the background “conditions of belief” in the transcendent,<sup>21</sup> the chief one of which is the erosion of trust in the transcendent-oriented psychology of man.

#### 4.

The reading I am proposing allows us to overcome the limitations of those critical stances on the “modern project” that, first, see only the radical Enlightenment side of the process, and

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18. Nietzsche, *The Gay Science*, 194–95n341.

19. Cf. Stephen Gaukroger, *The Natural and the Human: Science and the Shaping of Modernity: 1739–1841* (Oxford: Oxford University Press, 2016), chap. 2, pp. 70–120.

20. Arthur Schopenhauer, *The World as Will and Idea*, vol. 2 (Boston: Ticknor and Company, 1887), 359.

21. Charles Taylor, *A Secular Age* (Cambridge, MA: Belknap Press, 2007), pt. 5.



second, do not make explicit that the ultimate outcome of the project of mastering nature is not simply to humanize the world but more deeply to remove any reference to transcendence from the horizon of history.

On the one hand, the modern movement of mastery of nature by man is accompanied by a gradual and progressive identification of man as a part of a “disenchanted” nature, in such a way that the mastery ends up being addressed also, if not primarily, to man (radical Enlightenment naturalism). In this sense, not only man, as a part of nature, is reconceptualized as having a purely immanent destination (i.e., no desire for God, realization of heaven on earth, etc.), but, in case he had any stubborn illusions about his transcendent destination, he can also be designed in a new way, the “new man” without God (through a scientistic education; through ideological indoctrination; today, perhaps through scientific-technological transformation). On the other hand, the new Romantic concept of nature and history, born as a reaction to the rationalism of radical Enlightenment, reduces God to pure immanence in such a way that the desire for God or the “infinite,” though acknowledged and even promoted, is nevertheless reinterpreted within a purely immanent horizon (Romantic religion).<sup>22</sup>

5.

What we have to understand now—and this point is crucial for the genealogy of the metaphysics of information that I am attempting here—is that the two sides of the modern project generated a metaphysical tension that they could not solve.<sup>23</sup> In fact, the modern project—not just the conquering of nature, but the

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22. The treatment here abstracts from the problem of how such “desire for the infinite” is in fact thematized differently throughout Romanticism: whether reconciliation with the infinite is actually possible or whether it is only longed for and forever asymptotically approximated; whether a teleologically oriented “lack” is the best model for understanding desire, or rather “excess,” “expansion” toward radical novelty, and revolutionary “productivity” should be preferred, etc. What matters is that in all cases the desire for the infinite is taken seriously and interpreted immanentistically.

23. This point is rarely stressed, if stressed at all. A notable exception to the norm is Charles Taylor, *Sources of the Self* (Cambridge, MA: Harvard University Press, 1989), 383–85.

abolishment of transcendence through the weakening of the psychology of man's desire for the transcendent, which is the broader process within which the latter is also contained—produced these two tenets, clearly in tension with each other: on the one hand, the “materialization” of man as part of a mechanized or organic but in all cases “disenchanted” nature; on the other hand, the “divinization” of nature and history having man as its most conspicuous part. A sort of exceptionality is still granted to man in both cases, but within a framework of complete immanence. (Incidentally, this is the victorious tendency in modernity that decreed the defeat of the opposite tendency about the mutual irreducibility of man and nature represented in the line that goes from Descartes to Kant.) In other words, with both radical Enlightenment and Romanticism, the modern project was pursued with thoroughness, but at the price of a contradictory metaphysics: materialism, on the one hand, and spiritualism, on the other.

As Rémi Brague has demonstrated, the first view tends to represent nature as raw, purely passive material available for technological transformation and manipulation, with man being in the position of both the subject of the enterprise but also the object of it once he has been reduced to a “part” of nature.<sup>24</sup> This tendency sees its birth in the works of Bacon and, to a lesser extent, of Descartes, and reaches its most rigorous formulation with Boyle, although the process did not stop with him.<sup>25</sup>

The second view, on the contrary, tends to depict nature as an organic and divine vitality to which man must reunite himself and of which man must become the interpreter and spokesman by being immersed and getting lost in it.<sup>26</sup> This tendency, which is already conspicuous in the Renaissance, cuts across the various forms of modern pantheism; it reaches its highest metaphysical expressions

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24. Brague, *The Kingdom of Man*, 96–97. The political counterpart of this view of nature is represented by Niccolò Machiavelli, at least according to Leo Strauss's interpretation: “The Three Waves of Modernity,” in *Introduction to Political Philosophy: Ten Essays by Leo Strauss*, ed. Hilail Gildin (Detroit, MI: Wayne State University Press, 1989), 84–88.

25. Brague, *The Kingdom of Man*, 97–98.

26. Cf. Frederick C. Baiser, *The Romantic Imperative: The Concept of Early German Romanticism* (Cambridge: Harvard University Press, 2003), 33: “A striving toward wholeness, a longing for completion, and the idea of organic totality have often been said to be characteristic of *Romantik*.”

in some figures in Romantic philosophy and German idealism and some of its most popular manifestations with the American transcendentalists. For Hegel, human history rather than nature is the place of the unfolding and self-revelation of the divine, but in a way that is coherent with the immanentist framework of Romantic religion. An important figure to probe here would be Johann Gottfried Herder, not only because of his responsibility in performing the “anthropological turn” of Enlightenment philosophy but also because his philosophical outlook can be characterized, as has been shown, by two complementary movements: the “naturalization” of the spiritual and the “spiritualization” of the natural.<sup>27</sup> Though complementary, these two movements, as I have said, are also in a state of mutual tension, one which is never fully solved.

How could the project of modernity progress despite the metaphysical tension or, one might even say, contradiction, over which its course was laid? One could propose at least three reasons. First, the tension was handled, at the practical level, thanks to the exhilarating successes of science and technology, which left the divinization of nature to artists, and, later, thanks to the praxistic and anti-intellectualistic tendencies in philosophy, above all to Marxism and other forms of post-Romantic irrationalism, which were not concerned about overcoming the metaphysical tensions of modernity theoretically.

Second, at the theoretical level, both radical Enlightenment and Romanticism were sustained for the most part by an optimistic outlook on life, characteristically represented by the idea of scientific progress, for the former, and by the idea of an aesthetic-poetic reconciliation between man and nature or of a philosophical reconciliation between thought and reality through history, for the latter. This optimism energized and motivated action and production beyond any metaphysical impasse and remains in the idea of progress to this day.<sup>28</sup>

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27. Cf. Marion Heinz, “Grundzüge von Herders Psychologie. ‘Uebers Erkennen und Empfinden der menschlichen Seele’ (1774),” in Wulf Koepke, ed., *Johann Gottfried Herder: Academic Disciplines of Knowledge and the Pursuit of Knowledge* (Columbia, SC: Camden House, 1996), 145, quoted in Gaukroger, *The Natural and the Human*, 200.

28. This does not mean that there were no seeds of pessimism. Cf. Frederick C. Beiser, *Weltschmerz: Pessimism in German Philosophy, 1869–1900* (Oxford: Oxford University Press, 2016), 37–38.

Finally, the tension was eased at the conceptual level by the common subterranean goal of both radical Enlightenment and Romanticism—immanentizing history by undermining more and more the trust in the Platonic and Christian psychology of openness to the transcendent. More precisely, the two strategies can be both seen as ways to “liberate” nature: in radical Enlightenment, liberating nature meant to show that man is part of nature and therefore he needed to pursue happiness within a purely natural, immanent frame. Thus, he needed to liberate himself from anything that is allegedly nonnatural and pathological, first and foremost the psychology of the transcendent. In Romanticism, liberating nature meant liberating the divine dormant in reality by awakening man to the sense of the divine in the world—both nature and history—reinterpreting therefore the psychology of the transcendent in eminently immanentist terms. In both cases, the project is one of closing history to transcendence by way of a liberation of nature in man. Nevertheless, the tension remained at the metaphysical level between the two different meanings of “nature” at work in radical Enlightenment and Romanticism—and, I believe, the tension remained until the advent of the age of information.<sup>29</sup>

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29. According to Norman O. Brown’s Freudian interpretation of modernity, mechanism and organicism (one might say, Enlightenment and Romanticism) are two irreconcilable forms of neurotic sublimation. See his *Life Against Death: The Psychoanalytical Meaning of History* (Hanover, NH: Wesleyan University Press, 1985), 316–17. It is not necessary to accept Freud’s and Brown’s naturalism to appreciate the profundity of this insight. Rather, based on the psychoanalytic contribution to a philosophy of history, one could wonder whether the age of information, which, as we shall see, overcomes the tension between mechanism and organicism, could be interpreted as the historical crystallization of the stubbornness of repression and neurosis, which in defiance of perceived “metaphysical contradictions” simply finds a new creative way to perpetuate itself. If the “immanentization of the eschaton” can be considered the conscious final cause of the project of modernity, the perpetuation of repression and neurosis, in the specific forms of mechanism, organicism, and now information, might be considered the subconscious efficient cause of the same project. Such a hypothesis can be at least entertained without fearing the need to succumb to the reductionist temptation of annihilating the ideal final cause into the energetic efficient cause—in short, without turning human history into mere neurosis. There is of course an essential difference between acknowledging that human history is almost inevitably neurotic and saying that human history is neurosis.

## 6.

As an introduction to how the world came to be dominated by the notion of information, one can rely on the interesting reconstruction provided by James Gleick.<sup>30</sup> Drawing from that study, I would like to focus only on three nontechnical points, which should suffice to provide the context for my argument. First, the idea of information, introduced by Claude Shannon, the “father” of information theory, in the context of his work on the mathematical theory of communication (MTC), has gradually risen to a metaphysical concept, becoming the true meaning of what “being” is in all its multifaceted manifestations.

Second, this transformation of “being” into information makes sense only if we understand that this is the last product of the scientific outlook on the world, one that started with the modern scientific revolution and tends to reduce reality to what can be quantified and measured.

Third, the accumulation of information based on the quantitative measurement of reality is made possible by and is instrumental to the digital revolution. Without the digital and its “bit” there would be no “data,” and therefore no information proper.<sup>31</sup> That is why, contrary to what some information enthusiasts claim—for instance, that “the concept of information . . . is Aristotle *redivivus*, the concept of matter and form united in every object of this world”<sup>32</sup>—the information of the digital age is not the same as the Aristotelian-Thomistic “form,” insofar as the

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30. James Gleick, *The Information: A History. A Theory. A Flood* (New York: Pantheon Books, 2011).

31. As Paul Davies says, “Information is quantified in bits” (“Universe from Bit,” in *Information and the Nature of Reality*, 76), and there would be no information so understood without this specific system of measurement. Edward Fredkin explains that “digital philosophy” (what I have called the metaphysics of information) is based on two concepts: “Bits, like the binary digits in a computer, correspond to the most microscopic representation of state information; and the temporal evolution of state is a digital informational process similar to what goes on in the circuitry of a computer processor” (“An Introduction to Digital Philosophy,” *International Journal of Theoretical Physics* 42, no. 2 [2003]: 189–247).

32. Valentino Braintenberg, quoted in Floridi, ed., *Philosophy of Computing and Information: 5 Questions* (Copenhagen: Automatic Press, 2008), 16.

correlate of the latter is the “intellect,” the *forma formarum*, while the correlate of the former is precisely the bit. For St. Thomas, the “measure” of forms is creative, coinciding with the divine intellect, “in which are all created things.”<sup>33</sup> Contemporary information, on the contrary, stands or falls on human, quantitative measurement.

Even more importantly, the “form” of a thing, according to Aristotelian–Thomistic philosophy, is a simple whole. It is the wellspring from which all the features and intelligible aspects of a thing come and in which they are always already rooted and gathered together as in their generous, originating unity. Digital information, on the contrary, is fundamentally fragmented into bits.<sup>34</sup> The irreducibility of the Aristotelian–Thomistic form to digital information is comparable to the unbridgeable distance in topology between a continuum and the sum of discrete parts. One can of course adopt the notion of information to speak of the Aristotelian form (Why? Maybe to update one’s language? Is there truly a need for that?), but in doing so one would neglect the background story—the digital revolution—which is what gives meaning and content to this contemporary notion.<sup>35</sup> It is worth quoting from Gleick’s study at length:

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33. Thomas Aquinas, *De veritate*, q. 1, a. 2.

34. See D. C. Schindler, *Love and the Postmodern Predicament: Rediscovering the Real in Beauty, Goodness, and Truth* (Eugene, OR: Cascade Books, 2018), 76.

35. Cf. Michael Hanby, “Reconceiving the Organism: Why American Catholic Bioethics Needs a Better Theory of Human Life,” *Communio: International Catholic Review* 41, no. 3 (Fall 2014): 623: “The fact that science presupposes and perpetuates its own ontology in the very form of its analysis does not preclude an integration of science and Aristotelian philosophy inasmuch as Aristotle gives expression to something that is ontologically basic and therefore inescapable and operative in science anyway, but it does mean that integration is not straightforward and is much more complicated than simply finding Aristotelian names for supposedly equivalent concepts derived from empirical science. Too often this sort of scientific and philosophical compatibilism functions to conceal a scientific disdain for philosophy and a prejudice in favor of science as the real arbiter of truth about the natural world.” Analogously, one could speculate that this same compatibilism conceals, in turn, a kind of inferiority complex on the part of philosophy vis-à-vis the empirical sciences.

When it was made simple, distilled, counted in bits, information was found to be everywhere. . . . “Man the food-gatherer reappears incongruously as information-gatherer,” remarked Marshall McLuhan in 1967. . . . We can see now that information is what our world runs on: the blood and the fuel, the vital principle. It pervades the sciences from top to bottom, transforming every branch of knowledge. Information theory began as a bridge from mathematics to electrical engineering and from there to computing. . . . Now even biology has become an information science, a subject of messages, instructions, and code. Genes encapsulate information and enable procedures for reading it in and writing it out. . . . The body itself is an information processor. Memory resides not just in brains but in every cell. . . . “What lies at the heart of every living thing is not a fire, not a warm breath, not a ‘spark of life,’” declares the evolutionary theorist Richard Dawkins. “It is information, words, instructions. . . . If you want to understand life, don’t think about vibrant, throbbing gels and oozes, think about information technology.” . . . “The information circle becomes the unit of life,” says Werner Loewenstein. . . . He reminds us that information means something deeper now: “It connotes a cosmic principle of organization and order, and it provides an exact measure of that.” . . . Economics is recognizing itself as an information science. . . . Increasingly, the physicists and the information theorists are one and the same. . . . As scientists finally come to understand information, they wonder whether it may be primary: more fundamental than matter itself. They suggest that the bit is the irreducible kernel and that information forms the very core of existence. Bridging the physics of the twentieth and twenty-first centuries, John Archibald Wheeler, the last surviving collaborator of both Einstein and Bohr, put this manifesto in oracular monosyllables: “It from Bit.” Information gives rise to “every it—every particle, every field of force, even the spacetime continuum itself.” . . . The whole universe is thus seen as a computer—a cosmic information-processing machine. . . . The universe computes its own destiny.<sup>36</sup>

Such a gigantic computer would be best described, according to the so-called Zuse-Fredkin thesis, as a “cellular

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36. Gleick, *The Information*, 8–10.

automaton”<sup>37</sup>—a very telling blend of Romantic biologism and Enlightenment mechanism that only the metaphysics of information can rescue from contradiction. One could easily continue to draw from the wealth of information of Gleick’s and other books on the topic.<sup>38</sup>

Thus, to adopt a theological category, one might say that the new metaphysics of information has “transubstantiated” the world: it still looks the same, with its accidents and qualities—trees still look like trees, rivers look like rivers, birds look like birds, and human beings look like human beings—but thanks to the notion of information, we now think that their substance is quite different—trees, rivers, birds, human beings alike, are, at bottom, complex flows of information, sophisticated algorithms that can be digitally measured and intervened upon. The world has become an “infosphere”<sup>39</sup> or a digital globe.

## 7.

The transubstantiated digital world of information is a thoroughly fluid and therefore manipulable world. In this sense, it is the perfect continuation of the modern project, for which the process of the mastering of nature is in programmatic opposition to an anthropology of openness to transcendence. As anticipated in the previous section, there would be in fact no age of information if information were not essentially understood in relation to the “bit,” that is, in light of the possibility to measure, record, store, alter, and transfer said information. In his critique of the reduction of knowledge to the transferring of information, D. C. Schindler identifies manipulability-for-transferability as the main feature of the “bit,” which constitutes the basis of

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37. Plamen Petrov, “Church-Turing Thesis Is Almost Equivalent to Zuse-Fredkin Thesis (An Argument in Support of Zuse-Fredkin Thesis)” (unpublished), available at <http://www.wseas.us/e-library/conferences/digest2003/papers/458-114.pdf>.

38. In the same vein, Lloyd explains that “the big bang was a bit bang” (“The Computational Universe,” in *Information and the Nature of Reality*, 96).

39. Luciano Floridi, *The Fourth Revolution: How the Infosphere Is Reshaping Human Reality* (Oxford: Oxford University Press, 2014).



the contemporary understanding of information.<sup>40</sup> One could add to Schindler's point that transferring information is at the service of the implementation of such information in radically new ways—thus, not only manipulability-for-transferability but transferability-for-manipulability.

Why should this allow us to say that information fulfills the trend present in modernity? To answer the question, one has to look at the ontology underlying the modern project. Modern ontology, as some philosophers have pointed out, can be characterized as a progressive loss of the sense of the being of things, the ultimate result of which would be, to use Heidegger's reading, the reduction of being to Nietzschean "will to power" and of nature to a "standing reserve" for technological manipulation.<sup>41</sup> Kenneth L. Schmitz, for instance, claims that major and dominant trends in modern ontology declare the "death of things" and replace "things" (the Aristotelian "substances") with fields of forces conceived through mathematical models.<sup>42</sup> Byung-Chul Han confirms this metaphysical interpretation with respect to the updated scientific worldview brought about by the digital revolution: "The digital order *de-reifies* the world by *informatizing* it."<sup>43</sup> The dwelling place of man, once inhabited by "things," becomes an alienating world of "non-things" (and thus a place of non-dwelling). Schindler himself characterizes the contemporary notion of "knowledge by transferring of information" as the monstrous heir of the Aristotelian and Thomistic "knowledge

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40. D. C. Schindler, *Love and the Postmodern Predicament*, chap. 4, pp. 64–81.

41. Martin Heidegger, *Nietzsche*, esp. chap. 5 ("The European Nihilism"), the section "The Project of Being as Will to Power," and chap. 6 ("Nietzsche's Metaphysics").

42. Kenneth L. Schmitz, *The Recovery of Wonder: The New Freedom and the Asceticism of Power* (Montreal: McGill-Queen's University Press, 2005). See also Catherine Pickstock, *After Writing: On the Liturgical Consummation of Theology* (Oxford: Blackwell, 1998), esp. pt. 1, chap. 3.

43. Byung-Chul Han, *Non-Things: Upheaval in the Lifeworld* (Cambridge, UK: Polity Press, 2022), 1. Han interestingly points to the Brazilian-Czech philosopher Vilém Flusser as one of the first thinkers to speak explicitly about the de-realization of things due to the spreading out of the idea of information. See Vilém Flusser, *Dinge und Undinge. Phänomenologische Skizzen* (Munich: Hanser, 1993).

by apprehension of the form.”<sup>44</sup> With specific reference to the metaphysics of information, Albert Borgmann speaks precisely of the “erosion” of the “material density of things” by the “lightness of information,” the new, fully manipulable, and edgeless metaphysics of the “lightness of being.”<sup>45</sup> He explains very clearly how modern ontology can be considered to be fully manifested in the metaphysics of information: “The force of reality does not naturally present itself in bits. But if we can theoretically grasp the structure of information, it is technologically possible to capture the surface and anatomy of reality by assigning bits of information to the facets and ligaments of things, and in this way information about, for, and as reality can be structured in bits with powerful results.”<sup>46</sup> As Norbert Wiener says, “Information is information, not matter or energy. No materialism which does not admit this can survive at the present day.”<sup>47</sup>

The specific form of the “spiritual” crisis of our age would be, therefore, a “material” crisis: the dematerialization of reality and the transformation of its various forms into “bits”

44. Despite its intuitive meaningfulness and appeal, one should therefore consider whether the label of “software” used by a great contemporary Aristotelian, James F. Ross, to describe what was once the form of substances, is appropriate. Given the technologically inspired language of our time, such a label might lead too easily to a reconceptualization of the classic idea of form within the framework of the metaphysics of information. Cf. James F. Ross, *Thought and World: The Hidden Necessities* (Notre Dame: University of Notre Dame Press, 2008), esp. chap. 7, “Real Natures: Software Everywhere,” pp. 129–48. Similar attempts can be found in John Wilkins, “Information is the New Aristotelianism (and Dawkins Is a Hylomorphist),” *Scientia Salon Blog*, last modified May 1, 2014, <https://scientiasalon.wordpress.com/2014/05/01/information-is-the-new-aristotelianism-and-dawkins-is-a-hylomorphist/>. See the discussion in Edward Feser, *Aristotle’s Revenge: The Metaphysical Foundations of Physical and Biological Science* (Heusenstamm, Germany: Editiones Scholasticae, 2019), esp. “Aristotle and Computationalism.”

45. Albert Borgmann, *Holding on to Reality: The Nature of Information at the Turn of the Millennium* (Chicago: The University of Chicago Press, 2000), 213–33. I regret to admit that Borgmann would probably disagree with the overall genealogical reading of the metaphysics of information I provide here. Nevertheless, it is undoubtable that some of his reflections on “information as reality” (he distinguishes this from “information about reality” and “information for reality”) support my reading, without implying it with necessity.

46. Borgmann, *Holding on to Reality*, 139–40.

47. Norbert Wiener, *Cybernetics, or Control and Communication in the Animal and the Machine* (New York: John Wiley, 1961), 132.

of manipulable information. There seems to be nothing more paradoxical than to state that the fulfillment of the materialistic movement of radical Enlightenment lies precisely in the dematerialization characteristic of the age of information. And yet it is hard not to see the explanatory power of this claim. The movement toward dematerialization is so powerful in the age of the metaphysics of information that the modern project of lordship over nature by radical transformation of its given order is now paired with the replacement of nature and its order with digital reconstructions: it seems pretty safe to say that, although the concept of an alternate digital universe might be only material for science fiction, the prospect of a heavily digital “augmentation” of reality in all areas of human life is more realistic than ever.

It is unclear whether the category of gnosticism is an adequate one to describe the phenomena we are discussing. Some, such as Eric Voegelin, Augusto Del Noce, and Cyril O’Regan, have followed this path, though in different ways.<sup>48</sup> Others, notably Hans Blumenberg, have given a diametrically different interpretation.<sup>49</sup> Nevertheless, the light that this concept has shed on the issue is too bright not to fall into the temptation of adopting it. The common denominator of pre- and post-Christian gnosticism might be defined as the radical rejection of, and therefore the total rebellion against, the given order of the world. Pre-Christian gnosticism, still understanding human activity and history within the framework of an unchanging cosmos, was unaware of, or pessimistic about, any possibility of changing the given order. Thus, it pursued its ideal through the denial of matter and the liberation of the soul from the body (ascetic gnosticism) or through the denial of any established ethics that mirrored the order of the world (libertine gnosticism). Post-Christian gnosticism, thanks to the revolution in the understanding of man and history brought about by Christianity, pursues the ideal

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48. Voegelin, *The New Science of Politics*; Eric Voegelin, *Science, Politics, and Gnosticism* (Wilmington, DE: ISI Books, 2004); Augusto Del Noce, “Violence and Modern Gnosticism” and “Eric Voegelin and the Critique of the Idea of Modernity,” in *The Crisis of Modernity*, 19–48 and 287–306, respectively; Cyril O’Regan, *Gnostic Return in Modernity* (Albany: State University of New York Press, 2001).

49. Hans Blumenberg, *The Legitimacy of the Modern Age* (Cambridge, MA: MIT Press, 1999).

of the radical rejection of and total rebellion against the given order of the world through an activist-voluntarist (i.e., revolutionary) project of technological and political transformation of the world. The extension of this post-Christian gnosticism today might be characterized by the attempt not only to transform but also digitally replace the given order, a new form of asceticism that coincides with the dematerialization I have described.<sup>50</sup>

Thus, surpassing what Nietzsche and Heidegger could have envisioned, the ontology of the will to power has taken the shape of the redefinition of reality in terms of information available for technological, digital control. But the digital era brings about a much politer and nevertheless much mightier version of the will to power than most would have suspected. Constituting the bridges between all kinds of different disciplines and realities, the study and manipulation of information seems to be able to promise a new, unheard-of stage in the modern

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50. David J. Chalmers's recent book, *Reality+: Virtual Worlds and the Problems of Philosophy* (New York: W. W. Norton & Company, 2022), possibly foreshadows a drift toward digital asceticism. Chalmers proposes a view, "virtual digitalism," according to which "virtual worlds" are "real worlds" populated with real "digital objects" (see chap. 10). Part of his argument relies on the plausibility of "digital physics"—in other words, the plausibility of what Wheeler calls the "it from bit" hypothesis (see *ibid.*, chap. 8). In light of this underlying metaphysics of information, and despite his caution in distinguishing the "virtual" from the "physical," it seems clear to me that his claim should not be taken in the weaker, more trivial sense that a virtual world is obviously real because it is not a pure nothing. Rather, his approach suggests that a virtual world is real because it is made of the same stuff as the given world, i.e., bits of information. Hence, the idea of an augmented reality, a "Reality+." The dictum of some contemporary philosophers (Miguel Benasayag, Fabrice Hadjadj, and Olivier Rey) comes to mind: the idea of an *augmented* reality presupposes that reality has been previously *diminished*, reduced—in this case, dematerialized into bits of information. See in particular Miguel Benasayag, *El cerebro aumentado, el hombre disminuido* (Buenos Aires: Paidós, 2015). Moreover, in his otherwise instructive presentation of the defining features of virtual reality, Chalmers seems to overlook the essential philosophical problem at stake. Virtual reality, he tells us, is "immersive," "interactive," and "computer-generated." While granting that it is immersive and interactive, one could question, somewhat ironically, whether saying that virtual reality is computer-generated helps one understand what the true generating origin of virtual reality is. (It would be like explaining the origin of cinema by saying that it is "film-generated.") The gnostic hypothesis seems more promising. It could well be, in fact, that virtual reality originates in a human "gnostic dream" that tries to bring about a less-than-human "gnostic dream world," as Voegelin would put it.

project of mastering nature and man. Insofar as the modern project is, at least in its victorious, mainstream manifestations, a project of immanentization, the transubstantiated digital world of information is born from its past as a secular child.

As I have mentioned, the metaphysics of information is also the full realization of the other horn of the modern project, that of Romantic religion. The transubstantiated digital world is a pseudospiritual world in which everything is information or, according to the word that Claude Shannon used at first to speak of his research, “intelligence.”<sup>51</sup> The “intelligence” or information of everything is originally “locked up,” but it is ready to be liberated in order to fulfill, in the form of universal availability for transferability/implementation through a never-ending growth, the highest aspirations of man: the reconciliation of man and nature/history.

That such growth is perceived as never-ending seems to square with the Romantic idea that the reconciliation is never fully achieved, always postponed and asymptotically longed for. Such aspirations are described by digital enthusiasts either in the form of some niche of private, petit bourgeois interests—playing one’s favorite video game in the U.S. against a player in South Korea, working in an augmented digital reality with enhanced efficiency and comfort, such as wearing one’s favorite sweat-pants<sup>52</sup>—or some abstract ideal, such as universal justice, equality, end of hunger, etc., therefore allowing for a fully immanentist reinterpretation of the desire for happiness along the lines of consumerist capitalism. The concept of scientific progress is taken for granted and put at the service of social liberation, while the

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51. “Off and on I have been working on an analysis of some of the fundamental properties of general systems for the transmission of intelligence” (in Gleick, *The Information*, PAGE). Sociologist and futurist William Sims Bainbridge writes, “In a way, electronic personality transfer fulfills the hitherto vain hopes of traditional religions. ‘Information’ is the modern word for ‘spirit.’ Note that information is contained in physical objects, just as the human spirit is contained within the brain, but it is not itself material. Information consists of meaningful relationships between patterns that can be embodied in any number of physical systems” (“Trajectory to the Heavens,” *The Journal of Personal Cyberconsciousness* 2, no. 3 [2007]: 1, available at <https://www.terasem-journals.org/PCJournal/PC0203/wb1.html>).

52. Cf. Mark Zuckerberg, “Introducing Meta” (October 28, 2021), available at [https://www.youtube.com/watch?v=pjNI9K1D\\_xo](https://www.youtube.com/watch?v=pjNI9K1D_xo).

Romantic aspiration to an aesthetic reconciliation with nature/history is often preserved in its crassest form, hedonist consumerism, especially in the form of universal entertainment. The fact that consumerist capitalism is one of the last standing worldviews that take the symbolic need of the human being seriously<sup>53</sup> is very telling. To put it crudely, when a company wants to sell you a car, it is actually selling you sex, which is in turn the selling of a certain lifestyle in which you can be satisfied and happy, at least until a new car appears on the market—is very telling. It is a clue regarding the quasi-divine and quasi-spiritual understanding of information underlining the entire project of the digital transubstantiation of the world. Merchandise is symbolic and idolatrous, and reality as information is essentially intelligence, of which the human intellect is nothing but a fragment.<sup>54</sup>

It is not by chance that astrobiologist Caleb A. Scharf adopts the category of “transcendence” precisely to describe the passage of the information of the physical world into the digital information flow: information transcends its natural condition when it is assumed into, transformed by, and spread through the digital.<sup>55</sup> In this way, the digital era reabsorbs any reference to genuine transcendence within the fully immanent horizon of the universal availability and never-ending growth of information. The human being, reduced to nature and therefore to information, is led to reinterpret his own sense of the transcendent according to the same immanentist narrative.

It is reasonable at least to wonder whether the resurgence of the pantheistic sense of nature (Gaia) in some of the twentieth-century New Age forms of environmentalism<sup>56</sup> was short-lived due to the emergence of the digital culture, which performed with different and much more powerful means—means not limited

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53. Cf. Sydney J. Levy, “Symbols for Sale,” *Harvard Business Review* (1959): 117–24.

54. In the already cited “Trajectories to the Heavens,” Bainbridge claims that people in their “pure form” are “information” (3).

55. Caleb A. Scharf, “Transcendence Happens All the Time,” *Scientific American* (June 5, 2021), available at <https://www.scientificamerican.com/article/transcendence-happens-all-the-time/>.

56. For a presentation of the “Gaia Hypothesis,” see James Lovelock, *Gaia: A New Look at Life on Earth* (Oxford: Oxford University Press, 2016).

to neopagan symbolism—the same role of continuation of the modern Romantic legacy that environmentalism attempted. The key concept orienting our digital culture, “connectedness,”<sup>57</sup> is in fact the new version of the holistic idea of reality as one organic whole present throughout Romanticism. The injunction to stay always connected, which is implicit in every interface we use, is nothing else than the implementation with new means of the old metaphysical idea of Romantic religion. One might even speak of a “connectivity imperative.”<sup>58</sup>

According to digital advocates, then, contrary to appearances, the pathologies of the digital age would be the result not of an excess of connection but a lack thereof. In fact, only a perfect connectivity and the universal availability and growth of information that would ensue from it would guarantee the overcoming of the material, epistemic, and moral deficiencies of the parts, which are in themselves limited fragments always in need of new digital and global recomposition.<sup>59</sup> The transformation

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57. See, for instance, Edward Snowden’s candid statement in his autobiography, *Permanent Record* (New York: Henry Holt & Company, 2019), 4: “What makes a life? . . . A life is also what we love, and what we believe in. For me, what I love and believe in the most is connection, human connection, and the technologies by which that is achieved. . . . For my generation, connection has largely meant the Internet.”

58. I am adopting here José van Dijck’s terminology, where she speaks of the “imperative of sharing” in relation to social media, cf. *The Culture of Connectivity: A Critical History of Social Media* (New York: Oxford University Press, 2013), chap. 3, pp. 45–67.

59. A new concept of truth emerges here. Truth as the allegedly omninclusive (but factually partial and exclusive) point of view resulting from the admittance and composition of all points of view, all understood as having equal value. In a world in which universal and constant connection is not possible, such a view of the truth would never be possible. Note the difference between this and the traditional Thomistic view of the truth: truth as the common intelligibility of being, which is nevertheless, just like being, always already arranged according to the plurality of beings, in which it subsists, and is available to the human intellect without the possibility for the latter to exhaust it. Here, the omni-inclusivity of truth follows from its transcendental-ity, which allows for an internal and synthetic principle of composition of the various truths of different points of view on reality. There, in the concept of truth of the digital age, the omni-inclusivity is that of an external and analytic composition of unrelated views that have right of citizenship (because of their equal value, established on the basis of universal relativism) within the universally connected globe. One more element would be necessary to complete the picture, namely, the so-called “Internet of Things” (sometimes

of the old world into the new “global infosphere” aspires to nothing less than this: the redemption of the particular by its immersion and disappearance into the global whole, which is the only perspective that can “redeem” the mistakes of such a partial point of view. Del Noce has shown that this way of thinking is the result of the modern identification of “evil” and “finitude,” the response to which was the programmatic attempt to redeem/justify the individual and the particular by their immersion in and disappearance into the “universal”: the State instead of the individual (Hegel); the annihilation of individuation into the Nirvana (Schopenhauer); humanity instead of man (Comte, Feuerbach, Marx);<sup>60</sup> the priority of the “infinite” or “impersonal life” over the person (Bruno, Deleuze, Esposito);<sup>61</sup> the absorption of virtues and vices into the “systemic” social justice and injustice (e.g., critical race theory), etc. Or, alternatively, their immersion in and disappearance into the “indistinct”: the present negation of a definite past (tradition) in light of an indefinite, faceless future of “social equality” (e.g., cancel culture); self-denial into sex-liberated and maximally fluid erotic political activism and practices (Bataille);<sup>62</sup> etc. The global infosphere is what provides

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referred to as “IoT”). This is the idea that everything in our environment (including animals and people) should ideally become embedded with sensors and computing abilities so that they could connect and exchange data with other systems over the internet. The “Internet of Things” constitutes that reorganization of the material world corresponding to the new concept of truth just discussed. But, more deeply, it also represents the most rigorous project of what we might call the retranscendentalization of being with respect to truth. “Things” are perceived as being opaque, puzzling, ultimately unintelligible, and for this reason they need to be reinstated in their truth—they need to be retranscendentalized. The solution to this problem is pursued, first, by reducing things to systems of information and, second, by elevating them into the new life of the global infosphere. Hence, the crucial metaphysical meaning of the “Internet of Things.”

60. Augusto Del Noce, *Il problema dell'ateismo* (Bologna: Il Mulino, 2010), 42–43.

61. Roberto Esposito, *Living Thought: The Origins and Actuality of Italian Philosophy* (Stanford: Stanford University Press, 2012), 30–31.

62. In “The Ascendance of Eroticism” (in *The Crisis of Modernity*, 157–86), Del Noce claims that eroticism is the most advanced form of the Marxist “total revolution.” One can wonder whether Del Noce’s reading is still applicable today. In fact, he claims that sexual vitality is the only value that a scientific culture can produce. However, it seems fair to say that sexual vitality is the value



an always-growing universal connectivity and thus the most updated promise of a possible immanentistic redemption.

The ultimate horizon of a meaning for history that is saved from its flaws is, then, the universal availability and neverending growth of information made possible by an unlimited connectedness, through which reality can be shaped at will because it has been conceptually transubstantiated into information and technologically enveloped in the ever-present digital.

In this way, the two modern strategies for the total immanentization of history and the defusing of the transcendent vocation of the human being—the “materialization” of the human being of the radical Enlightenment and the “divinization” of nature of Romanticism—are synthesized in a coherent metaphysical theory with tremendous practical implications. The metaphysics of information of the digital era allows for that complete “liberation of nature”—in the two senses of the radical Enlightenment and Romanticism, now conjoined within a common metaphysical framework—which the modern age pursued thoroughly through different paths but with an incoherent metaphysics, as I have explained.<sup>63</sup>

## 8.

Even the most insightful critical voices of the digital age seem to miss the point concerning where the heart of the problem really lies. For instance, historian Yuval Harari has talked about the

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produced not by any form of scientism but by a scientific culture modeled on biology. Interesting and crucial questions follow. What happens if biology ceases to be the model for science and is replaced by the information technologies that lie at the heart of the digital revolution? Is there a new core value implied by this shift? Is there a link between this transformation of scientism and the transformation of eroticism from, say, the liberation of sex (i.e., the anarchic emancipation of sexual practices) described by Del Noce to the liberation from sex (e.g., gender theory, antinatalism, etc.) that we witness today?

63. Thus, the historical meaning of the metaphysics of information goes beyond the (admittedly problematic) overcoming of the modern dualism between material and mental phenomena that Hans Jonas discusses in his treatment of “cybernetics,” in which “information” plays a crucial role, as he recognizes. See Hans Jonas, *The Phenomenon of Life: Towards a Philosophical Biology* (Evanston, IL: Northwestern University Press, 2001), 110–11.

shift of authority—from gods, to humans, to algorithms—occurring in the age of “dataism,” which is roughly what I am calling the age of the metaphysics of information.<sup>64</sup> Despite the crucial importance of his observations, Harari’s reflections do not get to the bottom of the problem insofar as they are compromised by a concept of intelligence, including human intelligence, understood essentially as a problem-solving and decision-making system. For him, the history of *Homo sapiens* has been essentially the “drama of decision making,” and this is what is threatened by the religion of our age, dataism (the real prelude to *Homo Deus*), which presents a world in which algorithms “know” and “understand” human beings better than human beings know and understand themselves.<sup>65</sup> Who or what is the greatest epistemic and moral authority to solve the problems of life and make informed decisions? The answer today would be, according to Harari: neither God, nor the human being, but algorithms.

This seems to be true enough to raise questions and motivate our concern. However, by casting the problems of the digital era and the revolution of information in terms of the epistemic and moral competition between human and machines for decision-making processes, Harari has already accepted the reduction of reason to problem-solving and, in this sense, has accepted the immanentist framework of the modern project. An analogous assessment could be extended to other

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64. Yuval Noah Harari, *Homo Deus: A Brief History of Tomorrow* (New York: Harper Perennial, 2017), chap. 11, “The Data Religion,” pp. 372–402.

65. While sound, the arguments of the detractors of strong artificial intelligence (= AI) miss the point. The “knowing” and “understanding” of algorithms need not be said literally. Of course, it is not only that machines lack “consciousness.” It is also that machines have the same (and often superior) problem-solving capacity that human intelligence has without being intelligent. They look like ducks, swim like ducks, quack like ducks, but they are not ducks; similarly, one could say that machines look like intelligent men, move like intelligent men, and solve problems like intelligent men, without being either men or intelligent. However, the entire debate concerning soft and strong AI bypasses the real issue of the shift of epistemic authority described by Harari. Since the computing power of machines far exceeds that of humans (who are not computing machines), men will depend more and more on such machines and their algorithms for their decision-making. And even if decisions will always ultimately be made by men, how different will those decisions be if almost the entirety of the process of deliberation will have taken place at the level of the machine?

laudable attempts, such as the call for an “algor-ethics”<sup>66</sup> or for “conceptual design”<sup>67</sup> in order to deal with the problems posed by artificial intelligence. These attempts remain within the modern trajectory, which is in part a trajectory of first weakening and then obliterating the metaphysical vocation of reason. The trajectory that goes, say, from late medieval nominalism until Kant still understands reason as characterized intrinsically by a metaphysical horizon, even though reason by itself cannot say anything on the problem of God. But as I have said, we also see a trajectory in modernity in which reason is not simply weakened in its metaphysical aspirations but must be reinterpreted in a purely immanentistic way. In other words, dataism, or the age of the metaphysics of information, does not simply provide an antihumanist program for problem-solving and decision-making, but it also presupposes an epochal decision regarding the nature of reason and the best context for making such a view of reason widespread and effective.

“So what?,” some might ask. “This sounds very much like a metaphysical profundity—deep, maybe, but definitely useless.” The point is that striving toward realizing certain values cannot work if the foundations of our worldview—what is reality, what is human reason, etc.—are already compromised. It would be like trying to erect a building by piling up solid bricks on slippery mud. For this reason, a critical genealogy of the metaphysics of our age is more urgent than ever.

9.

Once provided with a clear metaphysics of information, the modern goal of immanentizing the eschaton by immanentizing man’s psychology must be advanced ethically and politically. As many debates regarding the institutional and legal status of social media show, the digitally transubstantiated world—the global infosphere—comes with its own internal norms, which are more

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66. Paolo Benanti, “Algor-Ethics: Artificial Intelligence and Ethical Reflection,” *Revue d’éthique et de théologie morale* 307, no. 3 (2020): 93–110.

67. Luciano Floridi, *The Logic of Information: A Theory of Philosophy as Conceptual Design* (Oxford: Oxford University Press, 2019).

often than not at the service of elites promoting a cosmopolitan identity characterized by a highly selective inclusivity—what Jonathan Friedman calls “the new respectability.”<sup>68</sup>

If what I have said so far is true, then the fundamental principle of the more or less implicit normative system of the digitally transubstantiated world is the rejection of transcendence. In this way, the right of citizenship in the global infosphere is granted only to those who abide by this fundamental norm, implemented not as such but in relation to its various anthropological, ethical, political, and cultural implications. Only a certain type of human being is allowed full, respectable citizenship within social media, and one wonders whether this situation is destined to spread to the entirety of the digitally informed globe: a human being for whom “transcendence” (both the “vertical” transcendence of God and the “horizontal” transcendence of sexual-generational difference and of a world of different things informed and ordered by a given logos) is an old superstition that must be left behind.

Accordingly, what the age of the metaphysics of information allows for is a new method for the immanentistic transformation of man. The method is indirect but extremely powerful. The strategy is in fact that of changing the world entirely—through the reduction of reality to information and the digital transubstantiation of the world—and by way of this, restricting the right of citizenship and existence in this (namely, “the”) world only to those human beings who accept its conditions. In technology, this is called “enveloping”: robots work only when the surroundings around them have been “enveloped,” namely, turned into an interface within which the robot can function.<sup>69</sup> Here the strategy is identical, yet reversed: we envelop the world by making it a digitally transubstantiated globe in order to change man, to create the new man, or maybe to do away with man, as I will explain shortly.

No prior ideology, which worked mostly at the level of the symbolic and which always fell short of wrapping every aspect of reality within its own narrative (no matter how hard it

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68. Cf. Jonathan Friedman, *PC Worlds: Political Correctness and Rising Elites at the End of Hegemony* (New York: Berghahn, 2019), chap. 8, 184–207.

69. Floridi, *The Fourth Revolution*, chap. 7, 144–66.

tried), had the effective power to bridge the gap between the symbolic and the real and to educate man by “enveloping” reality in its totality. But this is precisely the potential of the metaphysics of information and its digital implementation. The totalitarian ideologies of the past resorted to authoritarianism and violence to force whatever part of reality seemed recalcitrant to the symbolic re-telling of the truth of the world. Today, it is the normalized, efficient, pervasive, highly appealing and everywhere-required technological environment of our everyday activity that has the new gospel of the connectedness and never-ending growth of information built into it.<sup>70</sup>

10.

It is not wrong to say that the push for the “new man” typical of certain ideologies of the last century has been replaced today by the push for replacing man with a new actor of history. Many today talk about “transhumanism,” which is an umbrella term for different, though converging, views of the future—or lack thereof—of human history.<sup>71</sup> As far as I can tell, it is precisely the metaphysics of information and its digital implementation, more than the progress in biological and genetic treatments for enhancement, that constitutes the most advanced and most realistically impactful factor in the determination of the new transhuman subject, at least in the foreseeable future.

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70. Byung-Chul Han further notes that “infocracy” surpasses in efficiency the old “disciplinary regimes,” still bound to imposing restrictions of freedom, insofar as in the regime of information what allows for the perfect digital surveillance and control of the individual is precisely the individual’s most boundless freedom, i.e., his total self-exposure through the production of data regarding his life. The greater the freedom, the more far-reaching the surveillance. See his *Infocracy* (Cambridge, UK: Polity Press, 2022).

71. See Nick Bostrom, “Why I Want to Be a Posthuman When I Grow Up,” in Ronald L. Sandler, ed., *Ethics and Emerging Technologies* (New York: Palgrave MacMillan, 2014), 218–34; Nick Bostrom, “A History of Transhumanist Thought,” *Journal of Evolution and Technology* 14, no. 1 (2005): 1–25; Allen Buchanan, *Beyond Humanity* (New York: Oxford University Press, 2011); Judith Halberstam and Ira Livingston, eds., *Posthuman Bodies* (Bloomington: Indiana University Press, 1995); Natasha Vita-More, “The Transhumanist Manifesto,” *Humanity Plus* (1983), available at <https://www.humanityplus.org/the-transhumanist-manifesto>.

If I had to adopt psychological categories to interpret this historical phenomenon, I would say that transhumanism seems to be a quasi-pathological coping mechanism put into action by humanity's historical self-consciousness to shelter itself from the signs of the failure of the modern project. It is a way to make sense of a failure without saying that the project was flawed: we see the signs of the failure everywhere, but we pursue the project with renewed energy and conviction because its failure was not due to the intrinsic error of the project but to the metaphysical and moral weakness of its enactor—man, the traditional man, the man of the openness to the transcendent that not even modernity and the political ideologies of the twentieth century have managed to cancel.

In this way, the transhumanist movement would be the triumph of positive atheism (the position that atheism does not lead to nihilism but, on the contrary, to the full realization of a project of universal liberation; in this sense, it is the most rigorous form of contemporary positive atheism, as opposed to “atheistic humanism,” which is still a trope of the nineteenth century)<sup>72</sup> and the most refined strategy of the avoidance of negative atheism (the negation of God that, recognizing the almost inevitable nihilism ensuing therefrom, tends to end up in a renewed religious attitude).

Though pathological, this coping mechanism is producing effects, the chief of which is precisely the development of a new self-understanding of man, who thinks that his existence, again with Nietzsche, should be put at the service of the appearance of an *Übermensch* (overman), a new transhuman actor of history. What does this mean, concretely? It does not mean that we will be able to download our consciousness onto a computer and thus obtain technological, digital immortality.<sup>73</sup> On the contrary,

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72. On “atheistic humanism” as a product of the nineteenth century, see Henri de Lubac, *The Drama of Atheist Humanism* (San Francisco: Ignatius Press, 1995). This is why, I believe, positive atheists such as Richard Dawkins or atheistic humanists such as the President Chaplain at Harvard University, Greg M. Epstein, do not seem to represent fully the spirit of the time and sound a bit outdated.

73. See Hans Moravec, *Mind Children: The Future of Robot and Human Intelligence* (Cambridge: Harvard University Press, 1988); Frank J. Tipler, *The Physics of Immortality: Modern Cosmology, God, and the Resurrection of the Dead* (New

and more deeply, the transhuman age is the age in which the elimination of what constituted the essence of man from antiquity until its flourishing in Christianity, namely, the psychology of transcendence, which also played the role of being the greatest obstacle to the full immanentization of history, is neither simply fought symbolically (as it was in modernity), nor removed physically (e.g., the various genocides of the atheistic ideologies of the twentieth century, which sustained the symbolic retelling of the truth of the world with physical violence and political coercion). Rather, that psychology is eroded gently yet systematically and thoroughly by way of creating a world that is at once normal in appearance, full of incredible resources and thus highly desirable, and fully inhospitable to the desire for God and all the various forms of vertical and horizontal transcendence that flow from it. The transhuman is nothing else than the man who stably inhabits the transnatural, antihuman world, closed to transcendence, that he has created for himself—that is, for his transhuman heir.

The metaphysics of information, therefore, has the real potentiality to provide the basis for the fulfillment of what Del Noce called the “total revolution”<sup>74</sup> that shaped the twentieth century, namely, “the promise . . . of a new situation of mankind in which the problem of God will no longer arise”<sup>75</sup> and in which every form of “dependence” is rejected. This revolution was at once fulfilled and debunked by the success of Marxism (i.e., the destruction of all traditional values) and its nihilistic decomposition (i.e., the incapacity of Marxism to build new values over the ashes of the traditional) that eventually was taken over by the neocapitalist, technocratic, and consumerist society of today.<sup>76</sup>

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York: Anchor, 1995); Mark O’Connell, *To Be a Machine: Adventures among Cyborgs, Utopians, Hackers, and Futurists Solving the Modest Problem of Death* (New York: Doubleday, 2017).

74. Del Noce, “Revolution, *Risorgimento*, Tradition,” in *The Crisis of Modernity*, 49–58.

75. Del Noce, “Authority versus Power,” in *The Crisis of Modernity*, 202.

76. Del Noce, “The Latent Metaphysics within Contemporary Politics,” in *The Crisis of Modernity*, 59–72; “Secularization and Modernity,” in *The Crisis of Modernity*, 76. Following the interpretative line proposed by Del Noce, one could venture to say that the “totally other” utopian society envisioned by Marxism has turned, precisely because of the nihilistic outcome of the victory of Marxism, into the “totally other” ideal of transhumanism, which is the

One is tempted to speculate whether the popular phrase “digital revolution” unwittingly implies what Del Noce envisioned.

Accordingly, the continuation of the modern project is the project of liberating nature by relying on the metaphysics of information, whose transhuman actor is transhuman not only because his agency is displaced systematically in favor of supraindividual and suprapolitical centers of epistemic and moral authority, as Harari and others suggest; nor primarily because such an actor is genetically and biologically enhanced; but, more deeply, because the entire digital space of action of this actor—the entire world, or, to be more precise, the world understood as global infosphere—is the most advanced device ever conceived to silence, by way of “enveloping,” the transcendent psychology of the desire of God. In so doing, man not only renounces agency and responsibility but, more profoundly, he is subtly put in the position of having to give up his condition of radical freedom that lies in being rooted in the transcendent.

For these reasons, it is somewhat shortsighted to believe that man’s historical self-consciousness today manifests the awareness that the modern project has failed and that progress can no longer be a driving force of civilization:<sup>77</sup> what has changed is that now for the first time we believe that the sacrosanct project of modernity requires that man make room for a new transhuman actor of history, more worthy and more capable of such a noble pursuit. Everything must change—the “kingdom of man” must become the “kingdom of the transhuman”—so that everything can stay the same.

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most advanced product of the technocratic, consumerist capitalism that has grown out of the ashes of nihilism.

77. I use “civilization” here precisely as a term describing modernity, thus different and irreducible to “culture,” the way Stanisław Grygiel talks about this distinction in “L’uscita dalla caverna e la salita al monte Moria. Saggio su cultura e civiltà,” in *L’uomo visto dalla Vistola* (Bologna: Centro Studi Europa Orientale, 1978), 96–137. On the idea of contemporary man’s historical self-awareness of the crisis of modernity, which sounds a bit like the thesis of the “end of the great narratives” (Jean-François Lyotard), see again Brague, *The Kingdom of Man*, pt. 3, pp. 141–216; Robert Spaemann, “The End of Modernity?” in *A Robert Spaemann Reader: Philosophical Essays on Nature, God, and the Human Person*, ed. and trans. D. C. Schindler and Jeanne Heffernan Schindler (New York: Oxford University Press, 2005), 222ff.



## 11.

We can now conclude where we started. If this reading is at least partially correct, the possibility of realizing, as Floridi says, a fully immanent semantics of history is intrinsic to the digital era, as suggested by the fact that its anchors are to be found in the metaphysics of information and its branches in the full and coherent realization of that “materialization” of the human and “spiritualization–divinization” of nature and history that radical Enlightenment and Romanticism respectively pursued. This fact does not determine the future of our era in toto, but, on the contrary, it allows us to become more aware of the meaning of the global world we inhabit. Information technology is not an “iron cage”<sup>78</sup> and the digital does not need to be the omni-reaching flood that carries us beyond or outside our human condition.

At the same time, however, it is not clear how man’s openness to transcendence will survive in the age of the metaphysics of information. Finding more and more opportunities to “disconnect” can be healthy and necessary, but it falls short in three major ways: first, it remains at the level of an efficient management of mental health vis-à-vis technology, thus adopting two criteria that are typical of the technological world, efficiency and management, and therefore not reaching the level of a radical critique of the metaphysics of information; second, it assumes the technological model as the ultimate horizon of meaning, to such an extent that the antidigital choice is described in a digital terminology (we must “disconnect” ourselves just as we disconnect the laptop);<sup>79</sup> and third, it does not take into account that technology is not a tool (that we can easily set aside) but the very enveloping interface of the entire world.

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78. I am adopting Max Weber’s famous expression freely (Talcott Parsons’s translation of *stahlhartes Gehäuse*), which is rendered in the new Stephen Kalberg translation as “steel-hard casing” (*The Protestant Ethic and the Spirit of Capitalism* [New York: Routledge, 2012], 123).

79. Cf. Albert Borgmann, *Power Failure: Christianity in the Culture of Technology* (Grand Rapids: Brazos Press, 2003), 82. Originally, Martin Heidegger, “The Question Concerning Technology,” in *Basic Writings* (San Francisco: Harper Collins, 1993), 311–41. The point is sometimes made by Fabrice Hadjadj, for instance in *Dernières nouvelles de l’homme (et de la femme aussi). Chroniques d’une disparition annoncée* (Paris: Tallandier, 2019).

More and more people increasingly talk about the need for a “digital humanism.”<sup>80</sup> Whatever that might look like, a digital humanism must be at the service of the forces and practices that naturally tend to break the immanent frame of the digital age—those forces that spring from the insuppressible desire for God placed in our hearts, which includes the horizontal transcendence of a world apprehended in its variety as “creation” and its “sacramental” value.<sup>81</sup> Only serving these forces will have the creative and original power to restructure from within a world that is otherwise closed in itself. (I do not know how Charles Taylor imagined it, but I cannot help but picture the “immanent frame” today as the screen of my laptop.) Digital magnates seem to think that the solution to the problems of the digital future will mostly come from building democratic values into new technologies and from crafting and implementing the right policies to regulate their use. However, if a genealogy such as the one provided here is at all beneficial, it helps us see that the present and future challenges far exceed what a cautious management could solve. □

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80. Cf. Hannes Werthner, Erich Prem, Edward A. Lee, and Carlo Ghezzi, eds., *Perspectives on Digital Humanism* (Cham, Switzerland: Springer, 2021).

81. Both on the definition of “secularism” (as “negation of man as a worshipping being”) and on the treatment of the “sacramentality” of world and history, I find the following particularly illuminating: Alexander Schmemmann, “Worship in a Secular Age,” in *For the Life of the World* (Yonkers, NY: St. Vladimir’s Seminary Press, 2018), 139–59—though I disagree with his treatment of classical and Thomistic metaphysics as precursors of secularism.