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# Concerning Promethean Shame[1]

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## Abstract

Originating from a profound concern regarding the abusive deployment of AI platforms within academia—and, in particular, the pedagogical destabilization engendered by the proliferation of academic fraud—this text offers a critical exploration of the contexts of meaning within the current stage of global digitalization and its attendant psychic economy. The emergence of Large Language Models (LLMs) signifies the expropriation of both language and autonomous thought, and, consequently, of human dignity itself, while simultaneously rendering invisible the processes that have transformed universities into corporate entities and knowledge into a commodity. The institutionalization of "dataism" constitutes a symptomatic manifestation—simultaneously conspicuous and concealed—of the morbid rationalism characteristic of a novel form of totalitarianism, distinctly different from those of the twentieth century, aimed at eradicating all exteriority through propaganda and the voluntary servitude of digital-platform users, reduced to mere objects within the extractive frontiers of human mining, serving the interests of the technolords. To guide the analysis, I draw upon Günther Anders's concept of "Promethean shame" and seek to interpret the meaning of human exceptionalism through the lens of André Leroi-Gourhan's theory of technicity, projecting these ideas into a near future in which the present state of symbolic misery may be consummated irreversibly through the creation of "enhanced" humans—that is, the terminal stage in the annihilation of the human within Humanity. Finally, I propose potential foundations for an ethics of resistance to digital carcinogenesis and to the "assault of the bots," informed by the *metaskills* identified by Marty Neumeier and long cultivated within the discipline of Anthropology.

[1] This text results from the invitation of my colleague Manuel João Ramos, whom I thank, to participate in the meeting "AI-pocalypse Now? How AI is Turning Academia Upside Down" which took place in the Auditório JJ Laginha at ISCTE-IUL on May 28, 2025. The expression "assault of the bots" that I use here is his creation.

The invisibility of the monsters is the monstrosity of today
**Günther Anders**

## 1. Preamble

Within the insulated sphere of the university, the insidious manner in which the algorithmic governance of contemporary life has been eroding the temporal and creative dimensions of human speech—and its free exercise within the pedagogical process—remains insufficiently acknowledged. Indeed, it is conceivable that this erosion is not only recognized but actively desired, cultivated, and even applauded. The creative word, arguably the most complex and original attribute of our species, has been progressively devalued by the Professional Managerial Class (PMC) and by so-called Large Language Models (LLMs), which increasingly substitute themselves for human expression. This substitution assaults the dignity of the word, facilitated through the widespread deployment of online platforms (Gemini, DeepSeek, ChatGPT, among others) that promise to "ease workload," generate "knowledge products," and "assist learning." To resist or decline such tools risks suspicion, for within the oppressive logic of *dataism*—covering all human activity as a mantle of darkness—"conditioning replaces experience" [1:11]. I share the conviction that human dignity is grounded in the capacity for autonomous thought exercised through language, without which singularity and democracy alike cannot subsist, as Roland Gori has rightly observed [2:11]. This text seeks to interrogate the meanings, contexts, and causalities systematically occluded, distorted, or rendered invisible by *dataism* [3:53], aiming to contribute creatively to a critical perspective on the "assault of the bots" in higher education. It is dedicated to the memory of three dead men (one of them perhaps only a mythical figure): Ned Ludd, Piotr Kropotkin, and Jorge Bergoglio, the late Pope Francis.

## 2. Concerning Promethean Shame: Meaning, Context, Causality

The reasons that motivated the request to use English for the presentation of this text belong to the same disruptive scenario that now transforms us into actor-spectators of the "assault of the bots" on higher education and on all domains of social life. These are, admittedly, distinct issues, separated chronologically by roughly two decades; yet in both cases we can discern processes of expropriation serving particular interests marked by an excess of clarity—an effective way of obscuring the broader picture, where one cannot see the forest for the trees. For, as has been noted, "there is a blindness peculiar to excessive visibility" [4: 51], a blindness whose inexorable consequence is symbolic misery [1]. Under these circumstances, it is difficult not to be swept along by this torrent; accordingly, the retroversion of this text into English was accomplished with the assistance of the large language model ChatGPT, based on the GPT-5-mini neural architecture. In comparison with DeepSeek-V3 (who was also tested), this model

achieved a more precise, coherent, and academically polished result, successfully preserving the nuances, register, and complexity of the original Portuguese text[2].

At an earlier stage, we witnessed the expropriation of the professional use of Portuguese, following the already consolidated decline of French language and culture in Portugal, all in the name of "internationalization"—that is, the constitution of a new knowledge market dominated by the Anglo-Saxon world, with its obsession with metrics that determine merit and structure careers, where networked ambition and greed are redefined as virtues. This was the moment when universities became companies, students "clients," and knowledge a "teaching product," as anticipated by Jean-François Lyotard in *The Postmodern Condition* (1979) [5] and later by Bill Readings in *The University in Ruins* (1996) [6]. More recently, Peter Fleming has shown "how far universities have moved from a collegium of peers to hierarchical business enterprises" [7: 4], including accounts of institutional bullying and suicides, within an increasingly common scenario of burnout—what has been described as the collapse of the axes of resonance between the individual and the world [8]. Christopher Snook, Canadian poet and academic, has suggested moreover that Max Weber had already described, more than a century ago, the transformation of the university into a "capital-intensive corporate bureaucracy" [9].

In the specific case of my *alma mater*, ISCTE-IUL, this transformation occurred between 2006 and 2008, culminating in its conversion to the foundational regime—a public institution nonetheless governed by private law. One of the Rectorate's priorities during that period was precisely the determination of the "economic value of the Portuguese language," in line with the acceleration of the demands of the permanent metastization of value [10] that expands the sphere of the commodity into every domain of human activity—an essential trait of the new spirit of capitalism [11]. Under such logic, everything is to be priced: rivers and oceans, forests, glaciers, snow-capped peaks (rebranded as ecosystem "services"), and even the very emissions of greenhouse gases, now negotiable commodities within the "emissions rights" market. In such a grotesque scenario, how could the Portuguese language itself escape being defined by its "value," in terms of the business potential associated with its use? The reality, however, proved far more prosaic, reaching at once the limits of absurdity and pretension: events and even classes were conducted in English before audiences composed entirely of Portuguese speakers—English not as the language of Dickens, Kipling, Faulkner, or Steinbeck, but reduced to a transactional instrument, a functional pidgin of the peripheries of Empire.

In a second moment—the one in which we now find ourselves—LLMs, with their algorithmic expediency in processing languages, undertake the expropriation of human creativity as expressed in personal, inventive, autonomous writing: a form of expression that is, by definition, irreplaceable, and cannot be supplanted by the crippling

[2] The machines needed to operate Generative AI are voracious in energy demands. For GPT-5, energy consumption is 45 GWh. "This is enough to meet the daily electricity demand of 1.5 million homes in the United States. (...) OpenAI's data centers running GPT-5 at 18 Wh per query essentially require the power equivalent of two to three nuclear power reactors, which could be enough to power a small country." [63].

technophilia projected in the relation of voluntary servitude to so-called "artificial intelligence" (AI). The disruptive effects of these developments belong to a wider process of transformation, one that demands from us a critical understanding of certain phenomena for which anthropological reflection—in its broadest sense, and not merely as a disciplinary practice—remains indispensable. Central to this is the interrogation of the value-syntax of capitalism as manifested in the theology of Economics and in the myths that sustain the doctrine of Progress: the gospel of growth, the immaculate miracles of scarcity, and other hegemonic forms of morbid rationalism. Thus, critical inquiry into the "assault of the bots" on higher education cannot be separated from a broader effort to comprehend the profound implications of AI's introduction into other dimensions of social existence, across multiple "industries and facets of human life: scientific research, education, manufacturing, logistics, transportation, defense, law enforcement, politics, advertising, art, culture, and more" [12: 11].

Anthropology's critical engagement with the human impacts of AI must therefore be grounded in a holistic and systemic perspective, one capable of grasping the complexity of these transformations and interdependencies. At its foundation stands the ever-relevant framework elaborated by Marcel Mauss in his *Essay on the Gift* (1925), written in the very period when physics, through Heisenberg, was also consecrating the principle of uncertainty and, simultaneously, the notion—like Mauss—that the observer is always part of the observation. This represented the historical turn from an epistemology centred on the object to an epistemology of the subject. Decades later, at the turn of the 1970s, Heinz von Foerster's second-order cybernetics (with its "order from noise" principle) developed precisely as an epistemology of observing systems. From this creative shift where the concept of self-organization and the autopoietic theory of Humberto Maturana and Francisco Varela emerged—the so-called Santiago School (of Chile)—the anthropologists Gregory Bateson [13] and Margaret Mead actively participated. Positioning myself at a distance from the narcissistic excesses of certain nihilistic and identitarian strands of postmodernism, the question I find most pressing concerns the distinctive features of the subject-form required to meet the conditions imposed by the contemporary historical configuration of the value-form and the commodity-form. What are the now dominant modes of fetishistic inversion resulting from the transubstantiation of human life into dead labour accumulated as capital—a process aptly described by Anselm Jappe as autophagic [14]?

The consequences of this drift—induced by the global digital network and by LLMs, that "perfect reptile" already discernible through the thin membrane of its egg[3]—assume clearly totalitarian features. Yet, as Dany-Robert Dufour has argued [15, 16], these differ significantly from the totalitarianisms of the twentieth century, which operated under the sign of repression and prohibition. The new neoliberal totalitarianism, and the digital technologies through which it takes form, articulate a psychic economy attuned to the demands of a financialized mercantile order and its technolords, in which the regime of drives is inverted in a kaleidoscopic, mimetic proliferation. The tyranny of a repressive, castrating authority has given way to boundless freedom for the creation and circulation of commodities, for the unrestrained desire to consume them, and for the online staging of narcissistic self-exhibition within the immense spectacle of the "daily beastification

[3] Quote from the film "The Serpent's Egg" by Ingmar Bergman, 1977.

of human beings through means of disinhibitory entertainment" [17: 31]. With the pervasive presence of social networks, the deep dependence of both young people and adults on backlit screens, and the trivialization of LLMs, examples of this ontological hollowing [18] multiply rapidly, offering countless vignettes of what constitutes capitalism's most fervent dream: to mask servitude as freedom and democracy by totalizing the world in its own image and abolishing all exteriority [19]—in other words, the annihilation of the human in Humanity. Byung-Chul Han argues that "neoliberal psycho-politics differs from the biopolitics of industrial modernity, which operates through disciplinary compulsion and command" [20: 12] precisely by exploiting freedom itself. The suffocating internal atmosphere of capitalism, which Peter Sloterdijk once metaphorized through the iron-and-glass architecture of the nineteenth century, is consummated today in the digitalization of the world: "the whole of the existent and of the possible, reduced to a closed sphere of language, absolute in the absence of any 'outside' to it" [18: 52].

It is worth recalling that the harbinger of the "assault of the bots" on higher education was already discernible some years ago at my *alma mater*, in the enthusiasm of the Rectorate and various research sectors—ranging from the multiple "churches" of Economics to Computing, Technology, Sociology, and Political Science—for what was then celebrated as *Big Data*. This enthusiasm was imbued with the fetishistic fervour of *dataism*, hailed as a kind of "second Enlightenment," as Byung-Chul Han has observed [21]. In effect, "the human being itself is reduced to a data set, a variable that can be calculated and manipulated" [20: 82], a decisive condition for the full functioning of what Danish researcher and pacifist Jan Oberg has termed the MIMAC (Military Industrial Mediatic Academic Complex). Oberg defines this domain as "much broader, deeper, and more destructive than the Military-Industrial Complex that US President Eisenhower had warned his country and the world about in his farewell speech in 1961" [22]. *Big Data* consecrates psychopolitics [21] and is thus indispensable for the development of fifth-generation, non-kinetic warfare, which targets the cognitive sphere by computational means: influencing populations, modelling perceptions, shaping emotions, and managing beliefs. It also underpins electronic surveillance and information-gathering systems capable of pattern recognition, identifying individuals and objects, and devising techniques for the control and repression of both persons and crowds. Moreover, it enables offensive operations such as the deployment of AI-controlled swarms of killer drones, widely employed in the war in Ukraine and in the course of the genocide in Gaza.

The obsession with *Big Data* rests on ontological presuppositions tied to the psychosis of measure and quantity, and on the assumption of their ineffable equivalence to financial gain, a logic guaranteed by the services of a PMC whose necrophagous, utilitarian, and amoral ethos is consistently rewarded for its functional merit within the normative web of neoliberal capitalism. As Federico Campagna argues, "the record-shattering investments in Big Data systems and technology rest on the belief that there can't possibly be anything ontologically relevant that couldn't, at least potentially, be reduced (and reduced truthfully) to the serial units of the language of data" [18: 53]. Because this "data science" extends its predatory reach to virtually everything that exists, it accompanies the relentless expansion of the commodity form into all domains

of life and, in the process, confounds itself with reality itself—denying relevance to anything exterior to it.

The totalization of the world as language, computation, and measure revives and updates the old positivist and neo-positivist doctrines, while simultaneously animating new avatars of the Viennese holy alliances, notably that of Popper, Hayek, von Mises, and Friedman (the Mont Pèlerin Society). At the same time, it fuels the proliferation of extractive frontiers, accelerating the devastation of the biosphere and the progressive collapse of life-support systems. What we are witnessing is the culmination of the installation of the infrastructure necessary for data mining across the global digital network—which includes, crucially, the mining of human beings themselves. In this case, the devastated terrain is none other than the users, trained to accept, consent, and submit everything to a monster that is, assuredly, not the cookie monster. Digital extractivism, driven by *Big Data*, "intervenes and influences the human psyche without the person noticing. Digital psychopolitics degrades the human person into an object that is quantifiable and controllable" [3: 34]. Humans in the industrialized world, expropriated of their autonomous creativity and placidly reconciled with the illusion of Progress, are thereby reduced to the functional condition of being little more than living components of machines—resources to be managed by the elites who administer what Peter Sloterdijk has aptly described as the "human zoo" [17].

Contributions to a critical understanding of technology are not limited, however, to Philosophy and the reflections of Bernard Stiegler, Peter Sloterdijk, or Byung-Chul Han, nor to the classics Jean Baudrillard [23] with his notions of *simulacra* and *hyperreality*, or Paul Virilio [24] with his *dromology*. Setting aside the cyborg enthusiasms of Donna Haraway's posthumanism, it is worth emphasizing the invaluable work of Christopher John Muller [25] on one of the most incisive critics of technology: Günther Anders (1902–1992), author of the seminal *The Obsolescence of Man*, published in two volumes separated by more than two decades: *On the Soul in the Age of the Second Industrial Revolution* (1956), and *On the Destruction of Life in the Age of the Third Industrial Revolution* (1980). The theme of "Promethean shame," introduced at the outset of the first volume, leads us directly to one of Marcel Mauss's most remarkable disciples, André Leroi-Gourhan (1911–1986), the anthropologist and archaeologist who most consistently theorized technique as a constitutive attribute of human evolution. Furthermore, I share with Tim Ingold the conviction that anthropology can be defined as "philosophy with the people in" [26: 4].

For Anders, the obsolescence of the human is an ontological condition: humans are, and always have been, permanently surpassed by their own creations. This recalls the old Kabbalistic myth of the Golem, the creature that, once it escapes its creator's control, threatens the very life of the one who fashioned it. Norbert Wiener (1894–1964), the mathematician who founded cybernetics—the science of control in machines and living beings—expressed this very concern in his final work, *God and Golem, Inc.* [27], published posthumously in the year of his death, where he addressed the moral and religious dilemmas raised by machines capable of learning. Promethean shame is generally defined as "shame when confronted by the 'humiliatingly' high quality of fabricated things" [28: 30]. In this sense, humans in the industrialized world, increasingly

confronted with their own superfluous and socially precarious status vis-à-vis the design, efficiency, speed, and precision of machines, come to feel ashamed of their finitude, their vulnerability, and their limitations before technologies that, gaining greater autonomy, surpass and outlive them.

This is not simply a matter of machines attaining a degree of sophistication that makes them appear "smarter" than their users, in a reductive conception of intelligence as problem-solving capacity—a conception that underpinned the cognitivist model of first-order cybernetics, with its analogy between the brain and a computational machine processing inputs into outputs. This model was later supplanted by connectionism, the foundation of the neural networks from which LLMs are derived. Of far greater significance for the social sciences and humanities, however, was the emergence in the early 1990s of *enactivism*, an extension of autopoietic theory proposed by Francisco Varela, Eleanor Rosch, and Evan Thompson in *The Embodied Mind* [29]. This work—where the "new sciences of mind" intersect with Mahayana Buddhist philosophy—laid the foundation for a paradigm shift, showing perfect compatibility with phenomenologically oriented anthropologies such as that of Tim Ingold, and paving the way for the theory of the extended mind, anticipated by Gregory Bateson in *Steps to an Ecology of Mind* [13]. This trajectory gave rise to the 4E cognition approach—embodied, embedded, enactive, and extended [30]—which today also informs some of the most innovative strands of archaeology concerned with material culture [31, 32].

Let us, however, return to Promethean shame. As I suggested earlier, it is the remarkable sophistication of LLMs that imposes the progressive creative irrelevance of their users. Students who solicit ChatGPT to write their essays, teachers who use it to grade examinations, or healthcare technicians who request echocardiogram reports from it, all actively and enthusiastically collaborate in the very process that condemns them to irrelevance. In so doing, and without apparent shame or moral hesitation, they become agents in the expropriation of what most distinctly defines them as human: their creative imagination. Whenever an LLM is employed not as a mere servant of human creativity, but as its substitute, it inevitably absorbs even those who cling to the illusion of "responsible use" into its self-devouring, totalizing bubble—a system of metrics, rankings, and hierarchies that multiplies extractive frontiers and suppresses all normative nonconformity, rendering the non-quantifiable invisible, irrelevant, and eventually non-existent.

If there is any exceptionality proper to our species (and it must be remembered that elephants, crows, whales, rosebushes, cork oaks, rosemary… — all living species — possess their own exceptionality within the ontogenetic matrix of relations of which they are part), it certainly does not lie in the spurious notion of a "human nature" fabricated by the theology of Economics and the putrid dogmas of the "selfish gene," crafted for the delight of technolords and their permanent service hosts, 24/7, across the entire spectrum of the MIMAC, endlessly repeating the nauseating chants of market competition, survival of the fittest, and the elimination of the weak in the "struggle for life." The ignorance consented to by this sect reaches the point of positing the existence of an "entrepreneurship gene." Contrary to this pernicious doctrine and its propagandists, serious science shows that human exceptionality lies in imagination

[33]—the fruit of incompleteness, or neoteny, which distinguishes human primates from their close relatives and underwrites their immense adaptive plasticity. This, in turn, fostered highly innovative forms of cooperation and shared intentionality [34]. As Agustín Fuentes explains: "Countless individuals' ability to think creatively is what led us to succeed as a species. At the same time, the initial condition of any creative act is collaboration" [33: 2]. The centrality that molecular biology once claimed for genes as causal determinants (serving, in practice, the interests of BioTech and Big Pharma in their trillion-dollar industries) has hardened into a gross ideology—a continuation of nineteenth-century social Darwinism, fraudulently inverting reality [35, 36]. Genes do not determine the survival or choices of individuals; rather, it is the success or failure of individuals within their environmental niches—the ontogenetic development matrix, or *Lebenswelt*, of which they are part [37]—that will, in turn, determine whether their genes persist. Life, as we live it, is not the execution of a pre-existing "program," nor a mere epiphenomenon of drifting stochastic recombinations in a gene pool. It is, instead, the outcome of the "historically structured states of our own nervous systems" [38: 109].

In the very year of Norbert Wiener's death and the posthumous publication of *God and Golem Inc.*, the first of the two volumes of André Leroi-Gourhan's *Gesture and Speech* appeared, subtitled *Technics and Language*. The following year, 1965, saw the publication of the second volume, *Memory and Rhythms*. The central thesis may be summarized thus: the increasing complexification that accompanies the phylogenesis of motricity is grounded in successive processes of "liberation" of adaptive competences. In fish, for instance, the head remains merely an extremity of the body; in many species of amphibians and reptiles, however, the head achieves liberation, gaining autonomy of movement relative to the rest of the body; while in mammals and birds, new adaptive stages make possible still more specialized forms—limbs equipped with retractable claws, fins, or wings. With the process of hominization, however, something radically new emerges: the progressive exteriorization of technicity, enabled by the liberation of the tool, where the hand—freed from locomotor function and endowed with an opposable thumb—extends into manufactured artifacts in conjunction with vision; and likewise the liberation of the word, enabling the exteriorization of memory (and thought) into the social body. Bernard Stiegler would later name this process *exosomatization*—"being another name for what one calls more generally technics" [39: 9]. For Leroi-Gourhan, "Man is progressively led to exteriorize increasingly higher faculties" [40: 67]; and thus, moving from the paleoanthropological terrain into contemporaneity, the notion allows us to intuit that under concrete historical circumstances the gates of dehumanization are thrown wide open, condensed in the most terrifying acts of expropriation and, concomitantly, in their sad and alienating invisibilization: "'Dehumanisation' does not alarm the dehumanised, for it does not belong to their area of responsibility" [28: 44]. What is exteriorized can be appropriated, controlled, instrumentalized in the service of the winners of the "struggle for survival," and enlisted as a source of narratives extolling the victorious miracles of Progress and Civilization, of Freedom and Democracy. Who, after all, would dare not applaud the uncontestable superiority of "our values" against the "jungle" of the peripheries—against those enemies situated in the exterior domain of this Dantesque, hierarchical (and vigilant) concatenation of neural networks and sociopolitical dispositifs, sustained

by the constant swarming of billions of terminals, with their codes, cameras, service bots, the Internet of Things, the cloud, the drones...? Counter-narratives grow scarce and are destined for annihilation. We must, therefore, recall the wisdom—already six decades old—of Leroi-Gourhan, when he warned that "currently, adaptation has not yet ended: evolution now approaches a new level, that of the exteriorization of the brain and, from a strictly technological point of view, the mutation has already taken place" [40: 51].

The "cyborg-economy" [41] likewise represents, ultimately, the suppression of the exteriority of nature, its internalization into the sphere of *dataism* that generates new flows of capital. The accelerated destruction of ecosystems and of the human communities inhabiting them—by the proliferation of extractive fronts, by industry and by war—appears instead as an opportunity to reinforce the hegemony of the technolords and the infamous priesthood of their oligarchs, even within the dominant narratives of the Anthropocene. Paul Crutzen, the author of the term, was unequivocal: "the old barriers that once separated nature from culture are collapsing. It is no longer us against 'Nature,' but rather us deciding what nature is and what it will become. […] In this new era, Nature is us" [42: 80]. Anthropologists, in fact, have long recognized the recurrence of creative homologies between how human groups speak of nature and how they approach otherness [43], producing the vast range of possible variations that Eduardo Viveiros de Castro called the "symbolic economy of alterity" [44]. Such conceptual tools in anthropology are particularly pertinent when confronted with the pedagogical challenge of rendering visible not only the effects of the colonization of our imaginaries by the soteriological doctrine of Economics [45] but also of grasping the digital totalization of the world as a phenomenon of internal colonization, without which the MIMAC could never decree the abolition of exteriority—while simultaneously promoting the vilest ethnocentrism and xenophobic violence against external and internal enemies alike, including cognitive warfare [46]. Paul Virilio, indeed, writing in 1998 on advances in human genome mapping, identified precisely such a phenomenon of *endocolonialism* [24: 55; 47].

For all these reasons, the *hybris* of engineering never ceases to astonish: whether in the borderline delirium of those who now propose to alter and rewrite the molecular language of which, to a large extent, we ourselves are composed (gene editing); in the bizarre recipes advanced to modify the functioning of the Earth system (geoengineering); or in the characteristic fervor of morbid rationalism heard in the pathetic pronouncements of the priests of *dataism*—for instance, "we will solve the problem of climate change with technology,"[4] or "What I criticize the US Administration for in the invasion of Iraq is the fact that it did not use a much more destructive force to annihilate all the enemy's pretensions. (…) If tactical nuclear weapons were necessary, then they should have been used."[5] Both statements, it should be noted, were made by prestigious scientists from Portugal's most important technoscientific hub, the Instituto Superior Técnico (IST)—both ardent advocates of nuclear energy. Let us not forget: the

[4] Sampaio Nunes, from IST, on the television program 'Prós & Contras', hosted by Fátima Campos Ferreira, episode 25, "O Petróleo da Discórdia", September 10, 2018.

[5] Pacheco de Oliveira, from IST, on the blog 'Sorumbático', commenting on the post 'Arrogância Imperial' by Alfredo Barroso, October 28, 2006 [64].

atomic bomb and Cybernetics are twin sisters, born of war, of the demands of imperial domination, and of the devastating death drive of capitalism.

Also in 1964, the thesis of the progressive exteriorization of technicity was confirmed by one of the prophets of the global digital network, Marshall McLuhan (1911–1980), who observed that "with the arrival of electric technology, man extended, or set outside himself, a live model of the central nervous system itself" [48: 57]. This was still long before the advent of personal computers, smartphones, the Internet, virtual-reality prosthetics, neural helmets, drones, or LLMs. McLuhan, however, was already attentive to the "amputations" implicit in each technical extension of our senses, as well as to the narcotic drowsiness induced by the media. From the 1970s onwards, the introduction of telematics into the banking system marked a decisive stage in accelerating the velocity of capital circulation, paving the way for the present infrastructure of millions of transactions per minute—a world driven by money, where, in the image of Sloterdijk's nineteenth-century Crystal Palace, "being human becomes a question of purchasing power" [17: 22]: a hell capable of sucking everything into its orbit, dragging all into the gravitational field of the commodity, transforming even the brains of its inhabitants, not least through the deleterious synaptogenic effects of addiction to backlit screens—the very sites of human mining—above all in children and youth [49]. Confronted with the threats of the twentieth century and propelled by the immense acceleration of digital technologies, capital thus took flight, entering into an orbit "beyond the relations of production and political contradictions, to make itself autonomous in a free-floating, ecstatic and haphazard form, and thus to totalize the world in its own image" [23: 10].

In the 1960s, we were likewise still far from the exteriorization of the eye through the drone—whose operational role has, in the past two years, decisively reshaped the conduct of war—and from the complete sequencing of the human genome, achieved only at the start of this millennium. Yet Gunther Anders, in his reflections on Promethean shame, had already intuited the essential in relation to the inevitable *mecanhumanimal* [50] destiny to which this primal narcissistic wound condemns us. At a technology exhibition, in observing the behavior of his companion and the sense of inferiority and shame provoked in him by the perfection of the technical object, Anders remarked that this sentiment reached back to its very origin: the man felt ashamed "about having naturally grown instead of having been made. He is ashamed because he owes his existence to the blind and uncalculated, the highly archaic process of procreation and birth" [28: 30]. Today, this has become banal among certain elites: a delirious form of cyborg-technophilia oriented toward becoming "improved" humans, toward achieving immortality, conquering disease and death, and thus repairing Promethean shame. In this grotesque anthropophobic psychosis, to be born of the relation between a man and a woman (a relation which identitarian newspeak now discriminates as "cisgender") becomes, indeed, an uncomfortable archaism[6]—a mirror of the ultimate expression of Promethean shame. The abolition of nature here also entails that the biological condition of the individual can be dominated, artificially altered, and conquered, under the new universal "freedom" to "be whatever one

[6] Transhumanists rejoice at the possibility of the abolition of coitus, as explained by Jamie Metzl in an interview with the weekly 'Sábado' on September 27, 2020: "Reproductive sex will end, it will be safer to use science".

wishes"—a freedom that extends to acquiring a child by purchase, through technology and the market. For the time being, such claims to a "right" are legitimated under the pressure of new reproductive markets—a highly lucrative sector with multiple niches, ranging from well-funded laboratories and clinic networks [51] to small-scale cross-border entrepreneurs [52]—supported, naturally, by the extraordinary advances in Assisted Reproductive Technology (ART), the new neoliberal eugenics. A "surrogate womb" may already cost €150,000 in the United States, €50,000 in Ukraine (where, following the US-engineered regime-change of 2014, the industry has flourished, with companies like BioTexCom even offering Black Friday sales), or €30,000 in Nigeria[7].

We know that in the process of hominization the premature exteriorization of gestation (*neoteny*) arose from an adaptive compromise between the dimensions of the fetal cranial box and those of the vaginal canal, and that this prematuration, or juvenility, was the essential condition for the development of the multiple grammars of human incompleteness [53]: the exteriorization of technicity, whereby individuals extend the diverse bundles of their motricity into tools, in ever greater sophistication, leading to the manufacture of sensory extensions and complex prostheses; the exteriorization of memory and thought; the exteriorization of the brain, the central nervous system, and the eye. The consummation of this trajectory will be the exteriorization of human reproduction itself—ectogenesis [54]. Science, industry, and finance will leave no stone unturned in hastening the sordid path toward this outcome. Already, investments and specialized literature in artificial wombs, *biobags*, and ectogestation multiply. And, as might be expected, the entire transhumanist program (human engineering, biotech, genetics, implants[8], *Big Data*, LLMs…) cloaks itself in the rhetoric of altruism and the ostensible desire to "help mothers," "help babies," and so forth. The media, in turn, accustoms the herd to the new anthropotechnics [17] and celebrates the virtues of Progress, parading grotesque instances of technolord *hybris*: "Silicon Valley: 'tech bros' will design the babies of the future," headlined *Expresso* on 13 March of this year. Such examples abound—a permanent wager on the homogenization of perceptual experience through the "mass synchronization of consciousness and memory" [55: 51]. Thanks to gene-editing techniques such as CRISPR-Cas9, our future is one of catalogued humans, produced in laboratories with specifications chosen from a price list. The long-awaited Singularity in machine languages is not limited to the autonomy of digital Golems competing with their creators for absolute power, as in Philip K. Dick's *Vulcan's Hammer*. It signifies, rather, the eradication of Promethean shame and, with it, the annihilation of humanity itself.

Beyond the intellectual and socio-political dynamics of the transhumanist program imposed by the MIMAC—rendered invisible precisely by the excessive clarity of its objectives and by what Barbara Stiegler termed the "ideology of cognitive biases" [56]—we may consider further implications of the "refusal of the 'lottery of birth'" [25: 102]. As Henri Atlan explained, the sense of original lack (Promethean shame) before the perfection of the fabricated "other" necessarily confronts the fact that "perfect knowledge, never being possible, can only be an illusion. A certain randomness of birth

[7] Current price tables here: [65].

[8] Human 'chipping' has been practiced in Sweden since 2015 [66] and is often celebrated with parties by the chipped workers themselves. An overview of the transhumanist fraud here: [67].

thus becomes precious, something to respect, if one wants to preserve, if nothing else, a possibility of an autonomous person" [57: 57]. An LLM can never assume the status of an autonomous observer endowed with intentionality, capable of discerning meaning in an unforeseen happy event—in a serendipity—for the capacity to bring order out of noise (negentropy) depends on the recognition of a pattern or significant event by an observer, beyond the mere internal stochastic regularities generated by the neural-network architecture of an LLM. Machines may produce information, but only humans create meaning; only they can endow the world with significance, creatively and without concession to the cruel and devastating *pleonexia* of the technolords and their acolytes.

This requires an ethics of resistance: one distanced from television and sports competitions, from smartphones, LLMs, entrepreneurship, and financial literacy obsessions—the very forces that have displaced conviviality from music, dance, theatre, literature, and walking. The unfolding disaster of the Necrocene has brought with it the accelerated destruction of biodiversity and the climate crisis; the alienation of Life through the triple refusal of birth, death, and sexuation; the cognitive war that transforms individuals into weapons, through the uncritical reproduction of memes and narratives manufacturing the enemy and dragging Europe into the abyss[9]; the live-broadcast genocide in occupied Palestine; and—within the academy—the "assault of the bots" on the University. This symbolic misery appears irreversible, even if one still insists that life can bear no meaning other than the pedagogical task of continuing to humanize humanity and defend the cause of the commons—even if only through art, writing, and the word—"the power of the word against the word of power," as Professor Adriano Moreira tirelessly insisted. As we watch disaster unfold, while everything and everyone seems to command us to "adapt or die!," I share with Tim Ingold the only (im)possible hope: "the hope that the current trajectory of society will crumble, that it will collapse. Then, we will have the opportunity to build on other foundations" [58].

## 3. Epilogue

Marty Neumeier, celebrated by many as a "design guru," proposed in a 2013 book five *metaskills* necessary to confront the robotic age [59] and to resist the "assault of the

[9] It is early September 2025. France is on the verge of 'default' and having to resort to the IMF; the German Chancellor, a former executive of Black Rock Inc., announces the unsustainability of the Welfare State and increases public investment in the military sector exponentially, after having proclaimed in Berlin on May 5, 2024: "Germany is back!". In Brussels, headquarters of the EU-NATO pair, the feat of turning extortion into a virtue of "our European values" has been achieved: getting the European Parliament to approve the increase in public spending destined for the defence sector to 3.5% of GDP, with several member states paving the way for the required (by Donald Trump and the NATO Secretary General) 5%. Vladimir Putin, the leader of the Russian Federation, is publicly insulted by the EU establishment as a 'war criminal', 'ogre', and 'predator'. All diplomatic channels between the EU and Russia are closed and China is increasingly presented as a threat. Dietrich Bonhoeffer (1906-1945), who was hanged in a Nazi concentration camp just days before its liberation by the Soviet army, wrote in prison what best suits the present circumstances: "at this very point it becomes quite clear that only an act of liberation, not instruction, can overcome stupidity. Here we must come to terms with the fact that in most cases a genuine internal liberation becomes possible only when external liberation has preceded it." [68: 22].

bots." Strikingly—or perhaps predictably—these capacities are precisely those cultivated within Anthropology, and I venture to interpret them here in anthropological terms. The first is *feeling*: the cultivation of empathy, without which it is impossible to "place oneself in another's shoes" and thus to intuit, share, and understand the lived and narrated experiences of those with whom we interact. This constitutes a form of social intelligence not to be confused with the instrumental "empathy" demanded by the PMC to maintain worker docility and increase profits, nor with the productivism's perversions of Buddhist mindfulness or other commodified delusions—financial horoscopes, business tarot, and the like. The second is *seeing*, understood as the practice of direct observation coupled with a systemic, holistic perspective that situates phenomena within broader networks of meaning and causal concatenation. In other words, one must never neglect the contexts and historicity of what is observed, nor the relational processes in which the act of observation itself is embedded. A third *metaskill* is *dreaming*, the exercise of creative imagination, applied both to contexts of observation and to processes of learning and writing, as a way of resisting disciplinary narrowing. A fourth is *making*, which entails the creation of conceptual models and the testing of prototypes—of ideas, forms, and relations—whether through mind-mapping with nothing more than pens, markers, drawings, and photographs, or through techniques inspired by mathematics, such as set theory, matrices, or topology. Finally, *learning* emerges as a fifth and integrating skill: self-directed inquiry sustained by passionate curiosity, which embraces the virtues of amateurism. In this sense, Tim Ingold, following Edward Said, reminds us that "all true scholars, I believe, are amateurs. Literally, the amateur is one who studies a topic not—like the professional—in order to stage a career, but for the love of it, motivated by a sense of care, personal involvement and responsibility" [60: 11], and above all, "in a way that cannot be dissociated from their whole way of living in the world" [61: 117].

For the presentation of these five metaskills, Neumeier quite aptly invoked the image of the hand with its five fingers, assigning self-learning to the thumb. The anthropological significance of the hand is practically boundless, extending far beyond neoteny, technicity, and the grammars of incompleteness [53] discussed earlier in this text. The hand is also an organ of communication, opening possibilities for expressiveness and creativity that reveal the interiority and intentionality of the Being thrown into the world. In the immeasurability of its designs, "human hands are much more than instruments for manipulation—indeed, they are caressing organs. The fingers of the human hand can be extended fully as well as delicately flexed, allowing the hand as a totality to accommodate to any curved surface of the body in a caressing touch, more or less in the same manner that the tongue of other animals does. In modern human beings, hand caresses occupy the whole hand with the fingers flexing adequately to fit the caressed surface in a gentle holding touch" [62: 57]. Thus the hand that writes, draws, paints, and plays strings, that offers, nurtures, and caresses, emerges as both instrument and symbol of an increasingly necessary ethics of resistance to robotization and zombification. Against the "assault of the bots," the contribution of the Social

Sciences and Humanities—and of Anthropology in particular—is indispensable, if we dare to remain human [41].

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