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# DREAMING IN THE DIGITAL AGE: THOUGHTS ON THE TECHNOLOGICAL PHARMAKON

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## Technological evolution

The artefact is the mainspring of hominization, its condition, and its fate.  
(Bernard Stiegler)

### Prelude

Whether it be in paintings, the written word, or cinematic images, through microscopes, telescopes, telephones, or televisions, technology has always been the means by which we articulate and give form to reality. Digital technology is the most recent way of modulating and making sense of what we experience, and it has brought, in its tow, the virtual world, an unprecedented aesthetic and existential dimension that subverts our ways of seeing and perceiving and, hence, of what we conceive as real and important. Moreover, the increasing intertwinement of natural and digital environments, the inexorable flow between virtual and real that we are experiencing in our present day-to-day, is literally transforming our human form of life and raising deep and urgent ethical, aesthetic, and religious questions for our posthuman condition.

Now, as the Greek myth tells us, it is an archetypal feature of technology to possess us with the unconscious recklessness and irreverence of the titans. But it is also archetypal of technology to inspire us to po-

etic reverie, to dream beyond our limits, providing thus, also, the creative impetus that has sustained our engagement in the vital flow of the cosmos. Technology is a remedy to our original precariousness, but it is also a poison. As Bernard Stiegler puts it, “it is at once a human power [pouissance] and the power for humanity to destroy itself”.<sup>1</sup>

The Greeks named this paradoxical condition the *pharmakon*.<sup>2</sup>

## Pharmacology and disavowal

At the very heart of human being resides the technological *pharmakon*. It is perhaps our greatest power, though it also involves the risks and perils of its pharmacological nature. We are burdened by an impulse that can be both creative and self-destructive, but instead of acknowledging the paradox at the center of our being, and dealing with its complexity – especially when it shows its poisonous aspect – we naturally tend to disavow and to polarize. As Stiegler points out, when the *pharmakon* reveals its toxicity, we immediately look for a *pharmakos*, a scapegoat, rather than collectively change our relationship towards the *pharmakon*.<sup>3</sup>

We are blessed with the theoretical capacity of reason but also burdened by its dissociative power, and so, perennially haunted by its dichotomizing. We have learned to see (and can't help seeing) everything in polarities: black or white, good or bad, male or female, homosexual

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<sup>1</sup> Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus* (Stanford: Stanford University Press, 1998), 85.

<sup>2</sup> *Pharmakon* (φάρμακον) referred for the Greeks to what was both a poison and a remedy. In Plato's Dialogue on Phaedrus, *Pharmakon* is described as a drug containing both the power of the poison and the power of the remedy. Also, *Pharmakos* was a scapegoat, a slave, or a criminal, sometimes a foreigner, who was chosen to be expelled from the city and apparently beaten, stoned, or even executed in a sacrificial ritual to purify the city and protect it from any misfortune such as invasion, famine, war, or plague. In the 20th century, Jacques Derrida reinstated the double meaning of *Pharmakon*, which had tended to be polarized and separated in the tradition, in his idea of the binary oppositions that underpin the Western way of thinking. Bernard Stiegler makes the *pharmakon* central to his reflection on technology, advocating a pharmacological attitude whose main point is to hold the tension and realize that in considering technology we must keep in mind its irreducible ambivalence and paradoxical character.

<sup>3</sup> Bernard Stiegler, *What Makes Life Worth Living: On Pharmacology* (Cambridge: Polity Press, 2013).

or heterosexual, biological or cultural, human or machine? And when it comes to technology and nature, we are binary as well: it is either nature or technology, so we defend nature and scapegoat technology, or vice versa, ignoring that they are merely two *inseparable* aspects of the same phenomenon. For us humans, there is no nature preceding technology, and no technology that's not already natural. As Daniel Ross writes, "history cannot be thought according to the idea that humanity is the 'subject' of this history and technology simply the object. When it comes to the relation between the human and the technical, the 'who' and the 'what' are in an undecidable relation".<sup>4</sup>

We must deliberately begin to think of the relation between nature and technology as a complex and dynamic unity about which we need to acquire perspective, acknowledging the intrinsic relation of technology, its nature, use, and purpose, with (our own) nature. This means, however, also acknowledging the fact that not only our ideals and aspirations but also our shadows are all projected on technology, so that unraveling its complexity is dealing with our own.

Criticizing those that think of technology as an external tool aimed at garnering power and control, Walter Benjamin contended that "technology is not [for] the mastery of nature, but *of* the relation between nature and man".<sup>5</sup> If technology is to be mastery over anything,

[I]t would have to be over our relation to the world, over how to manage or live with the new nature that [technology] opens around us. [...] We should learn to see [...] technology as an event of life that speaks to (and from) the deepest levels of human consciousness. Understood in this way, any event in the world [...] insofar as it involves our technological presence in the world, becomes a sign from which to learn.<sup>6</sup>

The polarization of technology and nature into which the world drifts more and more as we advance into this century – some trium-

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<sup>4</sup> Daniel Ross, "A Summary of Bernard Stiegler, *Technics and Time, 1: The Fault of Epimetheus*," *Academia*, August 23, 2019, [https://www.academia.edu/20136235/A\\_Summary\\_of\\_Bernard\\_Stiegler\\_Technics\\_and\\_Time\\_1](https://www.academia.edu/20136235/A_Summary_of_Bernard_Stiegler_Technics_and_Time_1).

<sup>5</sup> Walter Benjamin, *One Way Street and Other Writings* (New York: Harcourt Brace, 1979), 104.

<sup>6</sup> Richard Frankel and Victor J. Krebs, *Human Virtuality and Digital Life: Philosophical and Psychoanalytic Investigations* (London & New York: Routledge, 2022), 17.

phantly hailing technology, others gloomily warning about the approaching doomsday – ignores the pharmacological facts and makes us victims of our own (in this case, digital) unconscious. What we need is rather to be awake and take these facts on. We need to learn to think pharmacologically and avow the underlying paradox.

That, of course, requires a radical change in attitude. We need to collectively change our relation to the technological pharmakon. We must begin to see it not as something outside us, not as a tool external to us, but as something that grows out of the human psyche and demands, therefore, not just intellectual but also psychological acuity. Indeed, it demands a deliberate introversion and careful introspection. The matter is of fundamental import, for, “[A]t this moment when humanity’s power increases in an unprecedented and incalculable way, the world appears to be becoming more dehumanized, destructive, and denaturalized [...] the question becomes, once again: What is the human?”<sup>7</sup>

### Beyond binaries

Not so much a special type of animal, as a deficient god.  
(Daniel Ross)

Outside the familiar polarizing dualism, we might more accurately characterize the relationship between technology and nature as one not of interaction but of “intra-action”, adopting Karen Barad’s coinage. Whereas in “interaction” there are separate individual agencies that precede their encounter, “the notion of intra-action recognizes that distinct agencies do not precede, but rather emerge through, their intra-action.”<sup>8</sup> Technology<sup>9</sup> emerges simultaneously with human conscious-

<sup>7</sup> Ross, “A Summary of Bernard Stiegler.”

<sup>8</sup> Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Durham: Duke University Press, 2007), Kindle.

<sup>9</sup> I am using ‘technics’ and ‘technology’ as synonyms here, though it is important to keep in mind that ‘technology’ refers to the “specific amalgamation of technics and the sciences in the modern period” (Stiegler, *Technics and Time*, I, 280–81), while Stiegler uses ‘technics’ to refer to what he calls “organized inorganic matter.” For him, it is the preservation of epigenetic experience (epiphylogenesis) in technical objects, that marks the break with genetic evolution. As he puts it, as a ‘process of exteriorization,’ technics “is the pursuit of life by means other than life” (Stiegler, *Technics and Time*, I, 17).

ness. According to Leroi-Gourhan, “it is the tool, that is *tekhmnē*, that invents the human, not the human who invents the technical [...] the human invents himself in the technical by inventing the tool, by becoming exteriorized techno-logically”:<sup>10</sup>

Interior and exterior are consequently constituted in a movement that invents both one and the other: a moment in which they invent each other respectively, as if there were a technological maieutic of what is called humanity [... that] produces the illusion of succession.<sup>11</sup>

Without technology, Stiegler adds, “there could be no mind, no recall, no memory of a past that one has not personally lived, no culture”.<sup>12</sup> Technology, we could say, is the prosthesis of human consciousness that externalizes and objectifies it, making us self-conscious and accessible to other consciousnesses. All technical or technological artifices have served from the beginning of human history as traces that help us construct a collective memory, an artificial past that is not one’s own but that must become one’s own, must be “inherited” as one’s own history. Whether those traces are tools, works of engineering, words written on tablets, creations of architecture and art, cinematic images, etc., these traces (of whatever nature they may be) serve our technical evolution. They function as material supports, mnemotechnics, upon which human consciousness and memory are extended beyond individual experience. These mnemo-technical traces, or tertiary retentions (as Stiegler calls them, alluding to Husserl’s phenomenological analysis of temporal consciousness), include more than just technical artifacts. Stiegler thinks of them as an “associated milieu”,<sup>13</sup> which comprises the entire human habitat, all the structures and dimensions that constitute our forms of life and provide human beings with the external organs needed for survival and evolution. As Sebastian Olma explains, we are talking of an “organological’ infrastructure”, of objects, artifices, tools,

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<sup>10</sup> Bernard Stiegler, *Technics and Time*, 1, 141.

<sup>11</sup> Bernard Stiegler, *Technics and Time*, 1, 141.

<sup>12</sup> Bernard Stiegler, *Technics and Time*, 3: *Cinematic Time and the Question of Malaise* (Stanford: Stanford University Press, 2011), 39.

<sup>13</sup> Couze Venn, Roy Boyne, John W. P. Phillips, and Ryan Bishop, “Technics, Media, Teleology: Interview with Bernard Stiegler,” *Theory, Culture & Society* 24, no. 7–8 (2007): 335, <https://doi.org/10.1177/0263276407086403>.

but also social institutions through which human beings relate to themselves, each other and the world, thus making us who we are in the most basic sense.<sup>14</sup>

The technical form of life, as Stiegler points out:

[B]reaks with evolution as Darwin had taught us to understand it, for it changes the conditions in which life evolved prior to the rise of humankind, this promethean race. The moment the first tertiary retention was invented, be that a tool to carve stones or a brush to paint, a spear or the wheel, evolution no longer followed merely natural causality.<sup>15</sup>

This vision of the place of technology in human consciousness tears down the wall that splits technology and nature and stresses instead the original hybridity of our species. It stresses technology's emergence from our very being, constituting it and everything that surrounds us. Our evolution is not only biological but also technical, not just genetic but also memetic. It is the unfolding of a form of life "that is no longer just the endosomatic evolution of the biological life of the biosphere, but rather technical life, which produces organs that extend outside the body of the organism, without which the organism cannot survive."<sup>16</sup>

Exosomatic evolution is the process whereby external technologies – such as writing tools, and digital media – become extensions of human cognition and memory, means by which we come to apprehend and constitute our world. Technological artifacts and systems become integral parts of our cognitive processes and affect how we experience and understand the world around us. They modulate our perceptions, shape our modes of thinking, and contribute to the formation of our identities. By storing and transmitting cultural and cognitive content across generations, they spatialize temporal consciousness, transforming the temporality of our memories and expectations into the spatiality of the

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<sup>14</sup> Sebastian Olma, *In Defence of Serendipity: For a Radical Politics of Innovation* (New York: Random House, 2016), 115.

<sup>15</sup> Bernard Stiegler, *The Age of Disruption: Technology and Madness in Computational Capitalism* (Cambridge: Polity Press, 2019), 159.

<sup>16</sup> Daniel Ross, *Psychopolitical Anaphylaxis: Steps towards a Metacosmos* (London: Open Humanities Press, 2021), 10.

intersubjective, which enables their repetition and exteriorization”,<sup>17</sup> and the formation of collective experience and memory.

But in that new freedom we are confronted with the paradoxical nature of technology that condemns us to the perennial risk of self-annihilation epitomized by what Stiegler has called the Fault of Epimetheus: a radical obliviousness at the core of our technological being, the cursed seed Prometheus planted in our hearts, that always comes to haunt us.<sup>18</sup> Therein lies the pharmacological danger, whereby our evolution may turn against itself. Indeed, as Karen Barad observes, “the recent convergence of biotechnologies, information technologies, and nanotechnologies reconfigures the human and its others so rapidly that it is already overloading the circuits of the human imagination.”<sup>19</sup>

### Dreaming

This world is but a canvas to our imagination.  
(Thoreau)

How the world is constituted and becomes an object of consciousness and judgment is a fundamental problem that has occupied the human intellect from its origins. It must indeed be a mysterious power of the mind that is able to assemble, out of the perplexing array of sensible stimuli, a meaningful unity before our awareness. For our whole philosophical tradition, since at least Aristotle, the imagination is at the root or base of all cognition. Kant (1787/1965) called that power *the transcendental schematism* or *synthesis of the imagination*, and described it as “an art, hidden in the depths of the human soul, whose true modes of action we shall only with difficulty discover and unveil”.<sup>20</sup> However, in its tendency to over-intellectualize, Kant and the philosophical tradition disembodied and subordinate the imagination to reason, demoting it to a lower kind of knowledge; hence, aesthetics is tradi-

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<sup>17</sup> Stiegler, *The Age of Disruption*, 159.

<sup>18</sup> Stiegler, *Technics and Time*, 1.

<sup>19</sup> Barad, *Meeting the Universe Halfway*, location 716.

<sup>20</sup> Immanuel Kant, *Critique of Pure Reason*, trans. Norman Kemp Smith (New York: MacMillan, 1965), B180–B181.

tionally seen as secondary to epistemology.<sup>21</sup> But psychoanalysis rather delves into those hidden depths by introducing the unconscious and hence the body into the equation. Wilfred Bion's theories of dreaming broaden the epistemological perspective and turn it around.<sup>22</sup> Rather than making it derivative, Bion makes the imagination fundamental. And whereas for Kant, the imagination mediated between pure reason and sensible impressions (what he called intuitions), for Bion, the matter also involves the imaginative articulation of affect and emotion; in other words, not just of sense-perception and the understanding, but also the unconscious. Kant disavowed the emotional and unconscious dimension of experience, except perhaps to name it and then disinherit it as the noumena – the unknowable things-in-themselves.

Bion ascribes the task of Kant's transcendental imagination to what he calls the alpha function (or dream work alpha), which is not merely a symbolic processing – as one might expect from the work of the understanding – but an emotional and material metabolization. The alpha-function works on the raw (unmetabolized emotional) materials of experience (Bion's 'beta' elements) by dreaming them. The alpha function constitutes what we could call with Stephen Asma "an embodied improvising imagination",<sup>23</sup> that transforms emotional experiences into assimilable (Bion's 'alpha') elements, accessible to recall and synthesis, and capable of generating dream thoughts and/or unconscious phantasies. Strung together and articulated, they become the precursors of memory, feelings, and thoughts-about-thoughts (cf. Grotstein).<sup>24</sup>

In bringing in dreaming, Bion provides psychoanalytic depth to the epistemological and transcendental understanding of experience articu-

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<sup>21</sup> It is, of course, not the entire philosophical tradition that falls into this category. One sometimes overemphasizes in order to bring out something that is otherwise taken for granted. It is fair, however, to take the main thrust of Western thought to have assumed the transcendental critique of knowledge developed by Kant; our generalized prejudice in favor of scientific rationalism resulting from it has had the effect we are outlining in what follows.

<sup>22</sup> Wilfred Bion, *Learning from Experience* (London: Karnac Books, 1984).

<sup>23</sup> Stephen Asma, *The Evolution of Imagination* (Chicago and London: University of Chicago Press, 2017), 6.

<sup>24</sup> James S. Grotstein, "Dreaming as a 'curtain of illusion': Revisiting the 'royal road' with Bion as our guide," *The International Journal of Psychoanalysis* 90, no. 4 (2009): 733–752, <https://doi.org/10.1111/j.1745-8315.2009.00155.x>.



lated in Kant's schematism, acknowledging the psychic complexity of the constitution of experience and highlighting the impact of unconscious processes upon it. To dream is to work via the alpha function, from the formlessness of impressions, i.e., beta elements waiting for metabolization, to alpha elements.

For Bion, dreaming happens not only during sleep but also while awake.<sup>25</sup> Alpha elements cohere as they proliferate to form what Bion calls the contact-barrier, which serves as an 'active and living filter'<sup>26</sup>, continuously in process of formation, that keeps reality separate from fantasy, consciousness from the unconscious, while at the same time connected, so that fantasy continues to nurture consciousness.

We dream, not just to protect sleep, but to be able to create a contact barrier between the realms of consciousness and the unconscious. Further, we dream – by day and by night – in order to transform (process) the moment-to-moment flow of our experiences of ourselves and others. [...D]reaming is the obligatory beginning of thinking.<sup>27</sup>

The alpha function contains in the unconscious those affective aspects of our experience that would interfere with our ability to distinguish reality from fantasy, grounding us thus in the actuality of the world (cf. Bion).<sup>28</sup> But, at the same time that it guarantees their separateness, it maintains the flowing interchange of consciousness and the unconscious, alphabetizing beta elements, from which it is then able to project and materialize the dreams out of which we construct reality.

Like Hermes, the alpha function is a creator of new spaces; it gives form to the inchoateness of sensibility and draws a boundary between the formlessness of vital life and the new order of consciousness. While we sleep, dreaming performs an internal depth-processing of our daily experience, where the raw affective material is contained and then

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<sup>25</sup> Wilfred Bion, *Cogitations* (London: Karnac Books, 1992), 43.

<sup>26</sup> Paulo Sandler, *The Language of Bion: A Dictionary of Concepts* (New York and London: Routledge, 2010), 158.

<sup>27</sup> James S. Grotstein, "'We Are Such Stuff as Dreams Are Made On' – Annotations on Dreams and Dreaming in Bion's Works," in *Dreams in Group Psychotherapy: Theory and Technique*, eds. Claudio Neri, Malcolm Pines, and Robi Friedman (London and Philadelphia: Jessica Kingsley Publishers, 2002), 111.

<sup>28</sup> Bion, *Learning from Experience*, 15–16.

transformed into dream contents, into psychic events from which we are able then to construct the world. Dreaming thus lays down the ground for the constitution of external reality – not just its form but also its content, not just its epistemological structure, but also its psychological texture. It therefore constitutes reality from a logic that is not only causal but also ludic and serendipitous, a logic that regulates the flow behind the spontaneity and surprise that allows for creativity to happen.

### An organology of dreams

Bion's alpha function, then, propels what Stiegler conceives as the exosomatic extension of human being, transforming the raw data of sensory experience into elements that are fit for thought. But, as we have seen, it is the technological artifacts, acting as tertiary retentions, that enable the transformation of *the temporality of subjectivity* into a public space of *memories and expectations*. It is the tertiary retentions that make possible the projection and adoption of collective dreams.

In a general way, all technical production of the technical form of life, by the desiring and dreaming beings that we are, constitutes such a spatialization of experience and thereby also enables its inter-generational transmission.<sup>29</sup>

Just as in Bion, with Stiegler we construct the world through our own projections and based on the memories of what we have previously perceived and processed, which alter, enrich, and deepen our perception with every new experience. But Stiegler stresses the fact that we cannot think of the process that is going on in the psyche unless we have already constructed an external prosthesis, which makes that thought possible. In the perception of any temporal object, it can never be purely or simply constituted by primary and secondary retentions alone, but only through a process of imaginative selection made possible by an external memory (a tertiary retention). In other words, without the intervention of the imagination through a tertiary (external) retention, we could not talk of primary and secondary retentions

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<sup>29</sup> Bernard Stiegler, *The Neganthropocene* (London: Open Humanities Press, 2018), 159.

because “it is not perception which makes possible memory and the artefact but the artefact that makes possible both primary and secondary retention.”<sup>30</sup> In the flow of sensible perception, we notice something because we have retained previous impressions that now become the criteria by which we discriminate what we perceive. For example, when a background melody that has been playing without our barely noticing it suddenly becomes more sharply noticeable because of a familiar melody, our attention has been called by our memory of that previous experience, which serves as criteria for selection (and determines our greater sensitivity) of the new experiences. Technological extensions, acting as tertiary retentions, analogously provide criteria whereby we constitute publicly shared experiences.

We find here something very similar to what Bion is after with dream-work alpha, although in a different register. In dreaming, as we have seen, we extract from the unconscious to create a narrative in our perception; beta elements are alphabetized in the unconscious and then released as the precursors of thoughts and feelings in consciousness, in terms of which we can categorize and then recognize what we perceive. Bion supplements psychoanalytically our understanding of how the mind constitutes reality; Stiegler adds a technological dimension also absent from Kant and modern philosophers: the conception of technology as a necessary condition and extension of our cognitive apparatus. Those technological extensions become “*the vector of fantasies, hallucinations, collective retentions and pretensions of every kind*,”<sup>31</sup> which end up constituting every epoch according to its particular technological advances. Perception is always imaginative projection, and tertiary retentions feed Bion’s alpha function like the images of the day feed the dream upon which, subsequently, imagination can work. Whether they help strengthen or weaken the contact barrier will determine whether the technological pharmakon is therapeutic or toxic.

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<sup>30</sup> Ben Roberts, “Cinema as Mnemotechnics: Bernard Stiegler and the Industrialisation of Memory,” *Angelaki* 11, no. 1 (2006): 55–63, <https://doi.org/10.1080/09697250600797864>.

<sup>31</sup> Stiegler, *The Neganthropocene*, 137.

## Arche-cinema

Just as Derrida coined the term “arche-writing” to refer to a fundamental, originary form of writing that precedes and underlies any specific written or spoken language and encompasses the broader notion of trace, inscription, and the dissemination of meaning, Stiegler coins the concept of “arche-cinema” to refer to the foundational, primordial gesture of audiovisual inscription that constitutes the human mind. In fact, dreaming is, for Stiegler, the arche-cinema of the unconscious, so the structure of consciousness has always been engaged in cinema without knowing it.

[C]onsciousness is already cinematographic in its principles of selection for primary memories, a selection that relies on criteria furnished by the play of secondary memory and associated tertiary elements, the combination forming a montage through which a unified flux is constructed (as “stream of consciousness”), but which is identical in form to the cinematic flux of an actual film, as a temporal object and as the result of a constructed montage.<sup>32</sup>

Temporal and perceptual flows of all kinds are rendered discrete and reproducible through being spatialized (what Stiegler calls ‘grammatization’), so we can take the history of human consciousness as a history conditioned by the sequence of tertiary retentions through the centuries. In fact, grammatization extends back in time to the ‘arche-cinematic’ productions of “rupestral mnemo-technical supports, cave paintings, which constitute tertiary retentions that initiate a process by which the mental temporal flows experienced by the psychic individual are recorded, reproduced, discretized and spatialized”<sup>33</sup>. Starting with “the grammatization of the manual gestures of the worker or the craftsman that are spatialized in being programmed into the machinery of the industrial revolution, and finally to what is unfolding right now: the grammatization of ‘everything’ made possible by the inscription of binary code into central processing units composed of silicon.”<sup>34</sup>

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<sup>32</sup> Stiegler, *Technics and Time*, 3, 17–18.

<sup>33</sup> Stiegler, *The Neganthropocene*, 154.

<sup>34</sup> Stiegler, *The Neganthropocene*, 21.

With the appearance of each tertiary retention, new regimes of individuation and new modes of collective consciousness result, leading to new attentional forms. With every fresh piece of experience, we add to the sum of the experiences we have had. These may be experiences that conform to our expectations and so reinforce them, adding to the sense of an individual's and the collective's stability. But there may be experiences that defy established expectations and therefore require that they be worked on. These experiences – that Bion considers beta elements – will be contained in the unconscious to be worked on by the alpha function, to eventually be projected as dreams and incorporated into consciousness.

Stiegler calls the experiences that conform to our expectations “stereotypical”, and those that defy established expectations – and must first be contained in the unconscious to be metabolized and made useful for thinking – “traumatypical” experiences:

Traumatypical experiences are diachronic rather than synchronic, inaugurating an individuating movement rather than reinforcing apparent stability, and amount to the possibility of the experience of significance. The difference between the stereotypical and the traumatypical is the difference between experience of the same and experience of the other.<sup>35</sup>

It is only insofar as tertiary retentions leave or open room for, rather than block, the traumatypes and their disruptions, that dreaming, and the transcendental imagination can operate to generate novelty and new life. In other words, the tertiary retentions can become therapeutic rather than toxic by leaving open the possibility of new ways of seeing, instead of perpetuating the sedimented concepts and expectations that numb the imagination and lead us into a zombie-like repetition of the same.

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<sup>35</sup> Daniel Ross, “Politics, Terror and Traumatypical Imagery,” in *Trauma, History, Philosophy*, ed. Matthew Sharpe, Murray Noonan, and Jason Freddi (Cambridge: Cambridge Scholars Publishing, 2007), 234.

## Technological disruption

### Digital Dreaming

We are asleep. Our life is a dream. But we wake up, sometimes, just enough to know that we are dreaming.

(Ludwig Wittgenstein)

Stiegler's conception of exosomatic evolution and the role of tertiary retentions highlights the significant role of external technologies in the constitution of reality and hence, in the processes of individuation, perception, cognition, and meaning making. It also raises important questions about the potential impact of technological mediation – especially considering its pharmacological nature – on our ability to distinguish reality from fantasy, truth from illusion, etc. Freed from the safe causality of Darwinian evolution, our organological evolution opens us to the Pandora's box of the technological pharmakon, which threatens us with titanic excess. Barad talks of the “overloading [of] the circuits of the human imagination”,<sup>36</sup> which is perhaps what may be seen behind the many sorts of social madness we are witnessing globally nowadays. The organological perspective considers how the arrangements of psychic collective memories and expectations (retentions and protentions) generate specific future possibilities made possible by the artificial mnemotechnical organs of each epoch – writing, analog media, digital imaging, etc. In other words, it can help us understand the constitution of the collective dreams (and nightmares) generated by the technological (tertiary) retentions. In particular, it helps us analyze and understand the paradigmatic forms of seeing, the horizons of expectation which mold the wills and desires of the culture in each new technological period.

All tertiary retentions are memories of recorded experience, and they are part of the history of consciousness. They define the criteria by which consciousness assimilates and transindividuates in each era. We can trace the history of tertiary retentions, then, as the history of the collective dreams we construct in our exosomatic evolution, where

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<sup>36</sup> Barad, *Meeting the Universe Halfway*, 28.

each new technological development inaugurates new ways of seeing, “*new attentional forms*”, “*new empathic possibilities*”,<sup>37</sup> in other words: new realizations of our dreams. But that history of tertiary retentions advances also through crises, broken paradigms and periods of generalized confusion. The danger is that the traumotypical will not be allowed, and so will not give the alpha function the work it needs to do to construct the contact barrier that holds the distinction between illusion and reality.

That danger becomes marked by the technology of cinema and its digitalization. The structure of consciousness is, Stiegler (2011) argues, thoroughly cinematographic, for “it unfolds through a montage of temporal objects, objects constituted through their movement”.<sup>38</sup> The cinematic image, because it so sharply reproduces the phenomenology of the human mind, manages to fuse our experiences with its technical register, our real memories with its virtual stories and memories, in ways that end up diffusing the boundary between real and imaginary, making the contact barrier that separates consciousness from the unconscious too porous, and so confusing the distinctions of fantasy and reality, confusing real desire with digital-virtual wishing, generating the whole post-truth phenomenon, fudging not only truth and falsehood, but also virtual and empirical temporality, dreams, and actual (or virtual) experiences.

The danger is found where the alphabetization of the beta elements (the projection of our dreams) is realized no longer by the alpha function, by the human (embodied and improvising) imagination, but directly by the technological tertiary retention operating in the form, for instance, of algorithmic automatization. When the schematization of the imagination is performed by algorithms and not by the spontaneous imagination of human agents, the understanding (as an analytical formalism) is split from reason (as the capacity for interpretation) (cf. Stiegler).<sup>39</sup> In other words, reason finds itself degraded, turned into automation by calculation, and, finally, into its destruction as a synthetic

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<sup>37</sup> Stiegler, *The Age of Disruption*, 156.

<sup>38</sup> Stiegler, *Technics and Time*, 3, 26.

<sup>39</sup> Bernard Stiegler, *Automatic Society, Volume 1: The Future of Work* (Cambridge: Polity Press, 2016), Kindle, 53.

function (cf. Stiegler).<sup>40</sup> And in the destruction of reason as a synthetic function, we may identify the symptoms of a compromised contact barrier, for it is in its preservation that the balance is kept that allows us to distinguish dream from fantasy and madness from sanity.

### Dreaming Madness

When it is no longer the spontaneity coming from the unconscious (in the alphabetized beta elements) but from the data provided by the algorithm – already tied to specific interests that are stereotypical – the process of transindividuation and interiorization is short-circuited and, I would like to suggest, the contact barrier is compromised. Because of its ability to turn fantasies so easily into realities, especially due to its cinematic character, the digital easily smudges the line that separates them. Just think of how often we are no longer sure whether we have dreamt something, lived it empirically, or experienced it virtually.

Stiegler imagines consciousness as a “post-production center”:

A control room assembling the montage, the staging, the *realization*, and the direction, of the flow of primary, secondary, and tertiary retentions, of which the *unconscious*, full of potential possibilities (including the speculative), would be the producer. “Post-production” occurs when the “rushes” and the montage are out of sync: this is the phenomenon of the dream. Direct control occurs when consciousness “builds” such that it is “captured”: This is the waking state. Cinema is of the order of the dream.<sup>41</sup>

Cinema is taking over the function of the dream. Instead of generating the contact barrier we are allowing it to be imposed from outside, by algorithms and cinematic representations that dissolve the separation between their productions and reality. Artificial dreams, in other words, are taking over and seeping into reality as unconscious beta elements.

What Stiegler calls “the phenomenon of the dream” is what happens when the raw data of experience is out of sync with the “montage”, which is exactly what happens when the alpha function contains and

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<sup>40</sup> Stiegler, *The Age of Disruption*, 249.

<sup>41</sup> Stiegler, *Technics and Time*, 3, 28.



alphabetizes the beta elements, which are indeed raw data that are affectively problematic and out of sync with the established in consciousness. The alpha function is what allows us to function in normal waking life, while at the same keeping contact with the “madness” of dreams – what Stiegler refers to as “the potential possibilities of the unconscious”<sup>42</sup> – that generates creativity in their eventual exteriorization.

The soundness of the digital depends on the preservation of the dreaming function, and hence in finding ways to generate the space where automatization is blocked and radical bifurcation can appear, where spontaneity irrupts and takes things in novel directions. The algorithm makes all repetition repetition of the same, so leads to entropy. What we need is that repetition be a repetition of difference, which always involves an element of novelty, the radical bifurcation that makes it possible. Dreaming madness is involved where automatization takes over and any deviance from the (automatic) norm is blocked. Spontaneity dies, and the repetition of the same becomes our daily bread while the dreaming function wanes.

To the extent that the virtual world enters into an intense dynamic with empirical experience, we begin to dream more on our screens than psychically, more according to the images forwarded automatically by the algorithm than from our own experience. Digital dreaming, thus sequestered, does away with the hermetic play between consciousness and the unconscious where creativity and novelty may happen. Instead of the dream function piloted by the inner needs of individuals in their constitution with others of a human society, it is more and more overriden by the algorithms that weave experience together into meaningful bits according to values and interests that may come in tension with the collective welfare.

We have always been surrounded by screens upon which we screen our projections (in the totem, the transitional object). As we have said, we constitute the world by projecting from the dream-work that arises from the spontaneity of the unconscious. But algorithms drastically affect our ability to distinguish reality from fantasy, truth from lies, madness from sanity, thus leading us into the labyrinths of post-truth,

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<sup>42</sup> Stiegler, *Technics and Time*, 3, 28.

conspiracy theories and, in general, the crises of conscience that we experience everywhere and at all levels in today's world. Rather than metabolization, what we witness is psychic evacuation in the form of hallucinations, excessive projective identifications, manic defenses, and paranoid delusions. Words, too, become vehicles of evacuation rather than conveyers of meaning, as in bullying and trolling. It is because one cannot suffer one's experience, that the resulting unmetabolized (beta) elements can only be dealt with by violent action toward the world and social madness. As Daniel Ross observes, it is "the negative pharmacological automatism of the screen itself",<sup>43</sup> which contribute significantly to the feelings of generational abandonment, global negligence, and the impending, catastrophic ecological apocalypse that constitutes our present global social madness.

### Short-circuit

Adorno and Horkheimer argued that an era of barbarism had begun when the culture industries took over the power of schematization that Kant had ascribed to the transcendental imagination. For them, the industrialization of the imagination constitutes a reification or "an alienating 'thingification' of knowing consciousness"<sup>44</sup> (Stiegler (2016), p. 68). But, as we have seen, Stiegler argues that individual consciousness is formed in and by circuits of intersubjectivity that already include the externalization of memory. Consciousness, in other words, is always already exteriorized into its technical supports. So, Adorno and Horkheimer failed to take into account that Kant's syntheses presuppose what Stiegler calls the technological synthesis of the imagination, in other words, the tertiary retention.<sup>45</sup> But this means that the transcendental schematism of the imagination has always involved the technical, so not all exteriorization can be harmful. In fact, Stiegler argues,

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<sup>43</sup> Daniel Ross, "For a Neganthropology of the Cinematic," *Academia*, August 19, 2015, [https://www.academia.edu/15142703/For\\_a\\_Neganthropology\\_of\\_the\\_Cinematic\\_2015/](https://www.academia.edu/15142703/For_a_Neganthropology_of_the_Cinematic_2015/).

<sup>44</sup> Stiegler, *Automatic Society*, 68.

<sup>45</sup> Stiegler, *The Neganthropocene*, 158.

[T]hat the schematism, as projection by the transcendental imagination [...] presupposes schemas that are themselves constituted through tertiary retention – and on the basis of sensorimotor schemas. The consequence of this point of view is that so-called ‘transcendental’ imagination presupposes a primordial exteriorization of memory *and therefore* of the imagination itself, that is, of anticipation and temporalization, such that, passing through artefactual schemas configured by technical organs as tertiary retention, it is supported by a spatialization.<sup>46</sup>

If the intersubjective constitution of individuals – through their interactions with others, the collective processes, and their environment – arrives at a dynamic equilibrium, the tertiary retentions become a form of therapeutics rather than a poison. But the fact is that the tertiary retentions are now dominated by interests that tend to short-circuit that equilibrium:

The very heart of the issue of the culture industries is that they comprise an industrial, and thus systematic, implementation of new, technological tertiary retentions and through them, criteria of selection of a new kind, which are, as it happens, totally subjected to the logic of the marketplace, and thus to shareholders.<sup>47</sup>

The bogeyman, we could say, is not the digital technologies but the capitalism that controls them, which subjects the synthetic function of the imagination to the stupefying effect of homogenization, “radically alienating what should be the freely reasoning subject whom it subjugates – by de-subjectifying”.<sup>48</sup>

The channelling of the drives through the application of mathematical algorithms to automatized social control can do nothing but push these drives to a highly dangerous level, by dis-integrating them [...] With the advent of reticular reading and writing via networks made accessible to everyone through [...] the technologies of the world wide web, digital technologies have led hyper-industrial societies towards [...] the hyper-industrial age [that] becomes the era of systemic stupidity, which can also be called functional stupidity.<sup>49</sup>

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<sup>46</sup> Stiegler, *The Neganthropocene*, 159.

<sup>47</sup> Stiegler, *Technics and Time*, 3, 39.

<sup>48</sup> Stiegler, *Technics and Time*, 3, 37.

<sup>49</sup> Stiegler, *Automatic Society*, 23.

The issue is therefore more complicated than envisaged by Adorno and Horkheimer. They failed to see that the problem “is not *exteriorization*, which has always already begun, but rather the *short-circuit* in that process of individuation that inevitably results from the hegemony of de-symbolizing, disindividuating, and imagination-destroying cultural consumerism, because it reinforces stereotypes and represses traumatypes”.<sup>50</sup> It is not so much that dreams have become more homogenized in their content due to the *short-circuit* phenomenon, but rather that the dreaming function as a whole is being affected in its metabolizing role, and hence affecting the capacity of human thought to occasion the radical bifurcation necessary for creativity. As Stiegler stresses,

[A]s noetic individuals we are, in the first place, *knowing* beings, and there is no form of knowledge that is reducible to the computational treatment of information (which is only an extension of the analytical faculty of understanding *without reason*).<sup>51</sup>

The algorithm, which gains more and more ground every day in constituting our reality, reinforces the synchronic stereotypes, especially through the audiovisual media that flood our digital consciousness and so mute the traumatypes that guarantee the continuous counterflow that makes change possible. Sequestered by the logic of the market and the imperialism of the algorithm, matters are certainly worsened in the digital era.

These cognitive technologies (from the television to the telephone, including the computer and GPS guidance systems) to which we confide a greater and greater part of our memory, cause us to lose an ever-greater part of our knowledge. [...O]ne must ask if the industrial and massive development of mnemotechnologies does not represent a structural loss of memory, or, more precisely, a displacement of this memory: a displacement whereby it can become the object of a control of knowledge.<sup>52</sup>

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<sup>50</sup> Stiegler, *The Neganthropocene*, 168.

<sup>51</sup> Stiegler, *Automatic Society*, 146.

<sup>52</sup> Bernard Stiegler, “Anamnesis and Hypomnesis,” *Ars Industrialis*, accessed October 16, 2023, <https://arsindustrialis.org/anamnesis-and-hypomnesis>.

Equilibrium, sanity, depends on how the relevant technologies are assumed and practiced. Tertiary retentions (writing, analogue, and digital audiovisuals) and their exteriorizations can also open positive pharmacological possibilities, capable of generating new attentional forms. The cinematic pharmakon as art, for example, is what makes it possible to struggle against the cinema as toxic pharmakon, which short-circuits the play of traumatypical secondary retentions and protentions by reinforcing their stereotypical secondary retentions and protentions.<sup>53</sup>

### Coda

When Prometheus stole the fire of the gods for human beings, he planted a cyborg seed in our hearts that germinates in the virtuality of the mind and gives substance to the technological pharmakon, with which we are always in existential struggle. Though technology elevates us and puts us one foot on Olympus, we nonetheless live divided within ourselves: half of us titans disavowing death and half of us mortal bodies hauling towards it. It is precisely around that struggle, watchful of its field of force, that we must guard against the perils of technology.

The virtual flow taken over by algorithmic clones is spectacularized. In the instantaneity and non-dilatory nature of the digital, there is no transitional state, no potential space where dreaming can do its task of weaving together the stash of yet unprocessed affections. It becomes nearly impossible today to distinguish – as the source of psychological animation and meaning in our lives – the psyche from the digital. So, the digital becomes our sole source of psychic vitality, singularly generating novel pathways of spontaneity, passion, and meaning. But what feels so enlivening and exciting can suddenly mutate into psychic claustrophobia and deadness.

While dreams function psychically to define the boundary between reality and fantasy, the digital – with what we may call its virtual dreams – is intervening at that boundary and affecting our ability to distinguish reality from fantasy. We open our computer and see images of war, horror, degrading sexual acts, etc. Their sheer volume and intensity clog up

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<sup>53</sup> Stiegler, *The Neganthropocene*, 158.

the dreaming function, clog up the process of selection. We can go to sleep and ‘dream’, but no psychic work is happening, there is no possibility for mental renewal. In the breakdown of the digital, dreaming fails in its function of offering something regenerative space. Whereas with dreaming there is a replenishing cycle of falling asleep, dreaming, and then waking, that replenishment is foreign to the digital. And a person who cannot dream is unable to generate differentiable conscious and unconscious experience and, consequently, lives in a state of stupor and automatization, a psychic state where perceiving and hallucinating, external reality and internal reality are indistinguishable, where, in a sense, they cannot fall asleep nor wake up (cf. Ogden<sup>54</sup>).

In the digital era, we could conclude, Hermes is in danger of losing his wings.

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<sup>54</sup> Thomas Ogden, “This Art of Psychoanalysis: Dreaming Undreamt Dreams and Interrupted Cries,” *International Journal of Psychoanalysis* 85, no. 4 (2004): 859, <https://doi.org/10.4324/9780203970010>.

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