PSYCHOPOWER AND ORDINARY MADNESS: RETICULATED DIVIDUALS IN COGNITIVE CAPITALISM

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ABSTRACT: Despite the seemingly neutral vantage of using nature for widely-distributed computational purposes, neither post-biological nor post-humanist teleology simply concludes with the real "end of nature" as entailed in the loss of the specific ontological status embedded in the identifier "natural." As evinced by the ecological crises of the Anthropocene—of which the 2019 Brazil Amazon rainforest fires are only the most recent—our epoch has transfixed the "natural order" and imposed entropic artificial integration, producing living species that become "anoetic," made to serve as automated exosomatic residues, or digital flecks. I further develop Gilles Deleuze's description of control societies to upturn Foucauldian biopower, replacing its spacio-temporal bounds with the exographic excesses in psycho-power; culling and further detailing Bernard Stiegler's framework of transindividuation and hyper-control, I examine how becoming-subject is predictively facilitated within cognitive capitalism and what Alexander Galloway terms "deep digitality." Despite the loss of material vestiges qua virtualization—which I seek to trace in an historical review of industrialization to postindustrialization—the drive-based and reticulated "internet of things" facilitates a closed loop from within the brain to the outside environment, such that the aperture of thought is mediated and compressed. The human brain, understood through its material constitution, is susceptible to total datafication's laminated process of "becoming-mnemotechnical," and, as neuroplasticity is now a valid description for deep-learning and neural nets, we are privy to the rebirth of the once-discounted metaphor of the "cybernetic brain." Probing algorithmic governmentality while posing noetic dreaming as both technical and pharmacological, I seek to analyze how spirit is blithely confounded with machine-thinking's gelatinous cognition, as prosthetic organ-adaptation becomes probabilistically molded, networked, and agentially inflected (rather than simply externalized).

KEYWORDS: Stiegler; Derrida; Simondon; Machine Learning

INTRODUCTION

> "It's true that, even before control societies are fully in place, forms of delinquency or resistance (two different things) are also appearing. Computer piracy and viruses, for example, will replace strikes and what the nineteenth century called 'sabotage' . . . You ask whether control or communication societies will lead to forms of resistance that might reopen the way for a communism . . . The key thing may be to create vacuoles of noncommunication, circuit breakers, so we can elude control" (Deleuze, 'Control and Becoming').[1]

As Deleuze notes in his 1992 article, "Postscript on Societies of Control," it would appear that Foucault was aware of a coming shift in the way biopower operates and, retrospectively, we can see this in the trajectory of *Discipline and Punish*. In the very beginning of Foucault's text, we are introduced to Robert-François Damiens (also professedly known as "Damiens the Regicide") at his execution at Place de Grève on March 2, 1757. Foucault guides us with great detail through a period characterized by the abrupt abandonment of judicial violence as a public ritualized event and its removal and relocation to invisible sites. At the end of *Discipline and Punish*, power is described as it is exercised in the 20th century, far more economically and efficiently, moving toward self-disciplining behaviors.

However, as Deleuze's prescient remark to Antonio Negri in "Control and Becoming" reminds us, sites of control can also function as sites of resistance, or as *pharmakon*—as both poison and remedy. Thus, while Foucault paints the prison as the locus for biopower, prison protest was also once the epitomal symbolic site for structural change—"[i]t is the prisons themselves that put up a resistance."[2] As Deleuze remarks in *Foucault*, "[w]hen power becomes bio-power resistance becomes the power of life, a vital power that cannot be confined within species, environment or the paths of a particular diagram."[3]

Amending Deleuze's "control society," where individuals are rendered *dividuals*, or entry-points for datafication, Bernard Stiegler describes how today's digital industrial economy facilitates withdrawal (*désaffectation*), which, in turn,

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[1] Gilles Deleuze, "Control and Becoming," in *Negotiations, 1972-1990*, trans. Martin Joughin, New York, Columbia University Press, 1995, pp. 177-182.

[2] Jean-François Bert, 'Ce qui résiste, c'est la prison', *Revue du MAUSS*, vol. 40, no. 2, 2012, pp. 161-172.

[3] Gilles Deleuze, *Foucault*, trans. Sean Hand, Minneapolis, University of Minnesota Press, 1988, p. 92.

generates widespread disbelief, miscreance and discredit.[4] Stiegler's provocation to Foucault is that we must not conceive of power at simply the level of biological life but at the level of mind; control exists beyond the juridical and scientific plane and, thus, is philosophically deserving of analysis re: how control becomes technically embedded. From "the cloud" to "smart homes," articulatory architectonics prelude the total quantification and intensive datafication of designed ecological circuits. Datascapes allude to quantifiable data and reticulated technical artifacts, with tracked movements and differential equations annotating corporeal and cognitive labor. Deleuze's prescient description of cybernetic-cum-statistical modulation has reached its pinnacle in our dynamic and mobile informationalized world.

In his most recent work, Stiegler scrutinizes algorithmic governmentality, examining how it prompts an uncontrollable becoming of "[s]ocieties of hyper-control,"[5] or a becoming-panicked that is, inevitably, a becoming-mad, where noetic souls are transfixed as aggregations, or "the swarm": *homo digitalis*.[6] As individuals are disindividuated and disintegrated, the technologies of ludic capitalism—from the assembly line to Facebook—consult desublimation.

As human experience is exteriorized onto digital platforms, individual and collective protentions[7] are decomposed by the data economy and come to be replaced by "automatic protention." The data economy comes to usurp the industry of cultural goods, tying the cerebral with the cultural. This displacement is what Stiegler terms "disruption," a kind of disintegration that ushers in a "new kind of barbarism" inflamed by extreme disenchantment, the likes of which Adorno and Horkheimer described when surveying the effects of consumer capitalism at the end of the Second World War. "Purely and simply computational capitalism as such is the effective accomplishment and perfect completion of nihilism," the process that ecologically actualizes via the Earth's explicit destruction, which, over the last decade, has been termed the

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[4] Bernard Stiegler, *The Age of Disruption*, Cambridge, Polity Press, 2019, p. 190.

[5] Ibid., p. 229

[6] Byung-Chul Han, *In the Swarm: Digital Prospects*, trans. Erik Butler, Cambridge, MA, MIT Press, 2017.

[7] "Protensions" are Stiegler's description for anticipations that prompt new subject positions. Following Husserl's phenomenological lexicon, "primary retentions" are sense perceptions, "secondary retentions" are memories, and "tertiary retentions" are media (as culture mnemonics, "tertiary retensions" can be further bifurcated as digital or analogue).

Anthropocene.[8]

As control societies appeared towards the end of the consumerist epoch, they effectively guided the transition towards our hyperindustrial era. Automatic society has inflamed the destructive capture of attention and desire that characterized Deleuze's description of noncoercive modulation exercised by control societies, passing through the mechanical liquidation of discernment.[9] From data-mining sentiment analysis to prediction markets, today's technologies are increasingly self-annotating and psycho-pathological, turning information into machine-readable data that can be mined. This is the inherently cybernetic character of control that Deleuze recognized when describing *dividuation*: discernment—which Kant associated with *Verstand* ("the understanding self")—is automatized as an analytical power delegated to algorithms and executed through actuators and sensors, while outside of any intuition in the Kantian sense and, consequently, outside of any experience.

By way of Deleuze and Peter Sloterdijk, Stiegler fills in Foucault's macro-political shortcomings, as *Madness and Civilization* credulously occluded the historical fact of marketing, which now serves "as the functional organization of innovation by disinhibition."[10] Computational machines have grown to span continents and the "digital turn" has extended the cartographic purview of virtualization to the molar scale of smart cities, undersea cable networks, and satellite communication systems. Threading an arachnean network, or *ecdemomaniac linealities*,[11] one can string together technical apparatuses as a cartographic labyrinth, or a "mania tabula," virtualization understood as "boundless uncompressibility."[12] Wherefore, Thomas Pringle remarks that

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[8] Stiegler, *The Age of Disruption*, p. 38.

[9] Bernard Stiegler, 'For a Neganthropology of Automatic Society', in *Machine*, Lüneberg, meson press, 2019, pp. 25-49.

[10] Stiegler, *The Age of Disruption*, p. 120.

[11] *Ecdemomaniac lineality* being a neologism for the "wandering" and uncountable plurality of "lines of flight." Fernand Deligny invokes such "wander lines" in his cartographic visual studies, visualizing that which eludes predictive control; see: Fernand Deligny, *The Arachnean and Other Texts*, trans. Drew S. Burke, Minneapolis, University of Minnesota Press, 2013.

[12] "Virtualization" upholds an appearance of seamless spatial entanglements, unlike Foucault's "heterotopias." For further discussion on "virtualization" as it relates to lossy/lossless compression, see: Alexander Galloway and Jason LaRivière, "Compression in Philosophy," *boundary 2*, vol. 44, is. 1, 2017, p. 131.

"[m]achines […] are inherently social devices. They never leave us alone."[13]

As Deleuze fundamentally linked the advent of control societies to marketing and the exploitation of affects via calculability to cybernetics, Stiegler appropriately reshapes biopower so that it is epochally fit for the twenty-first century, with probability calculation pooling and amortizing protentions. Thus, if we are to herald biopower's regulatory prowess, we must concede that it now presupposes psychopower, which is invested in the immaterial and psychological realm.

Thus, for Stiegler, any future thinking of the planet must necessarily be conceived of from the vantage of control's psychologically imbued hold, the effects of which have become massive and destructive. The achievement of biopower gave life to infinitesimal surveillance and the clustering of descriptive information around denizens, heightening auto-constitutive paranoia and self-surveillance through the administration of regulated bodies and the calculated management of life. Biopower sufficiently explains the folds of neurosis bedevilling the mid-to-late 20th century citizen. Foucault introduced the concept of "biopower" to help explain the power to interpret material objects as information, to affect objects at the statistical or informational level, not at the level of individual content. Psychopower, however, is globalized and diffracted, much like the flow of modulation, as it encompasses the systematic organization of the capture of attention made possible by the psychotechnologies that have developed with radio (1920), television (1950), and digital technologies (1990). Pychopower has burgeoned across the surface of our planet via reticulated circulation and variegated forms of networks and inter-net computational operations, producing a constant industrial channelling of attention and resulting in a new phenomenon: the massive destruction of attention, "referred to by nosologists in the United States as 'attention deficit disorder'." This is exasperated by what Jonathan Crary calls "24/7 capitalism," where generalized human life is inscribed into duration without breaks and defined by a principle of continuous functioning (and sleeplessness).[14]

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13 Thomas Pringle, 'The Ecosystem is an apparatus: From machine ecology to the Politics of Resilience,' *Machine*, Lüneburg, meson Press, 2019, p. 51.
14 Jonathan Crary, *24/7 Capitalism*, London: Verso Books, 2013, p. 8.

THE PREINDIVIDUAL AND TRANSINDIVIDUAL

This destruction of attention is particular to psychopower, rendering it both more subtle and severe than biopower, as it results in the destruction of libidinal energy. Conceived of as a positive force, "attention" indexes what Gilbert Simondon postulated qua the "reality of individuation," as it is both psychic and collective. "Attention" is directed towards the psychic faculty that allows us to concentrate on a technical object or "give ourselves over to an object," but it is also the "social faculty that allows us to take care of this object—or of another." In other words, "attention" is the name of that civility that is grounded in *philia* (φιλἱα), or socialized libidinal energy, and directed towards technological artifacts. Thus, it is part of the inflected epiphylogenetic circulatory process—between collective genetic memory and individual psychological memory there is cultural memory. Amending Simondon's work on technics, it is the articulation between the nervous, technical, and social systems which constitutes the total human fact.

However, while Stiegler's account distinguishes between this tripartite interactive cycle, distinctly remarking on the place of the central nervous system (CNS), it occludes the autonomic nervous system (ANS) and, consequently, preception, apprehension, and reflexes. Stiegler's interest in drive-based exosomatization is inattentive to how technologies are also instinctually embedded, producing anatomo-behavioral polyphonic rhythms that emulate biological processes. As Brian Massumi's work on preemption in the late 1990s notes, the operative mode of (psycho)power characterizing postmodernity impinges on the body's autonomic responses.[15] Our "digital brains"—Bayesian brains modelled on interference, simulated by probabilistic computers, and increasingly cultivated/synaptically shaped through repeated interactions with digital prostheses—reveal that plasticity is relative to automaticity and autonomic processes.[16]

If *dividuation* reduces the subject to data-capture, "individuation" is normatively positive, allotting for the discovery of subjectivity. In the digital milieu, the possibility of collective individuation is formalized by participation in

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[15] Brian Massumi, 'Potential Politics and the Primacy of Preemption', *Theory and Event*, vol 10, no. 2, 2007.

[16] David Bates and Nima Bassiri, *Plasticity and Pathology: On the Formation of the Neural Subject*, New York, Fordham University Press, 2015, p. 22.

the formation of groups that constitute the horizon of existential protention and creative constraints. To facilitate this process, Stiegler poses that certain kinds of (technologically-directed) "confrontations" can be staged, on a contributory hermeneutic platform and in an online educational context.[17] According to Stiegler's account, φιλϊα (*philia*) is what binds together the members of a community and that which is torn apart when civilization degenerates, lapsing into barbarism. φιλϊα is also what prompts "transindividuation," an unconscious process of becoming-produced through multi-generational assemblages and circuits.

Insofar as Stiegler's theory of memory is concerned, the concept of the "transindividual" refers to the realm of culture and media, facilitating a collective closure with the cultural unconscious, through which language acquisition as well as familial ethnic, urban and other "protosocial" and "preverbal" traits are transmitted.[18] Transindividual memory transits across individuals and generations, engaging within the cross-generational social sphere of non-verbal encoding. The transindividual emerges from the "transduction" of preindividual funds from an elemental, or "vital," force, moving into a self-reflective and affective coupling of the individual with the collective.[19] This process of "transduction" of the preindividual ("power of life") invariably results in the specific individuation of the collective establishing a transindividual relationship that creates future possibilities, thus its ecological promise as a means of combatting the bleak future of the Anthropocene.

Augmented with preindividual latencies and apeironic (indeterminate) flux, the individual cannot contain within themselves the latticework of preindividual forces constating the indeterminacy that, following Antoinette Rouvroy, Stiegler associates with "post-actuarial reality," thus prompting a kind of inherent incompatibility or tautly-bound tension within the preindividual. As such, technical objects convert this overbrimming excess into analogue artifacts or, in

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[17] Many of Stiegler's projects, such as Ars Industrialis, Pharmakon.Fr, Plaine Commune Experiment and Internation.World aim to achieve a contributory economy while making use of trans-geographical virtual networks. The New Centre of Research & Practice, an experimental leftist-accelerationist virtual academic outlet that hosts an amalgam of critical theory seminars online, abides to a similar ethos.

[18] Felix Guattari, *Chaosmosis*, trans. Paul Bains and Julian Pefanis, Bloomington, Indiana, Indiana University Press, 1995, p. 67.

[19] Richard Carlson, 'Nietzsche's Snowden: Tightrope Walking the Posthuman Dispositif', *Critical Posthumanism and Planetary Futures*, ed. Debashish Banerji, San Francisco, CA, Springer, 2015, p. 64.

the contemporary case, digital flecks. This is how containment consolidates that which escapes probability (the excesses of the possible) as peripheral. Qua Simondon, the transindividual is psychosocial, for it is this "reality that the individuated being transports with him, this charge of being for future individuations."[20] It is precisely the always-present charge of preindividuality, neither reducible to chronology nor history—though not disparate from either—which initiates and ensures that the individuated subject is prepared for the "second individuation," its transindividuation, as it becomes grouped (networked/reticulated). Through transindividuation, one is grouped within the circuits of a milieu and subjectivized, a becoming-*subjectified*. This amounts to a process that metastabilizes and orders identification by weaving the "primordial narcissism" of the *we* into relays of collective inscription—as Badiou would claim, this is the domain of the event's generic procedure. Through evental individuation, Simondon describes how "personality" is likewise formed, "which comprises, after structuration, an individual aspect and a complementary aspect of this individual."[21]

Such circuits of digital transindividuation have been manipulated by psychometric laboratories that are committed to scraping record levels of data. This was recently the case with Michal Kosiński and David Stillwell's selling access to pyschometric research data to Cambridge Analytica. Kosinski's and Stillwell's Facebook application was based off of personality quizzes such as the Myers-Briggs test and this psychographic data proved alluring for 2016 presidential primary candidates, ranging from Hillary Clinton to Ted Cruz and Donald Trump.

The networked user, at once both individual and collective via shared psychical experiences, is mediated by social technology. As these networks follow the flux and flow of cybernetic circulation (modelled along adequation and relative to the unstable position of the observer), it results in a unique model of socialization, a secondary form of becoming-subjectivized idiosyncratic to

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[20] For further reading on "post-actuarial reality," which is "no longer about calculating probabilities" but, instead, deals with "how to account in advance for what escapes probability," see Antoinette Rouvroy and Bernard Stiegler, 'The Digital Regime of Truth: From the Algorithmic Governmentality to a New Rule of Law', trans. Anaïs Nony and Benoît Dillet, *La Deleuziana*, vol. 3, 2016, p. 8. For further reading on "future individuation," see: David Scott, *Gilbert Simondon's Psychic and Collective Individuation: A Critical Introduction and Guide*, Edinburgh, Edinburgh University Pres, 2014, p. 139.
[21] Scott, *Gilbert Simondon's Psychic and Collective Individuation*, p. 139.

virtualization. According to Hyung Byung-Chul, due to virtualization's lack of proximate spacio-temporal distinctions—the central tenets of Foucauldian disciplinary society's regulation and administration of biopower—the distinctions between public and the private have become confused. Accordingly, "[d]igital communication is fostering this pornographic display of intimacy and the private sphere"—as social networks become "exhibition rooms" they shift the sites of information-production while rendering performative what was once considered highly private (fostering "icono-pornography").[22] Roland Barthes definition of the private sphere as "that zone of space, of time, where I am not an image, an object" has been thoroughly obscured by platform capitalism and the immaterial mediation of tracking devices and digital prostheses.[23] Not only do no such zones exist within deep digitality's trans*dividual* circuitry, but a growing compulsive drive to publicly perform oneself online (and, consequentially, "on camera") harmonizes with Capital, resulting in hystericisation, fomenting what Byung-Chul terms the "burnout society."

Today's capitalist "proletarianization" describes a new precariat order of "knowledge workers," mnemotechnically captured and industrially automated (*noetic hymenoptera*).[24] Cognitive ergonomics comfortably seduce and produce the "perfect citizen consumer" who not only shops but, simultaneously, produces "good and meaningful data." The internet as such is a machine designed for the efficient, smooth and automated collection, transmission, and manipulation of information, with a legion of programmers and user interface (UI) designers intent on coding the best possible algorithms to carry out such "mental movement." Furthermore, software agents play an increased role in the development of tracking through, for instance, the use of cookies, which not only record every online decision but tailor consumer suggestions while individually personalizing Google-search page ranks ("search engine optimization").

While today's reticulated society is based on the unfolding of rhythmic and periodic textures via smartphones and embedded mobile devices (GPS tags, cars, televisions, watches, and other prostheses)—fixed along mobile terminals

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[22] Han, *In the Swarm*, p. 13.

[23] 'Roland Barthes, Camera Lucida: Reflections on Photography', trans. Richard Howard, New York, Hill and Wang, 1982, p. 15.

[24] Stiegler, *Machine*, p. 36.

(the infrastructure and architecture of constant connectivity)—data-intensive computing's automatic power, a chrysalis parasitizing social relations, is the result of a century's ontogenesis, which we can separate into a ternate model.

PROLETARIANIZATION

Stiegler's description of "proletarianization" corresponds to the loss of knowledge as *savoir-faire* (or "know-how") and is part of tripartite historically-contingent mold. The first dimension, the proletarianization of the producer, directly draws from Karl Marx's *Fragments of Machines*; the worker's knowledge is inscribed in the machine, whereby specialization is reduced to a mere abstraction of activity.[25] According to Thomas Moynihan, Marx didn't quite envision modernization as formicating decerebration, but more as "the conquest of the external world by our neural innards," or as the onward-marching cognitive outpouching and noetic eversion of our control centres. Moynihan apportions "planetary environs" as "man's inorganic body," commenting that, for Marx, locomotives, railways, electric telegraphs, and so forth were considered organs of the human brain, as they represented "the power of knowledge, objectified."[26] However, as the historical trajectory from the first moment of proletarianization to hyper-industrial postmodernity evinces, it is inorganic technical objects that eventually usurped noetic dreaming and displaced intellectual activity, binding noetic activity to Capital flow. This is the Marxian moment we are most familiar with: the loss of knowledge develops in tandem with the displacement of the artisan, as the worker's guile is transferred to the machine. The worker is deprived of the capacity "to elevate himself above his condition and to individuate with others (through the process of coindividuation) and with technical objects."[27]

The second moment is that of the proletarianization of the consumer, which is determined through grammatization, or the technical history of memory —its material and spatial existence, or the "engraming" of temporal flow. This becomes something akin to the State science that forms what Deleuze and Guattari often remark as the "war machine"; recall that government science

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[25] Karl Marx, *Grundisse*, trans. Martin Nicolaus, London, Penguin Random House, 1973, p. 704.

[26] Thomas Moynihan, *Spinal Catastrophism: A Secret* History, Cambridge, MA, MIT Press, p 77.

[27] Benoît Dillet, 'Proletarianization, Deproletarianization, and the Rise of the Amateur', *boundary 2*, vol. 44, is. 1, 2017, p. 83.

funding generated the technologies underlying global positioning systems and internet communication and that a National Science Foundation grant allowed Sergey Brin and Larry Page to create the PageRank algorithm from which Google was erected. Here, commerce, rather than politics or machinery, becomes the forum for displacement[28] and markets, rather than elections and legislatures, became the aggregators of preferences. Grammatization explains the historical semblance of technical objects and their social inscription so that they can be reproduced, the formalization and transformation of knowledge occurring vis-a-vis gestures, speeches, and sensibilities. With Fordist industrialization, the rise of the consumer is in parallel with purchasing power, reconsidering the value of work and work of value; with "hyperconsumption," individuals have become addicted to technical novelty.

As political theorist Benoît Dillet aptly notes, the victim of the first form of proletarianization was the producer and, in particular, the industrial worker. Rather than an asylum, the privatization of the means of work configured the giant industrial "workhouse," or factory, so that it was identified as a "House of Terror."[29] Distinguished by the Decade of Prosperity and post-World Warr II economic expansion, the second form of proletarianization has mainly affected the consumer, especially those members of the middle class who flocked to retail areas—"the department store and the supermarket, then the shopping center and the online retailer."[30]

The third form, "generalized proletarianization," colors today's epoch and is characterized by mass propagation. Generalized proletarianization is associated with the third industrial revolution's virtual topography. Following the "first moment"—railway networks/the steam engine—and the "second"—Taylor-Fordism, the oil and car industry—this "third industrial revolution" is, specifically, that of the financialization of society and debt, the rise of cognitive capitalism and the information economy, which is often termed post-Fordism. A survey of "generalized proletarianization" shows that there is no radical break underway, but, instead, a kind of hybridization with and intensification of the previous two socio-historical modes—algorithmic governmentality's

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[28] Siva Vaidhyanathan, *Antisocial Media: How Facebook Disconnects Us and Undermines Democracy*, New York, Oxford University Press, 2018, p. 122.

[29] Karl Marx, *Capital: A Critique of Political Economy, Vol. 1*, Scotts Valley, California, 2010, p. 388.

[30] Dillet, *Proletarianization*, p. 86.

rift/fracture omits the critical veil of self-referential mystic subterfuge that accompanied the prior two epochal shifts.

As such, "generalized proletarianization" is inherently affixed to what Walter Benjamin described in his penetrating 1921 posthumous fragment, "Capitalism as Religion." It was in this essay that Benjamin argued that capitalism does not only represent the secularization of the Protestant faith, as Max Weber had claimed, but that it is, simultaneously, essentially a religious phenomenon, which has developed as a parasitical mutualism with Christianity. According to Benjamin, capitalism is a "cultic religion" uninterested in ideation, atonement, or the expiation of guilt but aimed, instead, at creating guilt, itself.[31] As evidenced by capitalism's conspiratorial admixture of "labor and the feast," modern capitalism's celebratory mode is invested in ludic play. Drawing on Benjamin's essay, Giorgio Agamben deftly anchors Benjamin's analysis in a historical index: August 16, 1971, the day that, under the presidency of Richard Nixon, the convertibility of the dollar into gold was suspended, evacuating money of any value that is not purely self-referential. Thus rang the death knell of the state's "exercise of monetary sovereignty."[32] Granted, this lineage can be further traced back to fiduciary paper money assuming the role of credit by displacing metallic money, which was originally valued for its content of precious metal. However, after August 1971, money functioned as a credit both founded in, and corresponding to, itself and itself, solely.

Consequently, "generalized proletarianization" invokes such invisible, albeit affectively charged, sites, which have, in an act of coincidental linguistic slippage, become epitomized by the "sites of the web" where we can locate today's "digital panopticon." Reliant on economies of data, digital industries function by tracking and capturing the activity of internet users, producing tacit information. The interconnected "internet of things" makes our environment predictable with the aid of artificial generalized intelligence (AGI), as these reticulated communicational technical instruments generate "places in the network" that "obey a temporality of their own."[33] This is a decentralized

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[31] Walter Benjamin, 'Capitalism as Religion', trans. Rodney Livingstone, in *Selected Writings, vol. 1: 1913–1926*, Cambridge, MA, Harvard University Press, 1996, pp. 288–91.

[32] Giorgio Agamben, *Creation and Anarchy: The Work of Art and the Religion of Capitalism* trans. Adam Kotso, Stanford, CA, Stanford University Press, 2019, p. 67.

[33] Florian Sprenger, *Micro-Decisions*, Lüneberg, meson press, 2015, p. 106.

process as, for instance, typified by Augur and Gnosis, the most well-known blockchain protocols, both of which utilize a suite of automated machine learning software that, in conjunction with decentralized supercomputers, facilitate prediction markets that serve as a foundation for a globally circulated "internet of things." Not only do neural nets and machine learning bolster predictive analytics, but, as in the case of the "internet of things," such apparatuses disconnect the user further from a product, mediating those nonvisible linealities that were precluded from meditation prior to reticulated "local communication" protocols.[34] Conversational technology—Alexa, Siri, self-service checkout machines, and psychiatric therapist applications—distinctly color industrial formation and predictive control as locutionary. Such information, which mediates processes and decisions, can be sourced from "direct process information" (also called "sematectonic information"), which emerges in and alongside mental/implicit activity. While interpersonal information can be exchanged, such transpersonal coordination is the product of mediation—thus a new socio-economic stasis has burgeoned vis-a-vis decentralized performed ontologies that cadger on neural plasticity.

Much like the conversion of the pastoralist class reconstructed feudal peasants into tenant farmers and, subsequently, the capitalist class converted these aforementioned farmers into industrial workers, today's "vectoralist class" has turned workers into information laborers through the privatization of vectors of communication.[35] Bernard Stiegler examines the psychic affect of "generalized proletarianization" that is characteristic of the end of the Anthropocene, when it becomes the "age of disruption and the Entropocene," signalling "disintegration and annihilating knowledge."[36] This "Entropocene" consists precisely in disintegrating and annihilating knowledge, paralleling entropy's downwards cast of energy disintegration—the Anthropocene amounts to an "Entropocene" as it also accomplishes a kind of nihilism that levels communal values capable of prompting a "general economy" (a kind of energetic entropy heuristically signalling the decline of social buoyancy).

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[34] Mercedez Bunz, *The Internet of Things*, Cambridge, UK, Polity Press, 2017.

[35] Accordingly, the vectoralist class "does not control land or industry anymore, just information. It does not claim its share of the surplus as rent or profit, but as interest." See: McKenzie Wark, *Telesthesia: Communication, Culture and Class*, Cambridge, UK, Polity Press, 2012, p. 109.

[36] Stiegler, *The Age of Disruption*, p. 210.

Over five billion terrestrial inhabitants are privy to the disruption of the data economy, given mobile telephony subscription statistics. Thus, Stiegler remarks that disruption is concretized by the unconsciously produced traces/metadata through which we ecologically annotate ourselves, enabled by automated glosses that "take over" and "short-circuit" our protentional potentials and, along with that, any possibility for interpretation, individuation, or hermeneutics.

We can trace a lineage from theory of the mind to resilience politics while remarking that machines urgently necessitate recalibration vis-à-vis autonomous acting capacity, which is truly ecological. Through an entropic vantage of biomorphism we can also approach a viable reorientation of social institutions and machines recalibrated outside the parameters of economic growth. Doing so recovers Canguilhem from Foucault's etymological grip, returning to the organic dispositif, or the apparatus as it is ecologically situated. Stiegler's engagement with entropy and the Entropocene considers both the social and natural ecosystem as an organic formation, upholding that organisms' and social technologies' coevolution must be met with technical individuation devoid of capitalist coordinates.

One such provocation is not to return to a kind of idealism but to revisit Foucault's psychological misattributions while reinstituting something akin to Canguilhem's methodology of hyperstitial genealogy. Today, psychopower is bound in a historically fettered dynamic relationship between madness and psychiatric power; psychopower not only problematizes Foucault's conception of biopower and disciplinary society but Foucauldian exclusionary madness as well. Recall that in *History of Madness* Foucault's project was to genealogically delineate how Western society, from the seventeenth century, radically opposes reason and "unreason" (madness). However, within the Greek philosophical tradition until Montaigne —and even Pascal—madness (folly) irreducibly belongs to thinking: it is, in fact, constitutive of the faculty of thinking.[37] Psychopower provides us a means of redrafting madness/folly as a dimension of noesis qua the faculty of thinking, both intellectually and spiritually.

Just as machines were once conceived of as extensions of inner organs and

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[37] Bernard Stiegler, 'Dreams and Nightmares: Beyond the Anthropocene Era', trans. Daniel Ross, *Alienocene: Journal of the First Outernational*, vol. 5, June 2019, p. 2.

the central nervous system (a generalized organology of pure externalization)—a philosophical-anthropology genealogy that runs from Ernst Kapp to Arnold Gehlen and Marshall McLuhan—Stiegler conceives of madness as the externalization of hubris (ὔϐρις) and noetic thinking, incepted with the dream. However, today we recognize that externalization/exosomatization is no longer sufficient—as Gertrud Koch notes (and as demonstrated by predictive processing and convolutional "neural networking"), our media paradigm-shift has divulged that machines are, in fact, agents in a field of techniques and part of a network of relations, which are often pathologically distorted, indexing how economic calculations convert the machinic function from mechanical-technical to perceptual-economic.[38]

Consider prehistorian Marc Azéma's account of "Man," the animal who "has always 'dreamed'"—according to Azéma, what distinguishes humans is that our "brain is a machine for producing images [...] capable of projecting his inner 'cinema' outside himself."[39] Both cinema and grammatization begin under the cave's penumbra—with Upper Palaeolithic rupestrian rock paintings—as these are the hypomnesic sites of "(pre)cinematic projection" where exosomatization constitutes an arche-cinema. Stiegler terms "technesis" the exteriorization process of dreaming, however, in our epoch of deep digitality

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[38] One marked example of this rift is the inception of the "virtual camera," as in the case of the Simulcam, which uses performance capture to facilitate the input of digital characters and set extensions (so as to produce and predictively model real-time, low-resolution composites of data, live-action footage and computer-generated characters and environments). Software such as the Simulcam extend beyond the purview of "motion capture" while topographically actualizing virtualization, making it compossible for digital characters to interact with live actors and environments, as in the case of Andy Serkis' role as Gollum in the Lord of the Rings film trilogy (2001–3) and in *The Hobbit: An Unexpected Journey* (2012). Consequently, optical technologies engaged in bilocalization or colocalization are perceptually limited within necessary aesthetic, perceptual, and sensorimotor conditions upon which the possibility of probabilistic perception re: external objects is rested. Consolidating "deep entrenchment," in the case of the Simulcam we see that distinctively proximate feedback is diffracting during visual projection, and that the topological richness (or lack thereof) of these models means that they simultaneously produce errant traces as "blind spots" (de-grammatization). For further discussion on the "virtual camera," see: Gertrud Koch, 'Animation of the Technical and the Quest for Beauty', *Machines*, Lüneburg: meson press, 2019, p. 7. For further discussion on the "Simulcam" see Hye Jean Chung, *Media Heterotopias: Digital Effects and Material Labor in Global Film Production*, Durham, NC, Duke University Press, 2018, p. 82. For further discussion on "deep entrenchment" and proximate feedback, see Reza Negarestani, *Intelligence and Spirit*, Cambridge, MA, MIT Press, 2018, p. 164.

[39] Marc Azéma, *La Préhistoire du cinéma: Origines paleolithiques de la narration graphique et du cinématographe*, Paris, Errance, 2001, p. 21.

and hyper-control, this is an *inflected* process whereby exteriorized dreams produced ashen traces. Committed to constructing order out of noise, computational capitalism and probabilistic algorithmic governmentality treat these vestiges as waste, yet these traces are culturally assumed—in the case of deep digitality, the multiplexed perceptual faculties of performance capture, "elastic bunch graph matching" facial recognition technologies, and 3D game-views are made noetic, parasiting our memory, cognition, and imagination alike. Thus, not only is the collective closure between the transcendental imagination and schematism the impetus for tertiary retentions/media artifacts but, also, the nexus for dreams' contrary motion, simultaneously interiorized and externalized.

This is, in fact, because media objects are not simply extensive but agential and optical mechanisms, as Freidrich Kittler recognized when considering the *camera obscura* as the nexus of mediated representation. As a device for automatically recording images, the *camera obscura* functioned as a first-order simulation, allowing for a kind of visually precluded "reality" to appear on a wall; however, Kittler's "hardware realism" has to be contextualized alongside techno-organic processes of observation. Drawing from the Copenhagen Interpretation and phenomenology of quantum behavior, for instance, we know that observation never shows a particle in a mixed state or in more than one location—observation only *seems* to resolve the indeterminacy in atomic systems. What is called the "observer-effect" cannot be discounted—for the observer and/or instruments of observation, which have non-trivial effects on that which they observe. This is what François Laruelle's metaphysics of the Real shows us—the Real is like "Schrödinger's cat" in the sense that it encompasses a multiplicity of states in a unified theory. Through observation, the Real as One is seen from the perspective of what Laruelle calls the "Vision-in-One," or immanently, while realizing that the Real is foreclosed to full epistemic access. Extending observation's agential charge to technical media, we see that artifacts' being-networked means they are intensive and extensive, producing inflected non-trivial effects and, in our case, seeping into dreams.

ORDINARY MADNESS

It is on the status of the dream, which we can consider in lieu of Descartes' "metaphysical hypothesis" in *Meditations*, where Foucault and Derrida once

vehemently disagreed. In *History of Madness*, Foucault argues that Descartes separates reason from madness while structurally attaching this to a historical observation: for Foucault, Descartes is the pivot point of the radical separation of reason from unreason as he published *Meditations* in 1641, just predating the "great confinement" of 1656, which saw the creation of the Hôpital Général in Paris. It was here where the mad were confined and the moment where Foucault locates Western modernity's sociological perturbation, as medical confinement replaces the leper houses of the Middle Ages. The mad and deviant were confounded together, as the "spontaneous elimination of the 'asocial.'"[40]

Derrida's 1963 criticism of Foucault, "Cogito and the History of Madness" questions the precedence of this historical departure. Recalling Descartes, Derrida underscores that it is both the suspension of belief/experience of hyperbolic doubt and the supposition of "total madness" that produces Descartes' hypothesis of the meddling "evil genius," contorting perception-cum-belief. Derrida poses that the dream can be considered as an attenuated form of madness—meditation being, itself, a kind of waking dream. Descartes' hypothesis that he is dreaming is a methodological postulate which advances that, regardless of whatever suppositional terms are co-opted, certain world-beliefs—mathematical and geometrical principles, or those analytic *a priori* beliefs that, for Kant, deal with space and time—remain indubitable. Thus, for Derrida, it is not madness that is excluded but sensory illusion: "madness is only a particular case, and, moreover, not the most serious one, of the sensory illusion which interests Descartes at this point."[41]

Stiegler, drawing from Descartes' *Rules for the Direction of the Mind*,[42] posits that in order to direct thought we must exteriorize it, making it an object of a form of attention. The realization of dreaming is coincident with the exteriorization of representation—therefore, Cartesianism is a cartographic theory of points, lines, and linealities. For Stiegler, this process is artificial,

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[40] Michel Foucault, *History of Madness* trans. Jonathan Murphy, London, Routeledge, 2006, p. xixx.

[41] Jacques Derrida, 'Cogito and the History of Madness,' *Writing and Difference*, trans. Alan Bass, London: Routledge, 1978, p. 50.

[42] "It is generally helpful if we draw these figures and display them before our external senses. In this way it will be easier for us to keep our mind in a state of attention." See René Descartes, 'Rules for the Direction of the Mind', *The Philosophical Writings of Descartes, Volume 1*, trans. John Cottingham, Robert Stoothoff and Dugald Murdoch, Cambridge, UK, Cambridge University Press, 1985, p. 65.

technical, and exosomatic, dealing with making memorization reproducible. In fact, given the tenuous nature of memory, retentional finitude can be overcome through grammatization, beginning with the practice of analytical representational exteriorization (cave paintings) and inscription (writing).

According to Crary's account, cognitive capitalism's disempowerment is not simply the incapacitation of dreaming but also the impairment of "any mode of absent-minded introspection that would otherwise occur in intervals of slow or vacant time."[43] Accordingly, Crary's analysis poses that we have devolved into passive automatons open to manipulation or behavioral management. Stiegler uses *hypercontrol* to describe this generalized automatization, whereby the noetic faculties of deliberation are short-circuited by digital tertiary retentions,[44] amending the "control-through-modulation" model put forth by Deleuze. It is the haunting of dreams and perturbation of technical memory, both exterior and interior, contra-agential, that we must underscore.

PROBABILISTIC DREAMING

In *In the World Interior of Capital*, Peter Sloterdijk describes the opening of modernity as a propensity to madness and a willingness to embrace delusion: "[s]overeignty belongs to the one who decides on flattening."[45] As evidenced by the Anthropocene's crises, the postmodern psychopathology par excellence is increased risk-taking, which Stiegler terms the intensification and permanent excitation of hubris (ὔϐρις). Through Sloterdijk, Stiegler allows us to see the genesis of psychotechnologies,[46] which seep through consumerist capitalism and deluge hyper-control society. In cognitive capitalism, the reshaped and psychotechnologized manifestation of organology is neuropower, which works to "produce changes in the material logics of the brain by affecting the brain's neurons and synapses."[47] As opposed to biopower, neuropower concerns the

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[43] Crary, *24/7*, p. 99.

[44] According to Stiegler, during the nineteenth century, mechanical tertiary retention defined proletarianization; during the twentieth century, analog tertiary retention fulfilled this role. The current operator of "generalized proletarianization" is digital tertiary retention.

[45] Peter Sloterdijk, *In the World Interior of Capital for a Philosophical Theory of Globalization*, trans. Wieland Hoban, Cambridge, UK, Polity Press, 2017, p. 101.

[46] Including video games, computers, SMS, and other such factors of today's "culture industry."

[47] Warren Neidich, 'Neuropower: Art in the Age of Cognitive Capitalism', *The Psychopathologies of Cognitive Capitalism: Part One*, ed. A. De Boever and W. Neidich, Berlin, Archive Books, 2013, p. 228.

ways and means that capitalism intervenes upon the neuroplasticity of the brain; neuropower produce changes in the material logics of the brain (synapses) via the reconstitution of working memory (protension), rather than simply modulating memories of the past (secondary retention). The transhuman mental endosomatic condition has become entropic, fulfilling the *inhuman*[48] as a denial of negentropic possibilities—a denial of noetic freedom and agency accompanies "deep digitality," with total automation reaching a threshold of disruptiveness. Neural entrainment is reduced to firmware, pruned and nested within algorithmic governmentality.

Stiegler associates the theoretical core of transhumanism with "*the metaphysics of absolutely computational capitalism,*" bearing within it the "ultra-liberal-cum-libertarian project."[49] Protracting Stiegler's thought, there subsists a coeval arche-cinematic cognitive condition in our thought, cognition rearranging the montages of psychic and collective retentions and protentions, whereby secondary retentions—the representational content of memories and dreams—are probabilistically pooled. Not just dreaming but anticipatory cognition (protension) and the transcendental imagination, too, become imagistically tied to psychotechnologies and reticulated media-images. In the age of disruption, endosomatic self-knowledge, understood as what Socrates called *anamnesis*,[50] is amortized by exosomatic stupefaction, catastrophes, and disorientation.

For Stiegler, we occupy an epoch of reticulated and automated disruption where a "new kind of barbarism" is induced by existential loss, generalizing what Emile Durkheim called *anomie*, the malady of the infinite. Stiegler points to terrorism and sociological case studies of isolated and suicidal *dividuals*, such as Richard Durn and Andreas Lubitz, to proffer how the key pharmacological

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[48] "Inhuman" in Whitehead's terms, whereby human beings risk a relapse/decay into simpler forms as a result of a lack of awareness.

[49] Stiegler, *The Age of Disruption*, p. 97.

[50] "Anamnesis," as a recollective process of remembrance, represents "direct dialogical interaction" without having to rely on any kind of external scaffolding. As part of today's military technics, anamnesis is denuded of techne and exerts ontic cartographic containment, written into the (perceptual/optical) functionality and political utility of targeting and imaging systems (e.g. drone warfare). This is contrasted to "hypomnesis," the making-technical of memory via substitutes and externalizations such as writing, photography, machines, etc.; "hypomnesis," the pharmacological condition of anamnesis, is actively constructed through techne. For further consideration, see: Allen Feldman, *Archives of the Insensible: Of War, Photopolitics, and Dead Memory*, Chicago, University of Chicago Press, 2015 p. 188; Also see: Alexander Galloway, *French Theory Today*, The Public School, New York, 2010, p. 5."

questions in our "epoch of disruption" involve how the technological powers that we lionize as "civilizational progress" become transfigured as weapons of destruction, revealing a dormant subterranean barbarism. Disruption, constantly outstripping and overtaking social organization, renders the will obsolete in advance, thereby destroying reason (understood as rational knowledge).

ECO-CRISES

Our becoming-panicked and social hysteria is perhaps best evinced by today's most apparent and variegated indices, including: scientific anticipations that demonstrate the metasystemic crises established as the Anthropocene (cf. the Meadows Report);[51] initiatives such as "Biosphere 2," a project (bolstered by Steven Bannon) in Arizona that seeks to grow commercial crops in CO_2-rich atmospheres, which are premised on the ecosystem's failure, or "disaster capitalism"; sentiments such as those of Secretary of State Mike Pompeo, who recently told diplomats at a meeting of the Arctic Council in Finland that the rapidly warming Arctic region will present abundant economic opportunities for offshore resources like gas, oil, uranium, gold, and rare earth minerals. This is accompanied by: an increasing general economic insolvency, of which 2008 was the first shockwave; the rise of sentiment analysis and metadata collection; an increase in "new forms of barbarism" vis-a-vis racially motivated violence (e.g. Dylann Roof in Charleston, or Yassin Salhi in Saint-Quentin-Fallavier); the explosion of opioid addiction in the United States; and the rise of reactionary neolibertarian ideologies amongst disaffected liberals (producing the "alt-right" and Mencius Moldbug and Nick Land's "Dark Enlightenment").

According to Stiegler, if there is to be a viable future, the economy-to-come will be that of practical and functional noetic differentiation—such is the Neganthropocene's noetic functor. Stiegler prompts a rediscovery of *tekhnē*, where new therapies of pharmaka accompany the rediscovery of dreaming. As the exteriorization of the content of dreams, mental perception (noesis) is also a technesis (thus, the perceptual noetic faculty is the site of primeval arche-cinema). In contrast to informatic calculative thinking, however, Stiegler

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[51] Donella H Meadows, Dennis L. Meadows, Jorgen Randers and William W. Behrens III. *Limits to Growth*, New York, Signet, 1972.

prompts the exteriorization of the contents of dreams and their realization to be guided towards "meditative thinking," whereby reason exceeds quantitative calculation, thus opposing the automated gradient of "calculated thinking."

On tele-science and techno-ecology, Derrida commented that the quickly approaching world of "law without justice" would oblige us to examine the virtualization of space and time alongside the possibility of virtual events whose movement and speed would prohibit us more than ever. However, virtualization, co-opted by monetization qua actuarial derivative markets, produces something much more akin to active informationalism's objective-driven providential recourse. Anthropologist Davor Loeffler notes that the projected scenarios of a 2°, 3°, or 6° increase of global warming will produce entirely different future worlds. Thus, these scenarios or process continua are not virtual, but objective, for "they are the recursive abstraction of the linear continuum condensed in single modules as processes of becoming, which can be coupled and exchanged like objects, as the emissions trading proves."[52]

This economy requires a shift from anthropology to neganthropology, where the latter is founded on the pharmacological use of new media apparatuses to produce a threat to hominization, which André Leroi-Gourhan described as the processual conquest of space and time through its technicization. In Stiegler's description of neganthropology, however, a conspicuous problem arises concerning how to evaluate or measure negentropy. Stiegler lifts the term "negentropy" from Erwin Schrödinger's "negative entropy"[53] and what physicist Francis Bailly and mathematician Giuseppe Longo term "anti-entropy." According to Stiegler, negentropy is "always described in relation to a locality in time as well as in space [...] it differentiates a more or less homogenous space."[54] While Stiegler often makes passing mention of Longo's work, this is the most detail that he provides us, leaving the inquisitive reader demanding elaboration. Nonetheless, Longo's quantitative work on the isomorphic evolution of our perceptual systems bears closer attention, so that we may better account for hominization as it relates to

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[52] Davor Loeffler, 'Distributed Potentiality', *Identities: Journal for Politics, Gender and Culture*, vol. 15, no. 1-2, 2018, p. 38.

[53] In computation and physics, 'neganthropy' refers to 'available energy', rather than dissipated energy (entropy).

[54] Stiegler, *Machine*, 44.

orientation, locomotory actions, and perceptual invariances.

LONGO AND COMPUTATION

According to Longo, large computing systems, such as banking systems, are based on real-time interaction with their environment. However, a certain gradient of dynamicity is introduced by interactive interpreters, as in the case of Object-Oriented Languages.[55] Longo's description of a "double loop control system" asserts there is a "phase space" of economic activity and a second loop at the allostatic level that inhibits the changing phase space.[56] Longo does not believe that the question of continuity and discreteness is a purely epistemological question inaccessible to ontological query. Thus, Longo's thesis sharply conflicts with the classic model of the Church-Turing thesis, which poses the two as absolutely unique. In his unpublished essay, *Intelligent Machinery*, Alan Turing writes of a p-type machine (p being an anachronism for pain or pleasure) with different means of signal differentiation; in Turing's model, sense stimuli function as "trigger circuits," or switches, which organize randomly distributed memory units to provide a systematic form of finite memory.[57] In contrast to Turing's discretization, Longo does not oppose digitally continuous computation, both for humans and machines. Instead, we can think of the body at different moments according to different paradigms because the body is nothing but interactions with other bodies (some qualitative, some quantitative).

What does this mean for exosomatic technical artifacts as they configure generative processes? As Longo demonstrates how dynamicity is introduced by "interpreters," the "reflective property" of machines is accordingly "extended by interaction,"[58] allowing for us to affect automated decision-making systems through decision-guidance techniques that are preferred by the "choice architect." Such "soft" forms of design-based control, called "nudging," alter people's behavior in a predictable way without forbidding any options or

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[55] Giuseppe Longo, 'The Difference between Clocks and Turing Machines' *Functional Models of Cognition. Theory and Decision*, ed. A. Carsetti, vol. 27, Springer, 1999, p. 12.

[56] Giuseppe Longo, 'Extended criticality, phase spaces and enablement in biology', *Emergent Critical Brain Dynamics*, ed. April A. Benasich and Urs Ribary, vol. 55, 2013, pp. 64-79

[57] Alan Turing, 'Intelligent Machinery', *The Essential Turing* ed. B. Jack Copeland, New York, Oxford University Press, 2004, pp. 395-433.

[58] Longo, 'The Difference Between Clocks', 12.

significantly changing their economic incentives.[59] As demonstrated by recent research in design-based regulatory techniques, this proves for a pharmacological co-option of information-processing hardware, which is irreversibly armed with the capabilities of sifting, sorting and interrogating vast quantities of data via bioprospecting. Digital machines, which "execute commands with identical repetition,"[60] assert the terms of hypercontrol society's "fixed exchange rates"[61] and deep digitality's multiplicity of points of view and matrices of vision. "Within deep digitality the subject is cellular"[62] and cognition is externalized as machanosensory feedback, feeding our multiplexed mental images as determined world-perception. To reinstate the human means to confer digital decision-guidance processes, where the targeted individual makes relevant decisions, contrasted to mechanically-determined and automated action-forcing/coercive design. Such is the prowess of Longo's work, which heralds continuous communication systems that privilege the observer (or "choice architect").

DIGITAL FLECKS AND OPTICS

If photography, phonography, and cinema produced analogue vestiges in the twentieth century,[63] inextricably linked to their materiality, their electromagnetic circulation foretold of a kind of synchronization that Leroi-Gourhan described as characteristic of the "programme industries."[64] Presciently foretelling of the algorithmic probabilism typifying user and item-based data packet inspection, "nearest neighbor algorithms," and "implicit data collection," as early as 1965, Leroi-Gourhan described a "magnetic library" (*magnétothéque*),[65] armed with "electronic selection":

"[t]he preservation of thought can now be envisaged otherwise than in

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[59] Karen Yeung, 'Hypernudge: Big Data as a Mode of Regulation by Design', Information, Communication and Society, vol. 20, no. 1, 2017, pp. 118-36.

[60] Giuseppe Longo, 'Critique of Computational Reason in the Natural Sciences', *Fundamental Concepts in Computer Science*, 2009, p. 14.

[61] Gilles Deleuze, 'Postscript for Societies of Control', *Negotiations 1972-1990*, New York, Columbia University Press, 2014, p. 180.

[62] Alexander Galloway, *Laruelle: Against the Digital*, Minneapolis, University of Minnesota Press, 2014, p. 69.

[63] Stiegler, *The Age of Disruption*, p. 37

[64] André Leroi-Gourhan, *Gesture and Speech*, Cambridge, MA, MIT Press, 1964.

[65] Ibid., p. 349

books, which will not for long possess the advantages of quick and easy manageability. Preselected and instantaneously reconstituted information will soon be delivered by a huge magnetic library with electronic selection."[66]

Artificial content-based filtering, from recommender systems to information retrieval, gesture towards de-symbolization—the industrial dispositif constituting its exteriorization through pooled arche-traces of memory, rather than analogue vestiges. However, what is often missing from discourse on digitality and machines is how deep digitality is *optical*. Even in the case of data packet inspection, at any given node, the upper layers have to be exposed in order for a packet to be distributed further, because these layers contain transportation-oriented data; differentiation is based on perceptual values.

As Leroi-Gourhan demonstrates, digitality and digital thinking precede digital technologies. Drawing from the metaphysical distinction between essence and instance, Galloway affirms that digitality simply entails a basic distinction: "whether zeros and ones or some other set of discrete units—the four nucleobases of the genetic code or the twenty-six letters of the alphabet—are just as digital as the base-two numeric encoding used in binary computers."[67]

Thus, much like perception, there is a kind of "fundamental hybridity" that results from this description of digitality. This is integral to what Leroi-Gourhan calls the process of exteriorization and what Bernard Stiegler, following the analyses of Alfred Lotka, calls exosomatization. Here, hybridity (Ὕϐρις) characterizes the realities that surround us and constitute us, as they are always doubled: realities are chimeras and artefactual mixtures of heterogenous realities. Thus, hybridity is also an aesthetic and technical notion, with the human at the center, functioning via continuous perceptual interference.

Fredrich Kittler inaugurated the termed *psychophysics* to describe the new technological media stored in the "discourse network of 1900" based on randomness and combinatorics. Where Kittler's "1800 kingdom of sense" corresponded to Foucault's sovereign societies and biopolitics, Kittler's "1900 kingdom of pattern," based on images and algorithms, corresponds to Deleuze's control society, though Kittler stalks this development's proleptical

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[66] Ibid., p. 404.
[67] Galloway, *Against the Digital*, p. xix.

conception.[68] Kittler chooses the epochal period of 1900 specifically because of the development of the phonograph and typewriter, where the ability to record sense-data technologically shifted: "[f]or the first time in history, writing ceased to be synonymous with the serial storage of data [...] the real entered into competition with the symbolic."[69] However, Kittler's description omits that this transformation is not only the conversion of matter into code, or the passage from the qualitative to the quantitative, but, instead, a progression from the non-aesthetic to the aesthetic. This transition, which Lacan recognized as integral to the castrative "mirror stage," also facilitates the development from nonmedia to media, politicizing life while converting representability into an aesthetic object.[70] Thus, while the Real remains foreclosed (despite Kittler's insistence), observation and perceptual faculties reinscribe the human-as-centre.

CONCLUSION

Stiegler does not settle into the lofty seat of prognostication, as he advocates for applying "negative entropy" to the Anthropocene by inspiring a media-ecological relationship birthed from the commons so as to evade ecological disasters that include rising water levels, global warming, and increasing CO_2 levels in the atmosphere. The aforementioned "choice architect" must be directed outwards, which situates epistemophilia's social fulcrum. From *Plaine Commune*, Stiegler's recently inaugurated "contributory learning territory," to the 2020 League of Nations macroeconomic "Internation.World" initiative, Stiegler advocates for direct political and legislative action.

Following Stiegler, "tertiary retentions," whether they be mechanic, analogue, or digital, are pharmacological—a phenomenon that is both poison and cure, introducing both emancipatory possibilities and newfound repressions. Stiegler's work is not terribly specific about what programs or technologies he finds most promising for pharmacological appropriation, which I have attempted to resolve. Granted, surveying surveillance and meta-data capture, Stiegler recognizes that the internet allows for the possibility of open-

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[68] Friedrich Kittler, *Discourse Networks 1800/1900*, Stanford, Stanford University Press, 1992, pp. 211-212.
[69] Alexander Galloway, *Protocol: How Control Exists After Decentralization*, Cambridge, MA, MIT Press, 2004, p. 73.
[70] Ibid., p. 111.

source "free software,"[71] stimulating new subject positions; this makes compossible the process of "individuation" as an uncompressed trial of becoming that is "structurally unachievable and in this sense infinite."[72] Nonetheless, we must also recognize the limits of such thought, recalling the imprudence of the California Ideology and Harry Halpin's unabashed and, at times, naïve utopian optimisms.[73]

If it is not "open source everything" as the freeing of prostheses that we ought to seek when reclaiming digital tertiary retention-cum-protension, where ought we seek such alternatives? In *The Cybernetic Hypothesis Part IV*, the French anarchist collective Tiqqun describes the "conversion of human relations into an ecology of data points that can be tweaked and controlled but remains self-stabilizing,"[74] anticipating such calculation. Tiqqun's "hypothesis" refers to a specific epistemological regime in which systems or networks combine both human and nonhuman agents in mutual communication, dominating the production and regulation of society and culture. Etymologically identifying cybernetics with the Greek term *kubernèsis* (to "pilot" or "steer"), Tiqqun likens cybernetics to control society's petrol. Ever-militant, Tiqqun claims "we want to disrupt the piloting of this ship, to take what detritus is usable and leave the rest to sink in the rising oceans,"[75] and provides a strategy: block the circuits (offline and online).

Tiqqun cites the 2011 blockade of the Port of Oakland and of ports up and

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71 Stiegler, "Machine," p. 40.

72 Galloway et al., 'Compression in Philosophy', p. 131; Bernard Stiegler, *For a New Political Economy*, tr. Daniel Ross, Cambridge, UK, Polity Press, 2010, p. 42.

73 Granted, the military-industrial complex's ARPANET—the first virtual network to implement the TCP/IP protocol suite—and cybernetics *are* both endowed to a American counter culture, as these developments and developers were directly informed by Stewart Brand's ethos of the Whole Earth Catalog, the politics of the New Left, Buckminster Fuller's systems theory, Ken Kesey and the Merry Pranksters/1970s psychedelic music culture, and the back-to-the-land commune movement. The sentiment of techno-utopianism, propelled by those open-source "California Ideologists" in Silicon Valley was first scrutinized by British media theorists Richard Barbrook and Andy Cameron of the University of Westminster. If the "California Ideology" found its most marked proponents in Wired.com, it found polemic responses in the "nettime" mailing list, where Barbook and Cameron's critique of dotcom neoliberalism was circulated for debate. For a more complete description, see: Fred Turner, *Steward Brand, The Whole Earth Network, and the rise of Digital Utopianism*, Chicago, University of Chicago Press, 2006.

74 Tiqqun, 'The Cybernetic Hypothesis Part IV', *Short Circuit: A Counterlogistics Reader*, ed. Jasper Berns et al., 2015, p. 71.

75 Ibid., 72.

down the Western Coast in the United States, the Argentine Piqueteros Unemployed Workers Movements (*Movimientos de Trabajadores Desempleados*), Julien Coupat and Tarnac Nine's sabotage of French train lines, Occupy Wall Street, and Idle No More's ongoing indigenous-led rail blockades in Canada. An inversion of Paul Virilio's "Total War," Tiqqun's position draws on corporeal networks and the flux of flow. Echoing the sentiments in Wolfgang Iser's *The Act of Reading*, Tiqqun indicates that non-sequential "virtual work" occurs at the intersection of objective specifications that the text, itself, divulges—for Iser and Tiqqun, alike, the manifesto produces a necessarily political aesthetic response.[76] Such a hermeneutic approach poses intermediality-as-pharmakon, giving rise to a new range of tactical media, which we have seen in our own epoch via RedHack and Anonymous' hacktivism, Chelsea Manning's whistleblowing, and Wikileaks' leaking confidential internal documents.

While politically promising, Tiqqun's strategy only takes us so far. Considering that cybernetics has culturally calcified into what Deleuze and Guattari termed lines of "rigid segmentarity,"[77] or normative stasis, to rupture its reticulated feedback-based circulation with (virtual) "blockages" simply does not seem to be a terribly viable approach. For instance, distributed denial-of-service attacks (DDoS) frequently lapse into symptomatic and palliative solutions for structurally-ingrained problems—the nodes and edges of protocological control, rooted in the riven technical specifications of TCP/IP and DNS. Despite Gabriella Coleman attributes a political precedent to DDoS hacks such as Anonymous' "Project Chanology" provocation against the Church of Scientology, these often amount to little more than what Critical Art Ensemble aptly describes as "monumental counterspectacle" that aims to compete with the "bunker of power's" symbolic order. This is not to suggest that hacktivism cannot prompt transindividuation—when hacktivism "seeks to undermine the symbolic order with more ephemeral, process-oriented methods,"[78] producing nomadic resistance through temporary autonomous

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[76] Wolfgang Iser, *The Act of Reading: A Theory of Aesthetic Response*, Baltimore, John Hopkins Press, 1980, 28.

[77] Gilles Deleuze and Félix Guatarri, *A Thousand Plateaus: Capitalism and Schizophrenia*, trans. Brian Massumi, Minneapolis, University of Minnesota Press, 1987, 204.

[78] Critical Art Ensemble, *Electronic Civil Disobedience and Other Unpopular Ideas*, New York, Autonomedia, 1996, p. 38.

zones, it can target structurally-directed resistance formations. One prominent such example is Turkish Marxist-Leninist hacktivist group RedHack's 2014 breach into the Soma Electricity Production company, cancelling 1.5 million liras (approx. 650K US dollars) of denizens' debt. We must constitute new, politically galvanized and post-hermeneutic active lines of flight over the pre-existent ones, ensuring that these are informed by epistemophilic *philia* (φιλὶα) and intended for the commons.

As the conditions of nihilism and dejection appear more and more akin to a kind of "general madness," normalized ad infinitum, madness has transmutated into an invisible phantasm, haunting and paralyzing our social impulse to transindividuate. Alas, perhaps we cannot extricate ourselves from automation's impersonal traumas and our media ecology's probabilistic binder, yet the fulsome debris and oil wafting and pooling on the ocean's epipelagic crust indicate that generalized dejection is certainly unsustainable. If nothing else, the digital turn ought to caution us that that which is embedded is not necessarily visible and that which is perceptual can not be reduced to a disclosure of "the Real." As the role of epistemic and epistemological transitions, transindividuation can be made actualizable through continuous priming via human intervention. A mastery of coding and computation, of theory and contributory praxis, is desperately needed if we are to fit new lines of flight and pathways over hypercontrol society's circuits. By modifying and specifying Stiegler's account, I have tried to mend the marriage of hardware realism and software agentialism, of media exosomatization with inflection. I am in agreement with Stiegler that transindividuation can solely be achieved through the commons, though we must be uncompromisingly specific. What do we mean by "the commons"? Rather than goods or resources held in common, such "commons" must be regarded as a dynamic system of social relations, or what Massimo De Angelis calls "doing in common."[79] This is the pure power of φιλὶα (philia), metastablization through circuits of transindividuation, through which reason is "conceived not as ratio, but as affect."[80]

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[79] Massimo De Angelis, *Omnia Sunt Communia: On the Commons and the Transformation to Postcapitalism*, London, Zed Books, 2017.
[80] Stiegler, *The Age of Disruption*, p. 51.