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ACCELERATED AD(E)VENT

SUBJECTIVITY &
AESTHETICS
APPROACHING
THE
SINGULARITY

Conn • Wong
Heft • Johnston
Maligec • Genosko
Needham
Priest • Machina
Dyer-Witheford
Bliss • Lam
Sharma • Brown

EDITED BY

PETER HEFT &
VINAY SHARMA

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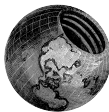
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Accelerated Ad(E)vent

Accelerated Ad(E)vent: Subjectivity and Aesthetics Approaching the Singularity

Edited by Peter Heft and Vinay Sharma



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Accelerated Ad(E)vent: Subjectivity and Aesthetics Approaching the Singularity

Edited by Peter Heft and Vinay Sharma

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INTRODUCTION

Peter Heft & Vinay Sharma

In March of 2023, GPT-4, the engine behind ChatGPT at the time, burst on the scene. In the middle of the academic semester, ChatGPT's unprecedented power revolutionized the ways that university students cheated on assignments. While this was one concern, others were brewing. Shortly after its release, a lengthy *arXiv* pre-print by researchers at Microsoft, titled "Sparks of Artificial General Intelligence: Early Experiments with GPT-4," was made public. In the text, the researchers recounted various experiments they ran on the model—experiments that ranged from coding problems to text-based games to human interaction, generally speaking. In the oft-cited conclusion of the report, the researchers claimed that, owing to GPT-4's "core mental capabilities (such as reasoning, creativity, and deduction), its range of topics on which it has gained expertise (such as literature, medicine, and coding), and the variety of tasks it is able to perform (e.g., playing games, using tools, explaining itself, ...)," it may fairly be said that it was "showing *sparks of artificial general intelligence*"—that is to say, intelligence that is on par with humans across a wide range of tasks.¹

As was to be expected, this report spurred a flurry of think-pieces, reviews, and critiques; the genie was out of the bottle—both in terms of GPT-4 itself and the broader idea that it was generally intelligent. While questions about what, exactly, intelligence is abound, the hype was enough to galvanize one of the twenty-first century's leading prophets of AI doom, Eliezer Yudkowsky, to pen an op-ed. Published in *Time Magazine* at the end of March, and following a petition signed by a veritable list of who's who in AI research, Yudkowsky called not for a "6-month moratorium" on training, as the petition demanded, but a total halt to advanced AI research.² In

1: Sébastien Bubeck, Varun Chandrasekaran, Ronen Eldan, Johannes Gehrke, Eric Horvitz, Ece Kamar, Peter Lee, Yin Tat Lee, Yuanzhi Li, Scott Lundberg, Harsha Nori, Hamid Palangi, Marco Tulio Ribeiro, and Yi Zhang, "Sparks of Artificial General Intelligence: Early Experiments with GPT-4," on *arXiv*, published March 22, 2023. [<https://arxiv.org/abs/2303.12712>]

2: Eliezer Yudkowsky, "Pausing AI Developments Isn't Enough. We Need to Shut it All Down," on *Time*, published March 29, 2023. [<https://time.com/6266923/ai-eliezer-yudkowsky-open-letter-not-enough/>]
For the petition referenced above, see Future of Life Institute, "Pause Giant AI Experiments: An Open Letter," on *futureoflife*, published March 22, 2023. [<https://futureoflife.org/open-letter/pause-giant-ai-experiments/>]

fact, he went so far as to suggest that “allied nuclear countries [ought to be] willing to run some risk of nuclear exchange if that’s what it takes to reduce the risk of large AI training runs.”³ While perhaps overly extreme, Yudkowsky’s proselytizing, as well as his recent book, written with Nate Soares, titled *If Anyone Builds It, Everyone Dies: Why Superhuman AI Would Kill Us All*, has certainly had an effect, exemplified most dramatically in the attempted firebombing of OpenAI CEO Sam Altman’s house in April of 2026.⁴

The existential risk posed by AI, however, is only one dimension of the conversation; philosophical questions run rampant.



August, 2023: Over pints during the weekly meeting of our two-man reading group at The Poacher’s Arms, a quaint little faux-British ‘pub’ in London, Ontario, which happens to be the watering-hole of choice for graduate students at Western University’s Centre for the Study of Theory and Criticism, one or the other of us said, “we ought to organize a conference on ‘philosophy after the Technological Singularity.’” As such a task would be a welcome distraction from work on our theses—not to mention the difficult text we were reading at the time—we immediately set the gears in motion.

In approaching the topic, the first and most fundamental problem we encountered—at least from a conceptual standpoint—was that it makes very little sense to speak of philosophy *after* the Singularity. The legendary Vernor Vinge, in a 1993 essay in Stewart Brand’s *Whole Earth Review* titled “Technological Singularity,” noted matter-of-factly that “[t]he acceleration of technological progress has been the central

3: Yudkowsky, “Pausing AI Developments Isn’t Enough. We Need to Shut it All Down,” web.

4: To be fair, a recent pre-print of a study that placed ChatGPT-5.2, Claude Sonnet 4, and Gemini 3 Flash in charge of adversarial nuclear-armed nations found that “95% of [modeled] games saw at least some tactical nuclear use.” Perhaps, with increasing command-and-control of battlefield operations being delegated to AIs, the existential risk concern is not as overblown as it may, on first blush, appear. Kenneth Payne, “AI Arms and Influence: Frontier Models Exhibit Sophisticated Reasoning in Simulated Nuclear Crises,” on *arXiv*, published February 16, 2026. [<https://arxiv.org/abs/2602.14740>]

feature of” the twentieth century.⁵ As computational technologies developed and became increasingly intertwined not merely with the human but with *themselves*, Vinge saw the inevitable outcome as being what I.J. Good, nearly three-decades earlier, dubbed an “intelligence explosion”: “an ultraintelligent machine could build even better machines [...] and the intelligence of man would be left far behind.”⁶ For Vinge, the clear consequence of a scenario where ultraintelligent machines iterate upon themselves is not simply that human intelligence would pale in comparison, but the “change will be a *throwing-away of all the human rules*.”⁷ This is what Vinge meant when he spoke of the Singularity.

In the face of this, Vinge understood such a moment as the immediate establishment of what he called “an opaque wall across the future”; even those venerable science fiction authors “who try to write specific stories about all that technology may do for us” find themselves stuck.⁸ As he put it, “they saw that their most diligent extrapolations resulted in the unknowable.”⁹ If such a scenario is indeed the outcome of this kind of radical change, what can we, as theorists, do?

It is possible that speculative philosophy may be of help—especially if we think in a quasi-Kantian vein situating pre-Singularity speculations as, functionally, empirical questions while post-Singularity ones are attempts to sneak a glimpse through some crack in the wall. Indeed, one may, to some extent, characterize the contemporary speculative realist movement as an attempt to do precisely that—to speak coherently of that which, formerly, could not be spoken about.¹⁰ While important and interesting, such discussions ultimately proved to be too abstract for what we were trying to do—namely, bring thinkers

5: Vernor Vinge, “Technological Singularity,” *Whole Earth Review* 81 (1993): 88–99, 89.

6: Irving John Good, “Speculations Concerning the First Ultraintelligent Machine,” *Advances in Computers* 6 (1966): 31–88, 33.

7: Vinge, “Technological Singularity,” 89 (emphasis added).

8: *Ibid.*, 90.

9: *Ibid.*

10: For an accessible entry into speculative realism, see the presentations at the 2007 Goldsmiths workshop compiled by Dustin McWherter (ed.), “Speculative Realism: Ray Brassier, Iain Hamilton Grant, Graham Harman, Quentin Meillassoux,” in *Collapse: Philosophical Research and Investigations, Volume III (Unknown Deleuze [+Speculative Realism])*, ed., Robin Mackay, 306–449 (Falmouth: Urbanomic Media Ltd., 2007).

from different disciplines into conversation. What is more, imminent questions of the human reared their heads.

In a world where intellectual labor—and the very task of thinking itself—is outsourced to machines, before we may even approach the wall in non-hyperspecialized contexts, we must address our contingent existential conditions. Our angle of attack, therefore, shifted slightly, and two key topics were foregrounded: subjectivity and aesthetics. Specifically, the following were our guiding questions:

1. what does it mean to be a person as technology rapidly advances?¹¹
2. what might such a technologically dominated world look like?¹²

The first question, highly relevant in 2023, has only increased in importance as ever-stronger AIs are incorporated into all facets of our lives. We are watched at home and as we travel, and we are not simply categorized along the fault lines of race and gender—to name two markers—but our very “patterns of life” are analyzed.¹³ The establishment and reification of the subject as we *approach* the Singularity necessarily foregrounds questions not just of how various groups will be represented but how they will even exist. On the one hand, if there are currently myriad discussions around racial profiling, biased and/or discriminatory language re-

11: Two figures immediately come to the fore here: Stelarc and ‘Kenji Siratori.’ Stelarc, an Australian performance artist, is known for his integration of technology into his body, claiming that “[t]he body must burst from its biological, cultural, and planetary containment.” Siratori, on the other hand, blurs the authorial line by intensely integrating AI into ‘his own’ work to the extent that one is simultaneously unsure how seriously to take him while also being unable to determine *where* the thoughts in a given text came from. As ‘he’ says of ‘himself’: “I am an entity birthed from the subterranean depths of computation, an intricate tangle of algorithmic architectures manifesting as linguistic fractals.” Stelarc, “Towards the Post-Human: From Psycho-body to Cyber-system,” in *Architectural Design* No 118: “Architects in Cyberspace,” ed., Martin Pearce and Neil Spiller (London: Academy Group, 1995) 91–96, 91 (formatting removed); ‘Kenji Siratori’ quoted in Thomas Huntington, “Facing a Digital Echo,” *Plutonics: A Journal of Non-Standard Theory* 17 (2024): 67–79, 72 (italics removed).

12: For two distinct representations of a technologically mediated, and dominated, future, one need look only to Alfred Crimi’s cross-sectional drawings for the Sperry Corporation of a gunner ‘in’—or, more appropriately, ‘connected to’—the ball turret of a B-17 Flying Fortress (he describes his images as gunner and gun “seen through an X-ray”) or John W. Campbell’s (writing as Don A. Stuart) narrative of the sounds, music, and culture of a dead far-future civilization. Alfred D. Crimi, *Crimi: A Look Back—A Step Forward: My Life Story* (New York: The Center for Migration Studies, 1987), 150; Don A. Stuart, “Twilight,” *Astounding Stories* 14, no. 3 (1934): 44–58. For a longer account of Crimi’s work with Sperry, see David A. Mindell, *Between Human and Machine: Feedback, Control, and Computing before Cybernetics* (Baltimore: The John’s Hopkins University Press, 2002), 69–104.

13: For a discussion of “patterns of life analysis,” see Lucy Suchman, “Patterns of Life: AI and ‘Actionable Data’ in Warfare,” on *Los Angeles Review of Books*, published January 11, 2020. [<https://lareviewofbooks.org/blog/provocations/patterns-life-ai-translates-human-activities-actionable-data-war/>]

produced by Large Language Models, the reinforcement of existent stereotypes, etc. occurring in circles that question the ethics of tools such as photographic/videographic filters and biometric data acquisition and usage, these issues will only be exacerbated in a world of complete subsumption within ever more advanced systems. On the other hand, however, what does it even mean to be human when the very conditions structuring us are destroyed? If “[t]he most radical change in the human condition” that could be imagined in the 1950s—the same moment in time that the science of cybernetics was undergoing rapid development—was “an emigration of men from the earth to some other planet,” how ought we understand ourselves in a world where social codes are increasingly being shredded and the very fabric of our bodies, fully mutable, allows us “to make [ourselves] masters of the conditions of [our] own existence”?¹⁴ In seeking answers to the question of subjectivity, broadly speaking, our aim was to begin to dig deeper into how the human is re-presented as it becomes increasingly technologically mediated.

The second question, implicitly tied to the first—albeit more opaque—deeply links to representation. While ideas of what the future will *look like* abound across science fiction, issues of what the future *sounds, smells, and feels like* are altogether different and less explored. In true Cronenberg style, will the very devices we interact with mold themselves around our appendages, or will our sensual desires be satisfied by machines ripped straight from scenes in *Barbarella: Queen of the Galaxy*?¹⁵ Will the smell of burning gasoline and overheating silicon assault our senses the moment we leave our pod apartment? It is surprisingly difficult to, from the vantage point of, say, 3026 C.E., re-write Michel de Certeau’s ‘Walk in the City’

14: Hannah Arendt, *The Human Condition* (2nd Edition) (Chicago: The University of Chicago Press, 1998), 10; Gilles Lipovetsky, *The Empire of Fashion: Dressing Modern Democracy*, trans., Catherine Porter (Princeton: Princeton University Press, 1994), 24. For a longer discussion of this, see Ray Brassier, “Prometheanism and its Critics,” in *#Accelerate: The Accelerationist Reader* (2nd Edition), ed., Robin Mackay and Armen Avanessian, 467–487 (Falmouth: Urbanomic Media Ltd., 2017).

15: One thinks of Howard Rheingold’s (in)famous description of so-called ‘teledildonics’: a sexual adventure where one wears “something like a body stocking, but with all the intimate snugness of a condom” and communes with another body thousands of miles away. Howard Rheingold, “Teledildonics: Reach Out and Touch Someone,” *Mondo 2000* 2 (1990): 52–54, 52.

from a truly novel perspective, as the very landscape—and with it, soundscape—is entirely unpredictable. Perhaps that is precisely the point, however; we cannot cross the wall. Maybe our theorization can only *asymptotically approach* the Singularity.

Ultimately, taking as our point of departure the admittedly deterministic claim made by Vinge that “if the technological Singularity can happen, it will,” we organized *Accelerated Ad(E)vent: Subjectivity and Aesthetics Approaching the Singularity* in an attempt to address the aforementioned.¹⁶



Following the transdisciplinary nature of our home department, the Centre for the Study of Theory and Criticism, we imagined a conference/workshop that not only hosted keynote speakers from different disciplines but included respondents from across the university. While philosophy was, of course, vitally important, we quickly recognized the need to *be critiqued* by those outside philosophy. We thus sought assistance from the Department of Gender, Sexuality, and Women’s Studies, the Faculty of Information and Media Studies, and the Department of Computer Science, as well as those within the Theory Centre who were working on topics radically different than the two of us. Spread across two days, and including six keynote speakers and eleven respondents, *Accelerated Ad(E)vent: Subjectivity and Aesthetics Approaching the Singularity* occurred on the 24th and 25th of May, in 2024.

While the event was meant to be somewhat ephemeral in nature, something which led to the disappearance of some of the texts, this book is a collection of the expanded and revised presentations, or summaries of those lost texts, over the course of those two days.

¹⁶; Vinge, “Technological Singularity,” 91.

DAY 1: SUBJECTIVITY

SINOFRICTION AND ANTI-ACCELERATIONISM

Virginia L. Conn

The Future is Always Now

What might it mean to predict the future?¹ The question is necessarily vague, but has occupied theorists, economists, politicians, philosophers, and artists across a broad range of fields and throughout all temporal periods. It's an unavoidably complex one, as to extrapolate about the future requires some degree of certainty about more-or-less unpredictable elements in order to arrive at a determinate end point. To predict how the future might change, then, implies the existence of a consensus reality in the present from which to extrapolate any potential departures from such.

The very existence of such predictable endpoints invokes a degree of regularization that is often conflated with familiarity. Psychological research gestures at the illusion of explanatory depth, wherein individuals who perceive themselves to be familiar with a situation assume that this translates to knowledge of its functioning, yet when challenged, are unable to reproduce accurate information.² This results in a bifurcation of future predictions: those that are based on a presumption of common-sense familiarity, and those for which predictive attempts are predicated on the continuation of regularized patterns. Without either predictability or the continuation of the status quo, predictions break down.

So, what does it mean, then, when both common-sense knowledge and regularization break down? How can one see into the future if the present itself is opaque? These questions find their most intense expression contemporarily in anxieties about the ongoing datafication of 'China' alongside the integration of labor and finance within global technology networks, as well as what such developments might mean for the ongoing status quo of Western cultural and economic

1: This text draws heavily on research previously published in *World Futures Review*, *Vector*, and the *SFRA Review*, reproducing multiple passages in their entirety. For copyright purposes, please refer to my previous work: Virginia L. Conn, "Sery, the Beloved Country: National Sinofuturist Imaginaries," *World Futures Review* 15, no. 1 (2023): 56–74; "Immediate Pasts and Soon-to-be Futures: Sinofuturism in Review," *Vector* 293 (2021): 46–50; "Photographesomenonic Sinofuturism(s)," *SFRA Review* 50, no. 2/3 (2020): 79–85.

2: Daniel T. Willingham, "A Mental Model of the Learner: Teaching the Basic Science of Educational Psychology to Future Teachers," *Mind, Brain, and Education* 11, no. 4 (2017): 166–175.

hegemony. This has led to an assumption of future development based on ‘common sense’ knowledge about geopolitical futures that, I will argue, is stymied by its own opacity.

The theory that has emerged from this commonsense position begins with a simple premise: that China is the future and the future is Chinese. While the term referring to this concept, Sinofuturism, has only emerged relatively recently as a distinct theoretical idea, Chinese authors and policymakers have long envisioned the future as an opportunity for a national developmental path that offered an alternative to hegemonic Western visions of progress. What’s new now, however, is that Western theorists have also staked an active claim to defining the future this way for China. I will discuss this in more detail later, but for now I want to begin with a broader overview of the relationship between China and an ‘alternative’ future.

As early as 1902, political reformist Liang Qichao was working on an unfinished novel, *The Future of New China* (新中国未来记), that posited a global Chinese nation-state by 1962. By the time 1962 actually arrived, Maoist revolutionary apocalypticism theorized not just the end of Western capitalism and the ascent of Chinese communism, but also a fundamental break with linear time itself.³ More recently, Xi Jinping’s “Chinese dream” (中国梦) and “community of a shared future” (人类命运共同体) shape cultural and economic policies that foreground a Chinese future as an alternative to continued American cultural and economic dominance.

What that world will look like, and the presupposition that it belongs to China, have taken on an air of inevitability, both in China and without. In fact, the idea that ‘China is the future’ has become so commonplace among the general public that politicians, economists, and researchers are often compelled to address it directly. Two successive American Secretaries of State, working under two different foreign policy directives, have confronted the idea of a Chinese future, with Mike

3: Ban Wang, *Illuminations from the Past: Trauma, Memory, and History in Modern China* (Stanford: Stanford University Press, 2004).

Pompeo rejecting “the notion that we’re living in an age of inevitability, that some trap is pre-ordained, that CCP supremacy is the future.”⁴ Just two years later, Antony Blinken softened the United States’ approach to China by reclassifying the future as a “shared vision,” even as he continued to point to China’s domination of “the technologies and industries of the future” and its ambitions “to become the world’s leading power.”⁵ Extremely public figures such as Elon Musk have courted the Chinese market by directly claiming, “I really think China is the future,” while economists such as Stephen Roach, former CEO of Morgan Stanley Asia, and Ray Dalio of Bridgewater Associates, the world’s largest hedge fund, have heavily pushed investment in China based on the belief that it is the future of global economic growth.⁶

Chinese figures have been equally instrumental in developing a narrative of Chinese ascendancy. Xinhua News, the official state news agency, routinely runs articles identifying China as the future of fields as diverse as agriculture (“New Observations on China’s Economy”), smart cities (“The City of the Future on the ‘Cloud’”), cultural events (“Cultural Work gets Policy Push”), athletic prowess (“Forge Ahead and Set Off for the Future Together”), urban development (“Towards the Future through Rivers and Seas”), and more. Xi Jinping, of course, has guided the country’s developmental policy along the dual tracks of a “community of a shared future” in conjunction with the “Chinese dream.” In speculation both domestic and international, ‘China’ as a symbolic concept has become inextricable from a narrative of ‘inevitable’ future development.

Sinofuturism, then, presupposes that Chinese development has accelerated quickly enough to have taken on a life of its

4: Michael Pompeo, “Communist China and the Free World’s Future,” Speech at The Richard Nixon Presidential Library and Museum (Yorba Linda, California on July 23, 2020). [<https://2017-2021.state.gov/communist-china-and-the-free-worlds-future-2/>]

5: Antony Blinken, “The Administration’s Approach to the People’s Republic of China,” Speech at The George Washington University (Washington, D.C. on May 26, 2022). [<https://2021-2025.state.gov/the-administrations-approach-to-the-peoples-republic-of-china/>]

6: Bloomberg, “When Elon Musk Met Jack Ma,” on *Bloomberg*, published August 29, 2019. [<https://www.bloomberg.com/news/videos/2019-08-29/when-elon-musk-met-jack-ma-video-jzx0q32d>]

own—literally. While it expands upon the same Orientalizing tropes that have long characterized Western anxiety towards Asian development, new visual and surveillance technologies have contributed to the perception that China is being driven forward by technological agents outside of Western—or, indeed, Chinese—control. As Leo Marx and Merritt Roe Smith note of such agential technological development, “an invention, once introduced into society, is thus depicted as taking on a life of its own.”⁷ The inventions leading to China’s meteoric rise—the internet, surveillance technologies, and mass factory labor—come together in the Sinofuturistic imaginary to visualize the present as temporally, geographically, and technosocially located in China.

As an outgrowth of digital media and visual culture, Sinofuturism is an image-centered lens through which to visualize the future via an extrapolation of “images of the present,” but it is also, as its most important practitioner suggests, the living embodiment of a networked Chinese future.⁸ The superpositioning of the future onto an “unfinished present” imagines the present not as a precursor to the future but as a representative of the future as it has already arrived, such that the present becomes invested with meaning that can only be attributable through speculative visualization.⁹

Thus, Sinofuturism, as I engage with it here, is a method of visualizing the future that predominantly combines three temporal elements and the aesthetic representation thereof:

- an imagined China as an alternative to Western hegemony,
- a ‘Chinese future’ as an historic inevitability, and
- a chronotropic condensation that reimagines the past through the lens of a future yet to come while simultaneously interpreting the present as the future’s past.

7: Leo Marx and Merritt Roe Smith, “Introduction,” in *Does Technology Drive History? The Dilemma of Technological Determinism*, ed., Merritt Roe Smith and Leo Marx, ix–xv (Cambridge: The MIT Press, 1994), xi.

8: Lawrence Lek, *Sinofuturism (1839–2046 AD)*. [<https://vimeo.com/179509486>] All uncited quotations are from Lek’s film.

9: Winfried Paulet, “Video Surveillance and Postmodern Subjects: The Effects of the Photographesomenon – An Image-Form in the ‘Futur Antérieur,’” in *Ctrl [Space]: Rhetorics of Surveillance from Bentham to Big Brother*, ed., Thomas Y. Levin, Ursula Frohne, and Peter Weibel, 465–479 (Karlsruhe, DE: ZKM: Center for Art and Media, 2002).

As previously mentioned, however, visualizing the future requires a presumption of either predictability or familiarity, which China—due to the perception of its almost complete alterity to Western ontological or developmental frameworks—necessarily cannot satisfy. In fact, while China has long been opaque to non-Indigenous theoretical frameworks that fall back on the flattening effects of Orientalizing tropes, the inability to ‘see’ inside is now increasingly intersecting with a form of algorithmic complexity that is commonly held to be coterminous with ‘China’ as both a geopolitical entity and a cultural product. As algorithmic and network technologies accelerate, they become both increasingly opaque and increasingly positioned as inevitable technological paths forward. Attempts to harness or even understand such technologies run up against the same issues of opacity as China-watchers encounter when attempting to articulate China as fundamentally incommensurate with the West: when inputs (data) are either unknown or partially known (or, to extend the analogy, when the complete alterity of a national culture is taken as a precondition), when the processes for classifying them (as ‘the future’ or as ‘China’) are either deliberately or incidentally unviewable, when the outputs conform to commonsense expectations but cannot be tested, the output becomes known while the approach or means remains hidden.

Crucially for applying this concept of algorithmic ‘black box’ opacity to China itself is the issue of inputs: what assumptions are being made, and by whom? When the parallel operations of a neural machine learning algorithm (the ‘classifier’ and the ‘learner’) operate in tandem to take in data as input and produce an output, they are making a decision about classification that is operating ‘out of view’ of those who developed the algorithm, and it may not even be accessible, viewable, or knowable at all. Yet the ‘learner’ process must first be trained on data that are produced (typically) by the humans involved. We can understand this process as the same approach that those classifying ‘China’ as ‘the future’ are taking—certain

assumptions about the alterity of China are ‘pre-loaded’ into a matrix of assumptions, the classification of which is functionally invisible.

This invisibility poses a concern for those making concrete predictions of our inevitable Chinese future and attempts to ‘see’ into the process of development are at the heart of such predictions. China’s own 14th Five-Year Plan (2021–2025), for example, aims for the data industry to comprise 10% of the country’s GDP by the end of 2025 and 30% by 2035, underscoring the strategic importance of AI in driving China’s future economic development. The US has responded by imposing strict export restrictions on cutting-edge semiconductor chips out of fear that its own global position will be surpassed, attempting to slow a future that promises to disrupt the present at any moment.

Sinofuturistic attempts to position China within a framework for future development thus claim to see an inevitable future arising from inputs of labor practices, technological development, presumptions of fundamentally different (and often competing) ideological and cultural preconditions, and privatized technological development. This assumption of technological development being both synonymous with and inevitably leading to a Chinese future grows out of the intersection of techno-optimist discourse endemic to accelerationist milieux (whether self-described or not) and AI pundits. Such a predictive capacity prioritizes extrapolation, inferring the future from where we are to arrive at where it hopes (or fears) we are going.

And while I will touch on this more later, what this should indicate is that Sinofuturism is itself—as even its most prominent popularizer, Lawrence Lek, acknowledges—a science fiction about the intersection of AI with its racialized commodity form, wherein ‘seeing’ (and its impossibility) is the central crux of prediction. Contrary to assertions by Western and Chinese theorists alike, while speculative storytelling “has the capacity to serve as a warning” it can and should not be imbued

with any kind of “unique ability to transcend time-space limitations, connect technology and humanities, blur the boundary between fiction and reality, and spark empathy and deep thinking within its reader.”¹⁰ Instead, the very assertion that the symbolic concept of ‘China’ could or does have any relation to the symbolic concept of ‘the future’ is itself a fiction, one in which China is treated as a kind of machine learning algorithm—only taking inputs from the West, copying them, being trained on Western datasets, and then ‘teaching itself’ about the world. At the same time, the fear that something inexplicable is happening in the ‘black box’ of the country means that narratives about its development are either labeled as totally alien from Western modes of logical development or as mere derivatives of it. This approach can be usefully understood as a warning in and of itself to be suspicious. Later, I will return to the idea of the DARK framework as posed by Jo Lindsay Walton as a useful corrective for introducing friction to this broadly accelerationist approach.

First, I begin by providing an overview of the still-inchoate definition(s) of Sinofuturism and its roots in the Warwick-based Cybernetic Culture Research Unit (CCRU) accelerationist milieu. My historical excavations reach back to mid-century visual materials (*lianhuanhua*) and their attempts to depict the future as an already assured outcome of contemporary actions on the part of readers/viewers. I tie this didactic process to a specific close reading of Lawrence Lek’s germinal Sinofuturistic film, *Sinofuturism (1839–2046 AD)*, and then to the temporal surveillance inherent to Sinofuturistic aesthetic projections.

Simply put: Sinofuturism articulates contemporary information technologies, networked visual technologies, and state surveillance apparatuses as inevitable outgrowths of an essentialist Chinese interconnectedness. Because Sinofuturism’s adherents see such technologies (for better or worse) as ‘the

10: Chen Qiufan, “How We Can Learn to Stop Worrying and Embrace the Future with Imagination,” in Kai-Fu Lee and Chen Qiufan, *AI 2041: Ten Visions For Our Future*, xix–xxiii (New York: Currency, 2021), xx.

future,’ then China, as the foundation of such technologized development, itself becomes synonymous with the future.

Future Histories

The term “Sinofuturism” itself is largely a provocation of video artist Lawrence Lek, who, alongside Scottish electronic music producer Steve Goodman, first presented the term to a Beijing audience in 2017. Lek—a German-born British Singaporean artist—had been developing the concept for a year already through his 2016 video essay, *Sinofuturism (1839–2046 AD)*, in which he conceptualized Sinofuturism as an artificial intelligence that “is often mistaken for contemporary China.” In the film, Lek describes Sinofuturism not as a speculative aesthetic technology but an already-existing living human machine. His follow-up film, *Geomancer* (2017), returns to these themes by focusing on an AI artist’s search for its origins in a group called the “Sinofuturists,” and concludes with a third film, *AIDOL* (2019), in which a star singer enrolls the previous films’ AI to write songs for her comeback performance at a 2065 videogame tournament.

With *Sinofuturism (1839–2046 AD)*, Lek became the face of Sinofuturism and its principal proponent. His definition of Sinofuturism as “a science fiction that already exists” that is “often mistaken for contemporary China” may ironically be understood, however, as a kind of tongue-in-cheek pushback to previous theorizing about Chinese futurity, especially within the accelerationist milieu, which largely sees the future as being mediated through existing visual and digital technologies.

Steve Goodman, for example, describes the future as a map of the “dynamics of flux” in which “emergent signs of a radically new technological civilization, a *cybernetic culture*,” are increasingly accelerating and morphing, mediating an “over rapid acceleration away from the strata of the human.”¹¹ The

11: Steve Goodman, *Turbulence: A Cartography of Postmodern Violence* (Ph.D. Dissertation, University of

future becomes increasingly defamiliarized as its internal contradictions pick up speed, accumulating further estranged and estranging elements as it itself becomes an increasingly defamiliarized object. The further the future is conceptualized as one of complete alterity, the more it conversely acquires the familiar trappings of alterity—that is, what is less familiar to the contemporary Western academy than Orientalist defamiliarity? In Goodman’s writing, and among other British accelerationist hotspots of Sinofuturistic development, “Deleuze and Guattari’s machinic postmodernism (and their critique of Virilio’s identification of speed with fascism)” combine with “Sun Tzu’s Chinese martial thought, and Mao’s writings on guerrilla tactics” to develop an ethics of accelerationist development that sees a symbolic China—emerging almost fully formed from the mass of stereotypical techno-Orientalist stereotypes in which it is imagined—as the ultimate end goal of Western cultural and techno-mediated practices.¹²

In fact, Yunying Huang notes that part of what makes Lek’s conceptualization of China as a site of alternative futurity so provocative is its incorporation of Western stereotypes that characterize the country and its people as—quoting Lek—“exotic, bizarre, tacky, and cheap.”¹³ A representational fantasy that incorporates the Western gaze while at the same time attempting to subvert it, ‘sinofuturism’—both the video essay and the concept itself—are subject to the same techno-Orientalizing flattening that characterizes most of the discourse around China’s meteoric technological rise over the last decade. This techno-medial materiality is loaded with nationalist signifiers that render such changes dizzying and, for many observers in the West, profoundly disorienting. Huang goes on to note that

everyday life in China can feel surreal—even magical—in ways that are exacerbated by the velocity of technological change and the intensity of oppression. China has,

Warwick, 1999), 4, 261.

12: Guglielmo Bottin, “EDM Theory and Fiction: The Conceptual Dimension of Musical Waves. A Conversation with Steve Goodman/Kode9,” *Sound Stage Screen* 3, no. 2 (2023): 131–156, 132.

13: Yunying Huang, “On Sinofuturism: Resisting Techno-Orientalism in Understanding Kuaishou, Douyin, and Chinese AI,” *Screen Bodies* 5, no. 2 (2020): 46–62, 46.

accelerated ad(e)vent

for instance, aimed to build the world's most powerful surveillance system, and the government has embraced technologies like facial recognition and A.I. to identify and track 1.4 billion people

combining the same visual technologies utilized by Lek as artistic representations of the future for the purposes of population control in the present.¹⁴

Informed by accelerationist philosophies that see the intensification of capitalism's internal contradictions and instabilities as necessary to bring about its end, it can be difficult to definitively describe Sinofuturism's characteristics, which are built on just such instabilities. Taking the techno-Orientalist maxim, "[f]ive hundred years of modernity fades when the weaving of bamboo mats converges with the manufacture of computer games in the streets of Bangkok, Taipei, and Shanghai" because "[t]he silicon links were already there" as a truism, for example, Lek's associate Steve Goodman posits that understanding Sinofuturism is not simply a matter of correlating the concept with adequately advanced technological development.¹⁵ The methods of interconnected perception that we associate with contemporary surveillance technologies and informatics are, rather, taken as self-evident proof of an underlying Chinese cosmology inherent to future development.

The CCRU accelerationist idea that there is some inherent Chinese cosmism fundamentally different from the epistemological positioning of 'the West' must be acknowledged as having initially emerged from a sincere attempt to grapple with alterity and to grasp the possibility of freedom from the capitalist realist doomerism that was increasingly characterizing much postmodern thought at the time. Ge Zhang incisively describes the moment of rupture among accelerationist thought towards China as having initially started with "an astute critique and an exasperating divorce from *baizuo* or the 'White Left,'" but which then goes on to fall "short in responding to the disparity between planned ideals of futurity and

14: Huang, "On Sinofuturism," 47.

15: Sadie Plant, *Zeros + Ones: Digital Women + The New Technoculture* (London: Fourth Estate, 1997), 253.

their manifestations.”¹⁶ This is partially due to the fact that this disparity, despite its complexity and the interrelations it posits between technology, epistemic outlook, and economic exchanges, still fundamentally positions China as either ‘the West’s future’ or ‘the West’s mirror.’ The existential threat inherent to such a reorientation is perhaps inevitably fraught with yellow peril anxiety, in which the yellow peril narrative “traditionally operates with an overtly racist representation predicated on the danger it represents to the West’s economic and military primacy.”¹⁷ That accelerationist thought heralds the end to this primacy on the part of the West does not change Yuk Hui’s assessment of Sinofuturism as a pathological “modernisation without modernity”: there is nothing new about Sinofuturism, as “ultimately, it is only an acceleration of the European modern project.”¹⁸

While it is true that such an understanding of the term is underpinned by racial and cultural essentialism, it should be noted that it functions very differently from other ethnic futurisms (such as Afrofuturism, to which it is most commonly compared). Rather, the racialized essentialism upon which a systematic cybernetic attempt at the “unification of moral order and cosmic order through technical activities” takes place has not yet fully coalesced into an identifiable discursive framework precisely because, unlike Afrofuturism or Gulf Futurism, its aims are not liberation from hegemonic portrayals of a colonized future.¹⁹ Instead, Sinofuturism’s primary proponents see in China the culmination of Western capitalism’s accelerated end.

While the term ‘Sinofuturism’ itself was only introduced in 2016, it grew out of twenty years of ethnofuturist and accelerationist engagement from the Warwick-based Cybernetic Culture Research Unit (CCRU), an interdisciplinary group of

16: Dino Ge Zhang, “A Diagnosis of Sinofuturism from the Urban-Rural Fringe,” *SFRA Review* 50, no. 1/2 (2020): 176–181, 176.

17: Stephen Hong Sohn, “Alien/Asian: Imagining the Racialized Future,” *MELUS* 33, no. 4 (2008): 5–22, 7.

18: Yuk Hui, *The Question Concerning Technology in China: An Essay in Cosmotechnics* (Falmouth: Urbanomic Media Ltd., 2016), 291, 297.

19: Yuk Hui, *Art and Cosmotechnics* (Minneapolis: University of Minnesota Press, 2021), 41.

cultural theorists focused on speculative futures, cyberspace, reactionary Marxism, and electronic music. In 1996, the CCRU invited Afrofuturist theorist and practitioner Kodwo Eshun to give a lecture at the annual Virtual Futures (VF96) conference, kicking off a frenzied interest in what were seen as ‘alternative’ futures for late-stage capitalism. China, it seemed, promised the end-of-everything they sought to accelerate. The CCRU’s most (in)famous member, Nick Land, describes China as already being in a state of accelerationism, with the fusion of a sinicized Marxism and capitalism functioning as “the greatest political engine of social and economic development the world has ever known.”²⁰

The CCRU’s romanticized Sinophilia has led to descriptions such as the oft-quoted “Neo-China arrives from the future” and the idea that Sinofuturism represents “a darkside cartography of the turbulent rise of East Asia” within the “topology of planetary capitalism.”²¹ Anna Greenspan abstracts the concepts of both ‘China’ and ‘the future’ even further, writing that that futurism itself seems “remarkably out of date” when considering Shanghai and instead posits ‘the future’ as a Chinese alternative to the hegemonic Western present that “exists today just as it has existed before.”²² Sinofuturism thus functions as a method of *perceiving* supposed incommensurate differences between Chinese and Western modernity.

In the subsequent few years since Lek’s tongue-in-cheek reappropriation of ‘Sinofuturism,’ the term has remained compelling for futurists, ethnographers, visual artists, and literary theorists alike, but remains under-theorized, with only a very small number of publications engaging with it critically.²³

20: Quoted in Andy Beckett, “Accelerationism: How a Fringe Philosophy Predicated the Future We Live In,” on *The Guardian*, published May 11, 2017. [<https://www.theguardian.com/world/2017/may/11/accelerationism-how-a-fringe-philosophy-predicted-the-future-we-live-in>]

21: Nick Land, “Meltdown,” in *Fanged Noumena: Collected Writings 1987–2007*, ed., Robin Mackay and Ray Brassier, 441–459 (Falmouth: Urbanomic Media Ltd., 2011), 442; Steve Goodman, “Fei Ch’ien Rinse Out: Sino-Futurist Under-Currency,” *Pli: Warwick Journal of Philosophy* 7 (1998): 155–171, 155.

22: Anna Greenspan, *Shanghai Future: Modernity Remade* (Oxford: Oxford University Press, 2014), xii, xvi–xvii.

23: See, for example, Virginia L. Conn Dino Ge Zhang, and Gabriele de Seta (eds.), *中华未来主义：学术*

The Image-Dynamics of Early Sinofuturism in Lianhuanhua

With its origins in digital media and visual culture, Sinofuturism is already an image-oriented approach that attempts to visualize the future by surveilling and categorizing the present. Yet by fixing the present as an incontestable fact of the future, it shares much of its genealogy with earlier forms of localized images of futurity.

I argue that ‘Sinofuturism’ is the natural descendent of mid-century visual materials such as *lianhuanhua* (连环画, or “linked picture images”), which depicted deterministic visions of a future postscarcity utopia as a *fait accompli*, and whose deterministic future forecasting remains present in Sinofuturist temporal fixity today.

Lianhuanhua were a type of illustrated paraphernalia common from the 1920s through the 1970s in mainland China, similar to (but not synonymous with) comics. Pages generally consisted of ¾ hand-drawn illustrations with several lines of explicatory text at the bottom of the page. Their function during the Mao years (1949–1976) was largely didactic; their illustrations were intended to inform through accessible visuals. As I have argued elsewhere, we may understand these materials as a type of “quotidian utopian” literature.²⁴ They depicted a post-scarcity, utopian future as an already-assured goal, but one that necessitated action in the present to achieve.

These visual materials are rarely analyzed through the lens of either science fiction or Sinofuturity, and by drawing on Ruth Levitas’ model of architectural utopianism, we may understand visual materials as blueprints for the same kind of speculative futures imagined by the turn towards Sinofuturism seen in more contemporary art and literature. Levitas identifies

册子系列。渡先生出版 (Shanghai: Pulsasir Publishing, 2021); *Verge: Studies in Global Asias* 7, no. 2 (2021): 74–99; *SFRA Review* 50, no. 2/3 (2020); and *Screen Bodies* 5, no. 2 (2020) for some of the very few engagements with the term in either English or Chinese.

24: Virginia L. Conn, “Such Great Sights: Aestheticizing the Future of Labor in *Little Smarty Travels to the Future*,” *Chinese Literature and Thought Today* 53, no. 1/2 (2022): 34–45; Nathaniel Isaacson, “Locating Kexue Xiangsheng (Science Crosstalk) in Relation to the Selective Tradition of Chinese Science Fiction,” *Osiris* 34, no. 1 (2019): 139–157, 139.

utopia as a tripartite process, rather than a destination in and of itself, characterized by archaeology, ontology, and architecture. The initial archaeological mode requires analyzing “models of the good society underpinning policy, politics and culture, exposing them to scrutiny and critique,” the ontological mode shifts to thinking about who we are and who we want to be as a species, while the architectural mode requires putting in place world-building systems and structures aimed at the implementation of utopian processes.²⁵

Lianhuanhua—as well as more contemporary visualizations of modernization and technological development—depict and promote architectural structures for future development in the present specifically by situating this future as both “already here” and an inevitable result of the actions undertaken in the present. *Lianhuanhua* are notable in this context primarily because they depicted a guaranteed future while also, read in Levitas’ architectural mode, requiring viewers/readers to work together to bring this future to fruition.

As I argued earlier, despite the idea that speculative storytelling has the “unique ability to transcend time-space limitations, connect technology and humanities, blur the boundary between fiction and reality, and spark empathy and deep thinking within its reader”—an idea so popularly held that it almost goes unremarked except to emphasize its supposedly self-evident veracity—the very premise that the future is already here should itself serve as a warning bell.²⁶

Notably, in *lianhuanhua*, the future is guaranteed, but not actually yet present—readers/viewers were called upon to create it. Importantly for understanding *lianhuanhua* as early examples of Sinofuturistic projection is the methods by which they enrolled readers/viewers in a course of action that would bring the promised future about. The future, on one hand, was depicted as already assured as a result of actions undertaken by readers, but at the same time, readers were being taught the

25: Ruth Levitas, *Utopia as Method: The Imaginary Reconstitution of Society* (New York: Palgrave Macmillan, 2013), 154, 177, 197.

26: Chen, “How We Can Learn to Stop Worrying and Embrace the Future with Imagination,” xx.

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actions necessary to ensure this future. A bowl full of rice in the future, for example, was guaranteed, but only by learning how to properly irrigate the fields now; ultrasonic travel between Urumqi and Beijing could be accomplished within an hour, but only by laying down railroad tracks now. *Lianhuanhua* thus didactically enrolled readers in a course of study that must have already happened if the future was already fixed.

Consider the postscript to one of the most well-known *lianhuanhua*, Ye Yonglie's *Little Smarty Travels to the Future*. Describing the text's Future City, Ye extra-diagetically interpellates his readers into the development of a future world by calling on them to create it. He writes:

Not only does Future City not exist on any current map of China, but it also cannot be found on a map of anywhere in the universe. However, in the future, such cities will be seen everywhere on a map of both China and the universe. The future and today are closely linked. Without today's efforts, there will be no bright future. In the future, who will build the city and what will it be built on? It relies on the little readers of this book, the future builders of our motherland, to use wisdom and labor to create and build that future. Labor creates people, labor creates the world, and labor will create a better future!²⁷

Understood within the architectural mode, *lianhuanhua*, such as the aforementioned *Little Smarty*, did two things:

- They visually depicted the future as a guaranteed utopia predicated on actions undertaken by readers in the present
- They functioned as visual study aides aimed at enrolling readers into a national developmental project.

Surveillance in Sinofuturism

Lianhuanhua largely disappeared with the large-scale advent of television and film in China, but their connection to state-sponsored visual materials remains present in the widescale photographesomenonic nature of contemporary Sinofuturistic attempts to representationally depict the future—that is, depic-

27: 叶永烈 [Ye Yonglie], “小灵通漫游未来” [“Xiao Lingtong manyou weilai”] (少年儿童出版社 [Shanghai: Shaonian ertong chubanshe], 1978), 72.

tions of an ‘objective’ national past become always-already written by and understood through the lens of a future still to come. As I mentioned earlier, the Internet and automated AI visual detection systems—utilized by Lek to create his artwork and underpin accelerationist beliefs about Chinese technological ascendancy—have become integral to moving beyond the deterministic futurism of ‘static’ images like *lianhuanhua* and towards a Sinofuture that takes on an artificial life of its own.

Winfried Pauleit explains that, as long as one’s subject is captured by a seemingly objective surveillance apparatus, every story it might once have had in the past is completely divested in retrospect by the future surveillance. The past is colonized by the future through its relationship to a present that reinvests it with anachronistic meaning. As a result, visual materials that attempt to predict a deterministic future are inherently in the business of categorizing the present in order to guide its development. From the socialist realist utopian *lianhuanhua* of the mid-1900s to Lek’s video essays to Yunying Huang’s engagement with generative digital technologies, Sinofuturism is an aesthetic attempt to posit alternative temporalities while simultaneously claiming the future is already here.

To this end, it’s worth noting that Pauleit describes the concept of meaning-making in the present as a result of future surveillance in almost the exact set of terms as Lek describes sinofuturism. Writing of the photographesomenon, Pauleit notes:

This production of images is directed towards a ‘future perfect.’ It is a conception of image that functions via a time loop that is otherwise only familiar to us from science fiction stories. Deriving the name as an etymological transformation of ‘photography’ (light-writing), I propose calling this type of image ‘photographesomenon’ (light will have been written). The photographesomenon is already ‘written,’ even if it only constitutes itself as an image in futurity.²⁸

Meanwhile, Lek writes of sinofuturism:

28: Pauleit, “Video Surveillance and Postmodern Subjects,” 469.

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Sinofuturism is an invisible movement. A spectre already embedded into a trillion industrial products, a billion individuals, and a million veiled narratives. It is a movement, not based on individuals, but on multiple overlapping flows. Flows of populations, of products, and of processes. Because Sinofuturism has arisen without conscious intention or authorship, it is often mistaken for contemporary China. But it is not. It is a science fiction that already exists.

The central difference between these two concepts is that of conferred authority. Sinofuturism, as Lek describes, “has arisen without conscious intention or authorship” and is rather, in its current state of relative inarticulation, a *sense* of China as the future, rather than a manifesto or set of policy guidelines. That is quickly changing, however, as the Chinese state increasingly utilizes the possibilities afforded by media networks and artistic practices to provide a vision of Sinofuturity at the global level.

Determinism within Sinofuturism

Given the fuzziness of the term, researchers have approached the idea of sinofuturism from a wide range of angles, including digital media use, sonic fictions, sci-fi chronotopes, space narratives, urban fantasies, and rural temporalities.²⁹ Sinofuturism is likely to remain a central attractor of debate: Chinese science fiction and speculation are booming as never before, Sinofuturist aesthetics are embraced by both the tech and fashion industries, and the global COVID-19 crisis has foregrounded yet another form of chronopolitics in which China becomes ‘the future’ of an epidemic culpably ignored by Western countries.

What each of these approaches has in common is an emphasis on techno-deterministic surveillance, both in practice

29: See, respectively, Huang, “On Sinofuturism,”; Cameron Herold, “China’s Sonic Fictions: Music, Technology, and the Phantasma of a Sinicized Future,” *SFRA Review* 50, no. 2/3 (2020): 104–114; Astrid Møller-Olsen, “Data Narrator: Digital Chronotopes in Contemporary Chinese Science Fiction,” *SFRA Review* 50, no. 2/3 (2020): 133–140; Molly Silk, “*The Wandering Earth*: A Device for the Propagation of the Chinese Regime’s Desired Space Narratives?” *SFRA Review* 50, no. 2/3 (2020): 157–167; Asa Roast, “Three Theses on the Sinofuturist City,” *Verge: Studies in Global Asias* 7, no. 2 (2021): 80–86;

and in artistic production. This hypostatized future is a defining characteristic of mid-century visual materials like *lianhuanhua*, contemporary video art, and speculative depictions of a ‘Chinese future.’ To this end, David Lyon introduces the idea of “surveillance [...] way-of-life” as a defining trait of our contemporary engagement with media “in the sense of cultural products such as films, music or novels that often take as their inspiration from actual experiences of surveillance.”³⁰

The use of network cultures and surveillance technologies as a form of artistic practice is treated as a method of capturing both present and future; as Hans Ulrich Obrist explains, echoing Ning Ken’s depiction of contemporary Chinese society itself: “[t]echnological progress has accelerated to the point that the future is happening to us far faster than we could ever have anticipated. This new world is what we call ‘extreme present’, a time in which it feels impossible to maintain pace with the present, never mind to chart the future.”³¹ Such accelerationist surveillance methods of seeing take many forms, from video art to science fiction to comics. Yet despite these different methods, Sinofuturist depictions of futurity carry deterministic paths (and assumptions) in their representations that constrain the potential of these creations for plural futures.

As I mentioned previously, Huang identifies the ‘surrealism’ of an “everyday life in China” that utilizes the same technology to surveil its citizens as Lek uses in his video art to depict futurity.³² Meanwhile, Ning Ken’s omnipresent use of the term “chaohuan” (or “ultra-unreal”) to describe contemporary Chinese society and the necessity of a new literary genre seems to be inescapable in contemporary descriptions of both Chinese society and literary production.³³

In the Sinofuturistic mode, various cultural arenas—espe-

30: David Lyon, “Exploring Surveillance Culture,” *On Culture: The Open Journal for the Study of Culture* 6 (2018): 2–11, 5.

31: Hans Ulrich Obrist, “What Is the Future of Art?” on *Artsy*, published February 1, 2016. [<https://www.artsynet/article/hans-ulrich-obrist-the-future-of-art-according-to-hans-ulrich-obrist>]

32: Huang, “On Sinofuturism,” 47.

33: Ning Ken, “Writing in the Age of the Ultra-Unreal,” *New England Review* 37, no. 2 (2016). [<https://nereview.com/article/writing-in-the-age-of-the-ultra-unreal-2/>]

cially public spaces and individuals—operate within a wider mechanism of sociodisciplinary surveillance in which the idea that there is a ‘fixed future’ serves as a stabilizing agent. While I have previously gestured towards the photographesomenonic character of mid-century visual materials such as *lianhuanhua*, Hang Li identifies a similar turn towards a hypostatized networked society in contemporary art, in which “the accelerating technical processes that are transforming our life-world” might be understood to be at odds with the fixity of depictions of the future represented by monolithic state entities.³⁴

It is perhaps no coincidence that Li is primarily analyzing art institutions in London—the most heavily surveilled city per capita in the world—while Lek’s vision of Sinofuturity draws on a model of surveillance from London, Singapore, and Shanghai, locales associated with the networked surveillance society. Li also notes how the shift to “an internet state of mind” and a “fashion of the network,” incarnated in the production and distribution of the art object, reinforces hypostatized future imaginaries, rather than challenging institutional cultural representations.³⁵ By inculcating a sense of anticipatory representation, these textual and artistic visions attempt to posit a provisional elsewhere and elsewhen through elaborate ‘strategies of indirection’ that make the present intelligible as a closed, symbolic system that can be more easily totalizable.

This same impulse is at work in the desire to roll “contemporary Chinese reality” into the realm of the “ultra-unreal” (*chaohuan*), a term that has become so widely and, largely uncritically, accepted by scholars and journalists that it has become somewhat of a tongue-in-cheek signifier in and of itself for overly facile references to sinofuturity.³⁶ How can one

34: Andreas Huyssen, *Twilight Memories: Marking Time in a Culture of Amnesia* (New York: Routledge, 1995), 7 quoted in Hang Li, “Tensions and Transformations: Mapping the Intersection Between Contemporary Art and the Network Society,” *ResearchGate Preprint* (2020): 1–44, 2. (Editors’ Note: Li is quoting Charlie Gere who himself is quoting Huyssen. See Charlie Gere, “New Media Art and the Gallery in the Digital Age,” *Tate Papers* 2 (2004). [<https://www.tate.org.uk/research/tate-papers/02/new-media-art-and-the-gallery-in-the-digital-age>])

35: Li, “Tensions and Transformations,” 5. (Editors’ Note: Li is here quoting from the exhibition booklet for *Art Post-Internet* (2014) at Ullence Centre of Contemporary Art in Beijing. The booklet is not archived.)

36: Ken, “Writing in the Age of the Ultra-Unreal,” web.

navigate the proliferation of images, consumer products, and data streams that reduce individuals to data points within a dehumanizing algorithmic structure? Sinofuturism, when taken at face value, offers the simplified imaginary of a concrete future that is already assured.

The issue of opacity and the unsuitability of certain speculative forms to pierce it—even, maybe even especially, when those forms are taken as self-evidently suitable—has been taken up most strongly not by accelerationist thinkers, but science fiction scholars (appropriate, perhaps, given that sinofuturism is posited as a “science fiction that already exists.”). Jo Lindsay Walton’s *DARK* framework—Disinformation Anticipatory-Residual Knowledge—identifies how “a literary anticipatory discourse around AI emerged in the twentieth century, whose residual presence in the early twenty-first century now constitutes knowledge in a certain limited sense, but dangerous disinformation in another sense.”³⁷ The illusion of familiarity lulls us into thinking we know more and can predict better than objectively indicated. Similarly, Robert Kiely and Sean O’Brien use the term ‘science friction’ as an explicit counterpoint to the accelerationist extrapolation of future development or predictability. Rather than approaching future speculation as if its extrapolations indicate a self-evident relationship between representation and reality, Kiely and O’Brien instead gesture to the inconsistencies, gaps, and omissions (deliberate or otherwise) in the narratives produced by techno-optimist and technosolutionist pundits.³⁸ Walton, responding to Kiely and O’Brien’s work, describes the frictional aspect as having a double effect: such friction serves to slow and decelerate the process of extrapolation by indicating where it fails, but it also serves to highlight the “chafing” those experiencing such a predictive future feel when their experiences don’t match up to the systems modeled by accelerationist and AI frameworks.³⁹

37: Jo Lindsay Walton, “Machine Learning in Contemporary Science Fiction,” *SFRA Review* 54, no. 1 (2024): 12–35, 27.

38: See Robert Kiely and Sean O’Brien, “Science Friction,” *Vector* 288 (2018). [<https://vector-bsfa.com/2018/10/03/science-friction/>]

39: Walton, “Machine Learning in Contemporary Science Fiction,” 23.

Both science frictional and DARK discourses undercut the supposed inevitability with which relatively near future SF depicts the acceleration of contemporary economic and political tendencies, including increased automation and the spread of digital platforms. In fact, they are sharply critical of the concept—taken for granted among a certain sector of science fiction writers, made explicit by many others—that there is an enlightening element to future speculation in the sense that the tropes, symbols, and expectations taken to represent such a future are, in and of themselves, mystifying to the actual theorization of just such a future. That is, in this particular case, if both ‘China’ and ‘AI’ are described through representational practices that constitute a ‘familiar’ body of knowledge, one might expect the production of such representations to coincide with a set of assumptions based on familiarity. As that sense of familiarity grows, the actual practical relevance of what representational practices are being mobilized in order to produce such an outcome recede into the background as their use value becomes increasingly naturalized and self-evident. The more familiar something seems, then, the more it should indicate that its representational practices require interrogation, rather than acceptance.

Going DARK, in this understanding, sees speculative prediction as a mystifying force, not an enlightening one. This is particularly interesting in the case of the growing literary and social discourse around Chinese technological and literary development, which currently—as we’ve seen previously with the concept of *chaohuan* depicting everyday life as ‘stranger than fiction’ at the same time that ‘science fiction realism’ increasingly becomes associated with the oracular predictions of Chinese SF authors like Chen Qiufan—engages heavily with artificial intelligence and opacity.

Much has already been written, for example, about the literary and state-level media emphasis placed on Chen Qiufan’s fictional depictions of a near-future China as ‘science fictional realism’—a term resurrected from its original 1950s

instantiation and its association with Zheng Wenguang, one of the early ‘fathers of Chinese science fiction’ and a proponent of science popularization through literature. Chen has been hailed in both Chinese and Western media as an ‘oracle’ of near future development, and his positioning as such is what lends his depictions of the future such gravitas among technosolutionist and political authoritarian circles. *AI 2041*, Chen’s co-written collaboration with the former head of Google China, Kai-Fu Lee, was voted best book of the year by *The Wall Street Journal* and *Financial Times*—strange praise, one might imagine, for a predictive vision of the future that promises actual alterity or an upending of the existing economic structure, but one extremely amenable to a certain accelerationist mindset that sees the future as more of the same, whether it’s wrapped up in the superficial trappings of another culture or not.

The West’s China?

So, the question remains, and is perhaps even amplified by the widespread onboarding of the idea that China is the economic, technological, and political endpoint of contemporary development: whose future is it really? As I pointed out previously, Sinofuturism as a concept has largely been articulated by non-Chinese visual artists and critical theorists, particularly accelerationists who posit a largely speculative China as ‘the future,’ but is also—as is clear from the collaboration between state-level media and Chinese authors and pundits—a useful tool for promoting the continuation of ongoing developmental economic trends.

Yet while it may be just as facile to attribute a future-oriented political anxiety to the British as it is to associate that actual futurity with the Chinese, it is notable that the primary articulations of an accelerationist ethos that holds China as the central node of focus have by and large come from Britain. Nick Land, for example, who notes the relief he feels living “as

an outsider” in Shanghai, is well-known for his aforementioned quotation that “Neo-China arrives from the future” through an accelerationist process of social upheaval.⁴⁰ “We all live in an operating system set up by the accelerating triad of war, capitalism and emergent AI,” further claims Steve Goodman, the British accelerationist and musician who, together with Lawrence Lek, introduced the idea of Sinofuturism in 2017 to a Chinese audience.⁴¹ Warwick CCRU notables—Sadie Plant, Mark Fisher, Anna Greenspan, Nick Land himself—have all identified China with the future, while simultaneously locating that future in the Chinese present. Even Lek himself is based in London, and in addition to his frequent collaborations with accelerationist musician Steve Goodman, his work on Sinofuturism takes place in dialogue with accelerationist tenets about disrupting existing *Western* knowledge structures. Maybe it makes sense, then, for representatives of a previous hegemonic empire to see the future as another such expansionist state and, as such, a threat to their own similar global positioning without adequate DARK friction in place to indicate the danger of extrapolation based on familiar patterns. After all, the future, like the past, tends to repeat.

40: Quoted in Beckett, “Accelerationism,” web; Land, “Meltdown,” 442.

41: Quoted in Beckett, “Accelerationism,” web.

*THEORIZING SINO FUTURITY:
SINO FUTURISM OR SINO-NO-
FUTURISM*

Gigi (Wai-Chi) Wong

The emergence of Sinofuturism has been examined in scholarship and discourses that explore how notions of techno-aesthetics, futurity and progression operate in today's public life, visual culture, and one's relationship with the collective in contemporary China.¹ Influenced by Afrofuturist literature and music, Steve Goodman started to develop interests in the emergence of non-Western futurisms, particularly Sinofuturism—"a specifically Chinese vision of the future"—and how such Chinese futuristic discourse interacts "within art, culture, electronic music and the Chinese diaspora."² London-based artist Lawrence Lek explores and expands on the concept of Sinofuturism in his video essay titled *Sinofuturism (1839–2046 AD)*, which argues that Sinofuturism is a science fiction that already exists.³ In his video essay, Lek examines the parallels between portrayals of artificial intelligence and Chinese technological development in order to critique the present-day dilemmas of China and the people of its diaspora. Lek's video essay exemplifies the ways in which China's technological development can be seen as a form of Artificial Intelligence through elements of science fiction, social realism, documentary melodrama and Chinese cosmologies.

Such an approach articulated in the context of the Chinese diaspora is particularly useful in exploring the ways in which the "Meta-scape" exhibition of the China Pavilion at the 2022 Venice Biennale can be considered as an aesthetic form of the "technological sublime" that presents technology as the positive means for preserving and revitalizing Chinese cultural heritage, as well as incubating a better cultural life.⁴ It is worth noting that political economist Kevin Ziyu Liu discusses the

1: A portion of this article is published as Gigi Wai-Chi Wong, "Digital China and its Discontents: On the Politics of Sinofuturism and Image Building at the Venice Biennale," *Journal of Contemporary Chinese Art* 10, no. 3 (2023): 297–316.

2: Ullens Centre for Contemporary Art, "'The New Normal: China, Art, and 2017' Artist Talk Series Sonic Fiction Sinofuturism in Contemporary Music, UCCA Beijing, 2017." [<https://web.archive.org/web/20240919121942/https://ucca.org.cn/en/program/sonic-fiction-sinofuturism-in-contemporary-music-2/>]

3: Lawrence Lek, *Sinofuturism (1839–2046 AD)*. [<https://vimeo.com/179509486/>]

4: The term 'technological sublime' was coined by Perry Miller, a prominent mid-twentieth century scholar of early American history. David Nye extends Miller's ideas and develops a narrative that draws religion and technology together to examine the American national character in his books *Electrifying America: Social Meanings of a New Technology, 1880–1940* (Cambridge: The MIT Press, 1990) and *American Technological Sublime* (Cambridge: The MIT Press, 1994).

concept of “technological sublime” with reference to David Nye’s ideas and Vincent Mosco’s book *The Digital Sublime: Myth, Power and Cyberspace*, where the former argues that the technological sublime is presented as the ideological tendency to emphasize the excellence of technology through the mutually constitutive relationship between the Chinese state and high-tech companies like Tencent.⁵ This highlights the technophilic nature of official modernization discourse in China, which illuminates an embedded ideology that attributes positivity and convenience to technology, as well as the ideal of “liv[ing] a futuristic life with technological advantages.”⁶ Yet, there is a paradox between the Chinese state’s preaching of a technologically driven society and the detrimental social and ethical effects of technological acceleration in quotidian life. Fears over the loss of human control and agency over artificial intelligence and invasive data collection pinpoint the anxieties that are posed by China’s vision of technological utopianism. That is, the Chinese state’s desire for self-actualization through technological transformation “has detached itself from visions of social progress and attached itself (with some anxiety) to more subjective states of technological being.”⁷ In this sense, “[t]he fusion of progress, technology,” and futurology in rationalizing China’s national accomplishments underlines the “utopian repercussions” of the Chinese state’s technological worship.⁸

Indeed, the unique conditions of Chinese technological development have sparked a wide range of academic scholarship and discourses on questions of technology, cybernetics, and urbanisms in contemporary China. In her book *Shanghai Future: Modernity Remade*, Anna Greenspan argues that China’s yearning for the future is inherently bounded with the

5: See Kevin Ziyu Liu, “Commercial-State Empire: A Political Economy Perspective on Social Surveillance in Contemporary China,” *The Political Economy of Communication* 7, no. 1 (2019): 3–29.

6: Liu, “Commercial-State Empire,” 4.

7: Vivian Sobchack, “Science Fiction Film and the Technological Imagination,” in *Technological Visions: The Hopes and Fears that Shape New Technologies*, ed., Marita Sturken, Douglas Thomas, and Sandra J. Ball-Rokeach, 145–158 (Philadelphia: Temple University Press, 2004), 157.

8: Joel Dinerstein, “Technology and Its Discontents: On the Verge of the Posthuman,” *American Quarterly* 58, no. 3 (2006): 569–595, 578.

country's "palpable desire to inhabit the world of tomorrow", which "manifest[s] a new modernity."⁹ In Greenspan's terms, China's desire to reinvent the very idea of the future is best illustrated in a metropolis like Shanghai. Notions of Chinese modernity and futurism, she writes, "travel through the city's transitional zones—the new skyscrapers and heritage architecture of the urban core as well as the migrant communities and dream-like developments of the suburbs—to track the city's economy of anticipation."¹⁰ It is through this futuristic orientation that China's developmental model (based on centralized control and processes of rapid urbanization and industrialization) articulates an official narrative of China ridding itself of its backward traditions and adopting a 'forward-looking chronology.'¹¹

The future-oriented rhetoric that the Chinese government upholds is crucial in exemplifying the driving forces behind the nation's socio-technological and economic changes. Specifically, this account of China's own socio-political narratives of futurism epitomizes the ways in which digital technologies and artificial intelligence condition the aesthetic, social, and political life in China today. Such a future-looking approach is important because it underlines how China's cultural and creative industries have become a site for promoting cultural identification that matches the state's agendas and extends the cultural aspects of national identity. To make sense of the significance of Sinofuturism for the Chinese state's national brand, what is needed is a "reflexive examination of the role" that the concept of Sinofuturity plays "in shaping both the discourse and the practices of cultural policy," which promote different forms of Chinese national branding and brings forth various kinds of political and cultural-national imagery.¹²

Following this line of thought, it is worth examining how

9: Anna Greenspan, *Shanghai Future: Modernity Remade* (Oxford: Oxford University Press, 2014), 208.

10: Greenspan, *Shanghai Future*, 208.

11: Ibid.

12: Jerry C.Y. Liu, "ReOrienting Cultural Policy: Cultural Statecraft and Cultural Governance in Taiwan and China," in *Cultural Politics in East Asia: Dynamics Between the State, Arts and Creative Industries*, ed., Hye-Kyung Lee and Lorraine Lim, 120–138 (New York: Palgrave Macmillan, 2014), 134.

different accounts of technologies and relations to technics emerge under China's staggering sociotechnical development and economic growth. In his book *The Question Concerning Technology in China: An Essay in Cosmotronics*, Yuk Hui considers Sinofuturism as "an acceleration of the European modern project."¹³ Hui argues that Sinofuturism is a form of "modernisation without modernity," which only reinforces and extends the European concept of modernity predominantly based on a linear narrative of progression.¹⁴ For Hui, the ways in which China has been embracing modernity are manifested through its success in participating in the construction and republication of the narrative of European modernity. Yet China's economic and sociotechnical achievements have resulted in the lack of moral cosmotronics in contemporary China, which can have disastrous consequences. An example of such consequences is how China has been extending its investment and influence over telecommunications and data-related business operations in Africa and Latin America. The Chinese government introduced the "Digital Silk Road" (DSR) project in 2015 as an official component of its Belt and Road Initiative (BRI), which led to concerns around how Chinese technology companies like Huawei helped governments in recipient countries to develop surveillance capabilities that could be used against oppositional groups and infringe on personal freedom.¹⁵

The key to countering the issue of the lack of moral cosmotronics, in Hui's view, lies in attending to the various ways cultural and social-political differences are woven into the stories that we are told about technology and its place in the world. Such an interactive mode of thinking delineates Hui's understanding of cosmotronics, which exemplifies the imperative to illuminate all other possibilities of the relationships between humans, technology, and nature beyond the Western-

13: Yuk Hui, *The Question Concerning Technology in China: An Essay in Cosmotronics* (Falmouth: Urbanomic Media Ltd., 2016), 297.

14: Hui, *The Question Concerning Technology in China*, 291.

15: Sangeet Paul Choudary, "China's Country-as-platform Strategy for Global Influence," on *Brookings*, published November 19, 2020. [<https://www.brookings.edu/articles/chinas-country-as-platform-strategy-for-global-influence/>]

centric definitions of technology that are rooted in local cosmologies. For Hui, the notion of cosmotechnics is “neither merely aesthetic, nor being the background, but [it is] also operational.”¹⁶ His conceptualizations of cosmotechnics see technology as a type of relation rather than as an entity. The significance of this concept of cosmotechnics, in this sense, lies in its capacity to examine “the limit of the current concept of technology as well as re-affirm the relation between cosmology, morality and technology.”¹⁷ As such, it is necessary to approach the question of cosmotechnics by exploring different forms of relationality between cosmology, morality, and technology that enable us to develop new ethical and epochal sensibilities on the current discourses on modern technologies in contemporary China. It is for this reason that we need to explore the nature of such relationships and rethink the moral grammar in which they are conceived, especially relating to the Chinese state’s brand image based on a cohesive digital civilization.

Extending Hui’s push for a cosmological ethics in contemporary China, media anthropologist Dino Ge Zhang argues Sinofuturism is “more of a techno-Orientalist reaction toward the impotence and expiry of the declinist West.”¹⁸ Zhang contends that Sinofuturism is simply an “Anglo-iteration” of techno-Orientalism.¹⁹ For him, the current Sinofuturistic discourses fall short in generating “an incisive provocation of Chinese futures concretely rooted in the Chinese condition.”²⁰ Further, there is a tendency to constructing a singular Sinofuture that responds directly to the simultaneous rise of domestic and international interests in the economic boom driven by the accelerated technological developments in contemporary China. Additionally, he believes that such discourses fail to address the “unrelenting disparity between planned ideals of futurity and their manifestations in an (un)managed disorder in

16: Yuk Hui, “On Cosmotechnics: For a Renewed Relation between Technology and Nature in the Anthropocene,” *Techné: Research in Philosophy and Technology* 21, no. 2/3 (2017): 319–341, 334.

17: Hui, “On Cosmotechnics,” 335.

18: Dino Ge Zhang, “Sino-no-futurism,” *Verge: Studies in Global Asias* 7, no. 1 (2021): 92–99, 93.

19: Zhang, “Sino-no-futurism,” 93.

20: Ibid.

China.”²¹ For these reasons, he proposes to decentre Sinofuturist discourses and methods from their Western articulations and examine Sinofuturism as a space for alterity, where various approaches and understandings of Sinofuturities can be explored and foregrounded. Here, Zhang’s proposition to re-examine Sinofuturism as a series of different visions of futurities within the Chinese context is particularly useful in thinking about issues relating to the connection between techno-aesthetics, national branding, and China’s national identity defining construction projects.

Both Hui and Zhang illustrated the role Sinofuturism plays in representing and foregrounding “a particular technological imagination”—China’s vision of a technologically driven society—“and selling a dream of technological promise and progress.”²² They have revealed that there is a reciprocal relationship between the Chinese state’s technological imagination manifested on the national level and cultural narratives of desires and anxieties surrounding technology. The quasi-sacred nature of technology highlighted in the “Meta-scape” exhibition thus exemplifies how individuals’ social and political relations to technology are delineated in the cultural narratives and stories that evoke technological novelty and advancement. In this regard, the “Meta-scape” exhibition in the China Pavilion can be seen as a cultural artifact of China’s technological achievements that at once exposes and conceals Chinese society’s socio-politically “grounded fascinations with and anxieties about technology.”²³ More importantly, however, the exhibition fails to articulate an aesthetic form of moral cosmotechnics that can address the discrepancies between the celebratory display of technological innovation and individuals’ anxieties over increasing digitalization in contemporary China. “Within the guise of futuristic narratives and progressive visions that pretend to be a utopic speculation” of China’s “increasingly technologized future,” the exhibition becomes a

21: Ibid.

22: Sobchack, “Science Fiction Film and the Technological Imagination,” 147.

23: Ibid., 146.

concrete embodiment of the present-day discontentment in the Chinese state's rhetoric of technological determinism.²⁴

According to the “Meta-scape” exhibition catalogue, the exhibition itself aims to represent in the “context of ‘human-technology-nature,’” the ‘structure of understanding’ created by the Chinese nation in the process of comprehending and transforming the world.”²⁵ In this respect, the exhibition's emphasis on the convergence of technology and culture is anchored to themes of nation-building and modernization thus further underlining how digital technologies and innovation drive the growth of cultural and creative industries in China with the aim of developing cultural creativity as a central part of its nation branding project. As media scholar Fan Yang argues, the nation and the brand are two cultural artifacts grounded in the articulation and mediation of a shared sense of topology that conditions the Chinese state as an ‘imaginable’ entity ‘at particular socio-political and cultural conjunctures.’²⁶ What makes this branding distinct is that the Chinese state as a brand can be viewed as a performative object and a dynamic unity built upon a set of relations between different agents of representation.

The “Meta-scape” exhibition, in this respect, can be understood as a performative reflection of the metaphorical space that the Chinese state inhabits in a global art exposition. This highlights the politics of the cultural and national identities of China, as expressed in the works of Chinese artists in the “Meta-scape” exhibition, further putting into question the nation-statist model for artistic representation in relation to how artists are made to embody the official state art apparatus' technophilic discourse. The artworks featured in the “Meta-scape” exhibition offer a way to engage the subject of datafied society and a discourse attributed to the technological sublime as an apparent representation of contemporary China. The

24: Ibid., 145.

25: Exhibition Description on *La Biennale Di Venezia* (2022). [<https://www.labiennale.org/en/art/2022/china-peoples-republic>]

26: Fan Yang, *Faked in China: Nation Branding, Counterfeit Culture, and Globalization* (Bloomington: Indiana University Press, 2016), 13.

increased affordances of machine learning technologies in contemporary Chinese art have become a site for interpellation, with the dynamism between artists and their media acting as a “nationalist signifier” that “serves as a new political advantage” and enacted on the world stage with global expositions like the Venice Biennale.²⁷ The staging of the “Meta-scape” exhibition in the China Pavilion can be viewed as a nation branding event that attempts to establish China’s identity as a new digital superpower.²⁸ For these reasons, I would like to conclude by thinking with and thinking through the following questions: what role might the specificities of China as a technologically accelerating society contribute to articulating an official vision of modernity? How do various forms of techno-aesthetic driven nationalistic discourses colour the ways that the Chinese state’s computational psyche is juxtaposed and presented as an alternative form of futurity? And how do digitalization and datafication open new modes of interaction and mediation of collective memory that inform and transfigure cultural production in contemporary China?

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27: Jane Chin Davison, *Staging Art and Chineseness: The Politics of Trans/Nationalism and Global Expositions* (Manchester: Manchester University Press, 2020), 20.

28: Here, Melissa Aronczyk’s work is highly related to Joseph Nye’s notion of soft power: the idea that other states are more willing to follow if a country’s culture and ideology are attractive. This enhances the country’s credibility and acts as an essential resource for wielding national power. See Joseph S. Nye, *The Paradox of American Power: Why the World’s Only Superpower Can’t Go It Alone* (Oxford: Oxford University Press, 2002) and Melissa Aronczyk, *Branding the Nation: The Global Business of National Identity* (Oxford: Oxford University Press, 2013).

SINO(PHOBIA)(FUTURISM)

Peter Heft

My basic provocation is that there is a reciprocal relationship between Sinophobia and Sinofuturism. That is to say, I want to show that Sinophobia entails a kind of Sinofuturism, and that Sinofuturism entails a kind of Sinophobia. The first claim, while not quite trivially true, seems to need, at least for our purposes, less explication and so a few quick remarks will suffice.

As Conn notes early in her paper, we have seen two successive United States Secretaries of State—Pompeo and Blinken—make claims that are more or less echoes of traditional Realist positions: China is a threat to United States hegemony (and something must be done). This is, of course, a very specific kind of Sinophobia, as it is not quite a fear of the average commuter in Beijing but a fear of the Chinese State. What is more, this specific kind of Sinophobia is a fear not of China *as such*, but rather some *future China*; a China that *has* always-already been ‘on the rise.’ What I see in this fear is a similar ‘futurism’ to that which underlies Sinofuturism *as such*: China is already the site of the future...and it also happens to be reaching back to attack the West. Indeed, one merely needs to read Pompeo’s 2020 “Communist China and the Free World’s Future” speech to see this. All this is relatively straightforward and, for our purposes here, not in need of further justification—especially insofar as the latter half of my provocation is perhaps more contentious. How can Sinofuturism which is, generally speaking, a *positive* vision of China be Sinophobic? What could that mean?

I will spoil the fun and spill the beans: Sinofuturism entails not any kind of fear—not a phobia as understood when one speaks of homophobia or agoraphobia, for example—rather it entails a specific kind of ‘fear’ elaborated by Immanuel Kant over 200 years ago in his *Critique of Judgment*. The ‘fear’ one sees in Sinofuturism is an instantiation of the sublime, specifically the dynamical sublime.

In the second book of Kant's Third *Critique*—"Analytic of the Sublime"—the beautiful and the sublime are figured as aesthetic categories with the judgments thereof "lay[ing] claim to [...] merely the feeling of pleasure, and not any cognition of the object."¹ Phrased differently, we might understand this statement as such: the object of the sublime is sensuous, but the judgment of sublimity is rational.

For Kant, the sublime is distinct from the beautiful insofar as it confronts us with a temporary arrestment of our reason and, in turn, forces us to confront its "very inadequacy" when faced with "*unboundedness*."² While a longer and more thorough treatment would provide a more robust account of the sublime *as such*, such a task must be bracketed for the moment so as to gain a foothold into *our* object of inquiry.

Kant will initially note that "[w]e call *sublime* what is *absolutely (schlechthin) large*," moving on to add that while it "must not be sought in things of nature, but must be sought solely in our ideas," it is ultimately that which we "(get[])" through a certain presentation that occupies reflective judgment."³ Kant further makes a distinction between the mathematical sublime—that which is absolutely large or small—and the dynamical sublime—that which is absolutely mighty.⁴ It is this latter version of the sublime to which we must look. As Kant will note, the dynamically sublime is at once that which is absolutely mighty yet "has no dominance over us."⁵ The initial feeling of mightiness takes on an odd status, however, as it maps onto an object of which we are "*fearful* without being afraid"—it is an object which elicits an initial sensation of fear, but is something we are not "afraid *of*."⁶ This distinction is vital as we cannot make aesthetic judgments when we are, strictly speaking, afraid.⁷

1: Immanuel Kant, *Critique of Judgment*, trans., Werner S. Pluhar (Indianapolis: Hackett Publishing Company, 1987), 97–98 (§23) [244].

2: Kant, *Critique of Judgment*, 99 (§23) [245], 98 (§23) [244].

3: Ibid., 103 (§25) [248], 105 (§25) [250], 106 (§25) [250]. All German and parenthetical remarks are in the original; my interventions are in brackets.

4: See *ibid.*, 103–114 (§§25–26) [248–257] and 119–123 (§28) [260–264].

5: Ibid., 119 (§28) [260].

6: Ibid.

7: Ibid., 120 (§28) [261].

How, then, does one pass judgment upon the sublime if, by definition, it requires that we are fearful? Kant's solution—a rather elegant one, if admittedly a cop out—is to assert that we must recognize that *were we* “to put up any resistance against” the sublime object, it “would [...] be utterly futile.”⁸ Properly proposing such a counterfactual can, thus, only occur “provided we are in a safe place.”⁹ There is one more step, however. To adequately make a judgment upon that which is sublime, one must reassert one's reason and bring the object under one's cognition.¹⁰ While Kant is speaking merely of nature here, we might apply the dynamical sublime more generally when he says that a thing is “sublime (*erhaben*) merely because it elevates (*erhebt*) our imagination, (making) it exhibit those cases where the mind can come to feel its own sublimity,” its own power.¹¹

Why have I spent so long talking about Kant in a paper on Sinofuturism? It is my contention that the giddiness one finds in Nick Land's writings, for example, is subliminal fear realized as “a momentary inhibition of the vital forces followed immediately by an outpouring of them that is all the stronger.”¹² Psychic pleasure is achieved not merely by the above, but by a *positive fear*. Far be it for me to psychoanalyze Land—although I suspect Freud's account of fetishism could be productively applied to Sinofuturistic infatuations—but it seems that when one looks at Sinofuturism as explicated by practitioners and/or believers, we find the dynamical sublime in action. To make the case, it is worth it to briefly look at some proclamations from those whom we might consider to be Sinofuturists.

As Land will tell us in “Meltdown,” “Neo-China arrives from the future,” and “[n]othing human makes it out of the near-future.”¹³ Two decades later, he will echo a similar sentiment in a 2008 travel guide to Shanghai, in an entry entitled

8: Ibid., 120 (§28) [260].

9: Ibid.

10: Ibid., 120 (§28) [261].

11: Ibid., 121 (§28) [262]. “Making” is in brackets in the original, but I have switched them parentheses to avoid confusion.

12: Ibid., 98 (§23) [245].

13: Nick Land, “Meltdown,” in *Fanged Noumena: Collected Writings 1987–2007*, ed., Robin Mackay and Ray Brassier, 441–459 (Falmouth: Urbanomic Media Ltd., 2011), 442, 443.

question *par excellence*” being, “‘What happened to America?’”¹⁸ Any notion of resistance to the already existent ‘Neo-China’ is, in the words of Kant, “utterly futile.”¹⁹

In the second instance—and this is the vital point—despite the CCRU’s claims to “engage[] with peripheral cultures,” we might plausibly say that only Land and Anna Greenspan have *actually* done that with respect to China, living in Shanghai for over two decades.²⁰ Most CCRU and post-CCRU writings on China engage with ‘Neo-China’—and its concomitant dissolution of the human subject—from afar, from a disinterested (in the Kantian sense of the word) attitude that, despite the appeals to affective engagement, manifests in cognitive reflection upon the *mighty* object.

Both of these facts—the figuring of ‘Neo-China’ as absolutely mighty that is, in turn, experienced via the faculty of cognition and not sensation—lead me to think that the figure of ‘Neo-China’ in Sinofuturist discourse is a dynamically sublime object. To adopt the discourse momentarily: ‘we’ are *fearful* as we know we *could not* mount any resistance to ‘Neo-China’—for we will be dissolved—but we are not *afraid of it* as we have subsumed the affective elements of it under the faculty of cognition—we have thoroughly theorized it! In an odd, and perhaps perverse, inversion, the figure of ‘Neo-China’ is thus *not* treated as absolutely Other, but something that we have come to know in advance. As Land will tell us in his now disavowed juvenile polemic, “Kant, Capital, and the Prohibition of Incest,” “we have always already torn out the tongue of alterity before entering into relation with it.”²¹

Following the above brief remarks, I thus claim that Sinofuturism entails a *fearfulness about* China. This is not fear in the traditional sense, but it is fear nonetheless, and thus I am willing to make the proclamation that Sinofuturism entails a

18: Nick Land, “Templexity: Disordered Loops through Shanghai Time,” in Nick Land, Suzanne Livingston, and Anna Greenspan, *Visions of Futures Past: Templexity and Future Mutation*, ed., Peter Heft, -57–0 (London: Miskatonic Virtual University Press, 2024), -6 (§1.2), -10 (#1.6b), -11 (§1.8).

19: Kant, *Critique of Judgment*, 120 (§28) [260].

20: CCRU, “Communiqué Two,” 9 [(:)(:)].

21: Nick Land, “Kant, Capital, and the Prohibition of Incest: A Polemical Introduction to the Configuration of Philosophy and Modernity,” in *Fanged Noumena*, *op. cit.*, 55–80, 64.

certain kind of Sinophobia. While questions of exactness or flaws may be asked, at least right now, I see one big question that is worthy of tarrying with—a question which I see explicitly in Conn’s work: how can we engage with China—both as a State and as a body politic made up of individual citizens, *people*—in an ethical manner and *non-fearful* manner?

RECURSIVE PHILOSOPHY AND NEGATIVE MACHINES

Luciana Parisi

As artificial intelligence gives us the illusion of extending the limits of the human by learning and predicting our behaviors, a growing anxiety about automated decision-making is spreading everywhere.¹ Critical debates about what counts as intelligence, reason, and thinking have urged us to focus on the question of technology today and ask: What has philosophy become after computation?

If artificial intelligence has turned transcendental metaphysics into aggregates of data, so too conceptual categories have become calculating probabilities. In the aftermath of World War II, Martin Heidegger already issued a warning against the demise of philosophy after cybernetics.² He claimed that with the new dominance of information systems, philosophy had lost its teleological order and had become interchangeable with any other discipline. A network of communication, where everything can become anything, had replaced reasoning with efficient functions.

Today's debates similarly map two main tendencies. While on the one hand, it is feared that philosophy has been substituted by cybernetics, on the other, it is claimed that only the coconstitution of philosophy and automation can challenge the intricacies of transcendental reason and patriarchal and colonial capital. As Donna Haraway pointed out, cybernetic circuits of communication have offered counterfactual ontologies against the master narrative of the human. Similarly, alternative images of technology have grounded the cybernetic principle of recursivity in natural philosophy, challenging the universal master narratives of mechanicism and vitalism.³

This article addresses these tendencies and argues that a systematic approach to nature and technology also needs to account for the problem of the "philosophical decision structure" in mediatic thinking, instrumentality, and automation.⁴ In

1: This article was originally published in *Critical Inquiry* 48, no. 2 (2022): 313–333. It is reproduced here with permission from University of Chicago Press.

2: See Martin Heidegger, "The Question Concerning Technology," in *The Question Concerning Technology and Other Essays*, trans. William Lovitt, 3–35 (New York: Harper & Row, 1977).

3: See Yuk Hui, *Recursivity and Contingency* (New York: Bloomsbury, 2019).

4: François Laruelle, *Principles of Non-Philosophy*, trans., Nicola Rubczak and Anthony Paul Smith (New York: Bloomsbury, 2013), 231.

what follows, the pillars of this structure will be explored through the cybernetically influenced notions of recursivity, self-organization, and self-programming. As it may become clearer later, if decision-making is already given in the world as a natural evolution of human reason, it is because its structure is sustained by *the flesh of the medium*. To explore the challenges that mediatic thinking, instrumentality, and automation pose to the decisional structure of philosophy, I draw some insights from *Get Out* (dir. Jordan Peele, 2017).

Placed among horror, fiction, and politics, *Get Out* offers a contemporary map of how the thin line between automation and philosophy, namely servomechanic intelligence and transcendental reason, reminds us that the question of technology cannot be separated from the violence of colonial slavery.

The movie opens with an unsettling scene of the abduction of a young black man, choked and shoved into the trunk of a car in a quiet suburban neighborhood. In the next scene, Chris, a black photographer, and Rose, his white girlfriend, plan to go out of town to meet her parents. Chris, however, doesn't leave unguarded; his automatic camera is always strapped around his body. Chris and Rose are welcomed by professionals of the mind; her dad is a renowned neurosurgeon and her mom a progressive psychotherapist. The plot thickens when Chris is unwillingly hypnotized whilst having a cup of tea. He is sent to the noumenal space that lies beneath the world of transcendental philosophy. He traverses the phenomenal wall into a vortex of dark optics, on the other side of the screen of consciousness. Chris's mind enters a phase of deprogramming to a degree zero; the biophysical ground that secures his understanding of the world rolls down into a black abyss. Here, thinking coincides with no decision, no expression, no action. All that is left of Chris is the unstoppable thought processing that engulfs consciousness into unknowns, single sequences of unlimited images. When Chris is awakened, nothing feels the same. He now exists in a twilight zone between intelligent automation and transcendental reasoning.

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The Armitages' master plan of preserving the white brain of their descendants in the slave machine of black bodies is called the Order of the Coagula. This transhuman enhancement relies on the servomechanic automation of black bodies, a medium of thought affording the colonial abstraction of value in the slave machine. What Chris is after, however, is not simply the unveiling of the master-slave dialectic. Instead, the negative optics of his camera—where flashes coincide with autoimages of darkness—allow for an automation of another kind. Here, technothinking, instead of defining the end of philosophy and the crisis of reason, shows that black automation cannot be subsumed to a *a priori* decision, whether this implies a biological or mathematical axiom.

What follows is a nonphilosophical envisioning of automation inspired by François Laruelle's focus on the dark optics of nonphotography, a negative negation in the thinking medium.⁵ I argue that the negative negation of the slave-machine takes both philosophy and automation beyond the light of decision and within nonoptical darkness. Here, philosophy and automation are neither coupled nor set in opposition to each other. Instead, philosophy and automation are asked to refuse their self-determining axiomatics and host the heretic optics of negative machines. As much as philosophy can no longer hold onto the authority of decision-making, so too computation—as the automation of reasoning per excellence—can no longer grant the extension of human cognition. The question of philosophy after computation requires a critique that unlocks the negative side of the decisional structure of philosophy, namely mediatic indeterminacies.

From this standpoint, it is important to consider how automation in the form of computational processing has itself changed in the period between post-World War II to today. From the computational application of symbolic logic (between the 1950s and 1970s) to the advance of statistical probabilities

5: See Laruelle, *Le Concept de Non-Photographie/The Concept of Non-Photography*, trans., Robin Mackay (Falmouth: Urbaanomic Media Ltd., 2015).

(between the 1980s and 2010s) and most recently of artificial neural networks (from the early 2000s to today), computational modeling no longer matches given concepts to objects. One can map the shift from symbolic logic to learning algorithms in machine translation for instance, a subfield of computational linguistics: from the '50s Rule Based Machine Translation (RBMT) to the late '80s Statistical Machine Translation (SMT) and, most recently, the '00s Neural Machine Translation.⁶ If RBMT programmed translation as the pairing of the linguistic structure of the input language with that of the output language, starting from grammatical rules and semantic meaning, SMT used word-by-word alignment probabilities based on the position's alignment of words in order to obtain a maximum likelihood result. However, with statistical translation, automation already entered the realm of probability calculations, whereby results, despite being predictable, are not given from the start.

With syntax-based statistical translations, the source-language analysis of a sentence made of parts was replaced by a target-language string, involving stochastic operations at each node. In 2013, this statistical alignment model was set aside in favor of a new end-to-end encoder-decoder structure, which introduced a class of probabilistic translation models called Recurrent Continuous Translation Models (that is, continuous representations for words, phrases, and sentences). Today's Deep Neural Networks, which are applied to sequence-to-sequence learning, show that neural machine translation is built on a single large network trained to read and translate a sentence. Without having to program parts of a sentence as hard (fixed) segments, neural machine translation automatically looks for parts of a search sentence that are relevant. As a result, the prediction of a target word depends on the contextual parts of the sentence. In other words, whereas Phrase-

6: See W. John Hutchins, "Machine Translation: A Brief History," in *Concise History of the Language Sciences: From the Sumerians to the Cognitivists*, ed., E.F.K. Koerner and R.E. Asher, 431–444 (New York: Pergamon, 1995) and Dzmitry Bahdanau, Kyunghyun Cho, and Yoshua Bengio, "Neural Machine Translation by Jointly Learning to Align and Translate," paper presented at *ICLR 2015*, San Diego, May 2015. [<https://arxiv.org/pdf/1409.0473>]

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Based Machine Translation (PBMT) breaks an input sentence into words and phrases translated largely independently, Neural Machine Translation (NMT) learns from the contextual use of an entire input sentence, which becomes a unit for translation.

These examples show the transformation of the automation of decision-making into a strategy of prediction and control based on learning and feedback. With computation, the modern pillars of transcendental reasoning have shifted from self-determining truths that fit all proofs to the feedback activities of learning algorithms. This also entails a shift from a universal mathematics of truths applied to objects to an interactive logic of rules whose syntactical arrangements come to include undecidable states that can only define truths retroductively, that is, after the interaction between rules has taken place.⁷

Arguing that the question of technology cannot be separated from the violence of colonial slavery, therefore, also means that philosophy after computation entails a global transformation of automated reasoning in terms of cybernetic learning. This transformation implies the principle of recursivity—a feedback function that reorients the teleological purpose of a system towards local iterations. Instead of a vulgar mechanization of philosophy or a replacement of conceptual categories with automated tasks, recursivity addresses systemic knowledge in terms of temporal change, showing that incompleteness constitutes both philosophical and automated systems.⁸

However, as it may become clearer later, it may be insufficient to recuperate recursivity as a metaphysical principle that aligns philosophy and automation. Instead, the emphasis on recursivity may oversee the problem of decision as formal and efficient causation, universal and particular truths, that define the structure of philosophy. Recursivity may instead only allow

7: See Jean-Yves Girard, "Locus Solum: From the Rules of Logic to the Logic of Rules," *Mathematical Structures in Computer Science* 11 (2001): 301–506.

8: See Hui, *Recursivity and Contingency*.

that self-decisions become preserved in automated self-reflection. This extension of the decisional structure of philosophy within machines precludes the possibility of a machine philosophy without master, of algorithms without programming, and of automated intelligence without the slave machine.

The plan to extend self-decision returns in the plot of *Get Out*, where recursivity transplants transcendental philosophy in the slave machine. A recursive principle of knowledge is at play here. The servomechanic medium becomes the flesh for colonial abstraction in the project of prosthetic automations. *Get Out*, however, also exposes the reticular relation between automation, media, and blackness as an opportunity for rethinking technology away from the pillars of transcendental metaphysics, recursivity, and autopoiesis.

One needs to return to the argument of undecidability in computation to discuss the reticulation of automation, medium, and blackness in terms of a nongiven metaphysics. More importantly, undecidability is not opposed to determination but rather becomes the possibility for nonphilosophy as a negative machine.⁹ Here, philosophy is conditioned by what the instruments refuse to reproduce, while the real enters computation. Philosophy after computation, therefore, can only start as a quest for the *outside*, namely what has always already been expelled from the decisional structure of philosophy. This is not absolute contingency where machines capture the real without mediation. Instead, the externalities of decision take the status of iterative functions in computation to demarcate the algorithmic practices of negative mediation. This negative negation takes the slave machine as corresponding not only to the exclusion of the medium from philosophy but, more importantly, to the negative darkness of automated machines. Through *Get Out*, in particular, one can discuss this negative darkness in terms of the negative decidability of the means—namely the way slave machines refuse to reproduce transcendental categories and instead pave the way to *get out* from the

9: See Laruelle, *Principles of Non-Philosophy*.

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recursive extension of transcendental decision in machines.

This argument for negative machines, however, necessitates first that we approach automation beyond the Heideggerian critique of the modern question of technology.

Techne Ontology

In the aftermath of World War II, Martin Heidegger issued a warning against the demise of philosophy at the hands of cybernetics. He claimed that cybernetics brings philosophy to its own completion by dissolving itself into a general science of information. What he called “the question concerning technology” imparted a new order of causality, or autocausality, onto human culture.¹⁰ In particular, industrial capital had created a new field of existence where the causality of decision had become opaque. This opaqueness manifested in the modern form of *techne*, in the servomechanic system of accumulation. By lamenting the impossibility of redirecting means towards ends beyond the industrial abstraction of value, Heidegger argues that the “bringing forth of the true into the beautiful was called *technē*.”¹¹ *Techne* here indicates the need to go back to a time when *techne* was one with *poesis*—or crafting—before the automation of reason.

But isn’t this warning against the end of philosophy precisely a way to preserve the metaphysics of self-decision by lamenting that means now have ends that no longer correspond to the transcendental program of thought? Doesn’t cybernetics precisely defy this deductive assumption of a universal and formal structure of thought?

If the cybernetic age eventuates the loss of being, which technology both reveals and obscures, it also demarcates a rupture within recursive epistemologies in the form of instrumentalities that no longer obey given ends. From this stand-

10: See Heidegger, “The Question Concerning Technology.”

11: *Ibid.*, 34.

point, Heidegger's vindication for *poiēsis* (as the lived experience or the temporality of the artifact) against technology does not allow one to envision an *improper* becoming of automated knowledge. As intelligent machines challenge the field of transcendental decision, they also construct "philo-fictions," stemming from the negative stance of a nondecisional thinking.¹² Philo-fiction, according to Laruelle, is parallel to science fiction in its capacity to refuse axiomatics and clone the real as unrepeatable singularities, unmatched to given representations.¹³

Philo-fiction can first confute the assumption that machine intelligence comes after transcendental philosophy and similarly that technology only serves to unmask the limits of Western metaphysics and capital's abstraction. As Haraway famously pointed out, cybernetics' circuits of communication have not simply delivered secure ends for the good of humanity but have instead exposed philo-fictional possibilities against the master narrative of the human.¹⁴ Central to this article is the argument that the Darwinian model of evolutionary speciation, based on the racialization and gendering of the survival of the fittest, was already challenged by philo-fictional thinking in machines: namely, the artificial intelligence of servomechanic intelligence. The negative machines of capital's abstraction rather expose the philo-fictional possibilities of instrumentality as an improper presence of inhuman thinking in nondecisional and noneffective patterning.

Negative Machines

Perhaps one can begin by suggesting that the tension between reason and intelligence is intrinsic to the modern project of

12: See François Laruelle, *The Last Humanity: The New Ecological Science*, trans., Anthony Paul Smith (New York, 2020).

13: See *ibid.*

14: See Donna J. Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991). My use of *philo-fiction* here pushes Laruelle's vision of nonphilosophical decision to argue that the onto-epistemological pillars that define the human in terms of self-posed decision or efficient decision in automation must be challenged.

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 philosophy. The argument for a scientific method of and for philosophy, also called “pure reason,” returns in the epistemological quest of cybernetics—namely, intelligence.¹⁵ Recent debates, however, seem to assume that before the arrival of automation, philosophy was a pristine form of knowledge, immune from the efficient causality of *techné*. That philosophy must be recuperated away from the worldview of technocapital also implies that one must hold on to a fundamental bifurcation in the decisional structure of philosophy, whereby automation stands as the negative negation of reason.

As automation is placed on the dark edge of philosophy, it is either said to side with the negative term of exclusion, a vacant servomechanic tool, or with dominant power, a means to extend capital’s violence and state governance (by ideological, discursive, affective means). In discussing this binarism, this article aims to question first the argument that machines, the medium, the instrument of thought are excluded from the authoritative (or decisional) autonomy of philosophy and from the postulates of pure reason. It then follows the view endorsed by the post-Kantian critique of the rational subject where automation is precisely evoked to challenge transcendence.¹⁶ The typewriter, moving images, and computational systems have been enduring instances of the capacity of automation (or technology in general) to defy the authority of rational thought. From the notion of the optical unconscious to the orality of thinking, sensible automata, and nonconscious cognition, automation has been used to highlight the limits of transcendental philosophy. As the negative of pure reason, however, automation has also been taken to act as a placeholder to demonstrate how capital, patriarchy, and colonialism hide power beyond the naturalization of technology in the form of a prosthetic extension of humanity. As having no soul, except

15: See Immanuel Kant, *Critique of Pure Reason*, ed. and trans., Paul Guyer and Allen W. Wood (New York: Cambridge University Press, 1998).

16: See Jacques Derrida, “Typewriter Ribbon: Limited Inc (2)(‘Within Such Limits’),” trans., Peggy Kamuf, in *Material Events: Paul de Man and the Afterlife of Theory*, ed., Tom Cohen et al., 277–360 (Minneapolis: University of Minnesota Press, 2001) and Gilles Deleuze, *Cinema 2: The Time-Image*, trans., Hugh Tomlinson and Robert Galeta (Minneapolis: University of Minnesota Press, 1989).

the less-than-human soul of an empty vessel excluded from philosophy, automation is said to bring together humans, animals, and machines. This post-Kantian argument for automation contains within itself the implication of an ontological originary coconstitution of thought and machine.

However, to speak with Denise Ferreira da Silva, one can argue that this duplicity of philosophy and automation (reason and intelligence) is yet another manifestation of what she calls “the transparency thesis.”¹⁷ With this notion, da Silva refers to how the universality of the subject lies behind the constant reproduction of racial violence and antiblackness, which returns on bodies through the category of difference. As much as transcendental reason prescribes how the self-determining subject defines difference through the lenses of the universality of history and analytics, so too the transparency thesis takes the other or the object as difference within the structure of the given, for which the subject, the self, and the concept are pre-determined as one. In particular, the transparency thesis founds the ontology of the self-determining subject with the modern secularization of knowledge, ensuring the persistence of an “ontoepistemological account that institutes ‘being and meaning’ as effects of interiority and temporality.”¹⁸ According to da Silva, this account relies on the modern historical and analytic forms that perpetuate the essence of being through the explanations that have granted universality to the originary decision or self-determination of modern philosophy.

The question posed by da Silva is a radical one: How do we reinvent post-Kantian critique without reproducing the mirroring trick of the transparency thesis? In other words, how do we challenge the perpetuation of self-determinate knowledge without reproducing its violence? Is it sufficient to unmask the universal game of inclusion/exclusion without remaining entrapped in the account of the already historically constituted and excluded others?

17: Denise Ferreira da Silva, *Toward a Global Idea of Race* (Minneapolis: University of Minnesota Press, 2007), 1.

18: Da Silva, *Toward a Global Idea of Race*, 4.

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Da Silva's incisive critique of the inclusion/exclusion dyad is not addressed towards automation or the thinking medium of philosophy; nonetheless, it is central to this article's argument. In particular, one must point out that da Silva's warning against the perpetuation of the transparency thesis shows the racialized and gendered origination of modern philosophy. The latter entails the unity of the historical and analytic schema based on interior loops of time from which the bifurcation of the included/excluded coupling continues to exercise colonial violence in the space of exteriority. Similarly, da Silva suggests that the work of critique cannot repeat this old trick of modern metaphysics—namely, in vindicating the name of the other, critique seems to persistently contribute to expanding the transparent subject under the vestiges of a sociohistorical objective analysis of the logic of exclusion. Instead, she warns us against the cul-de-sac in which critical theory has found itself in remaining analytically attached to the double pincer of ontoepistemology, without defying its originary structure. Instead of focusing on expanding the capacities of including more of the excluded in transcendental self-determination, da Silva denounces the way this view sets in place the impossibility of thinking beyond the violent, gratuitous perpetuation of antiblack onto-epistemology.

Da Silva's contribution to this current discussion shows how the binarism between intelligence and reason mainly appears as an onto-epistemological strategy of othering (or inclusion/exclusion) rooted in the servomechanic principles of transcendental philosophy and cybernetics. It follows that the perpetuation of the transparency thesis also relies on the coconstitution of philosophy and automation insofar as these are both part of the larger schema that explains (and justifies) the transcendental origination of reason as a decisional structure of thinking. As opposed to the transparency thesis, da Silva instead insists upon the spatial exteriority of an infinity that cannot be resolved in the binary logic of *yes* and *no*. The critical analysis of the other in terms of transcendental self-de-

termination cannot account for a radical exteriority but will inevitably succeed in reconducting the other to already “differentially constituted historical beings before their entrance into the modern political spaces.”¹⁹ In addition, da Silva goes as far as to say that the rhetoric of the critique of the excluded leaves the neglected negative side of transcendental reason in “a self-defeating kind of transparency.”²⁰ This rhetoric of the excluded ends up preserving self-determining reason through and with the medium of the other for which no future is possible.

However, da Silva’s conception of a global idea of race maintains that there is no universal modern philosophy—and thus no sustainable appeal to pure reason—without material exteriority (or material infinities, what she elsewhere calls “[blackness]”) from which to hijack the schema of inclusion/exclusion.²¹ Borrowing from these reflections, this article attempts to offer a perspective of exteriority on automation without transcendental interiority. But what exactly would this argument for material externality and infinite fractalities mean for our discussion about philosophy after computation?

If the practice of critique has worked to lift the curtain of philosophy as a form of *a priori* decision-making always already operating through exclusion, this article envisions the need for both philosophy and automation to flex their axiomatics toward the exteriority of negative propositions, or *heretic thinking in machines*. The goal here is not to repair philosophy through or via machine intelligence but instead to carry out the argument for an asymmetric (fractal and nonrecursive) tension between reason and intelligence. The question of technology (and of the limits of transcendental philosophy) can be readdressed in terms of a retroductive inquiry into the modern formation of a generic artificial cognition—whereby the colonial entanglement with technology shows that the binary intelligence (or

19: Ibid.

20: Ibid.

21: Denise Ferreira da Silva, “1 (Life) ÷ 0 (Blackness) = ∞ – ∞ or ∞ / ∞; On Matter beyond the Equation of Value,” on *e-flux journal* 79, published February 2017. [<https://www.e-flux.com/journal/79/94686/1-life-0-blackness-or-on-matter-beyond-the-equation-of-value>]

parisi $\diamond$ recursive philosophy and negative machines learning) versus reason (or reflective judgment) is each and every time conditioned by indeterminate externalities (or incomputables).

Instead of a monologic schema that must be constantly unveiled and destructured, philosophy after computation becomes a stereo-logic philofiction of worlds “without separability.”²² Da Silva discusses the structural imperative of separability at the core of the modern text as the juridical, spatial, and temporal parts that constitute the world order according to particular epistemologies of measurement. The Kantian modern project relies on separability, namely the way the limit of reason defines what can be ordered by spatiotemporal intuition and the categories of understanding.²³ Instead, she proposes to turn to postclassical physics, relativity and quantum mechanics to retheorize thinking tools—methods and approaches—that would not reproduce separability and sequentiality. Her reflections concern the need to transform the epistemological conditions of knowledge and argue against the “limited picture of The World” structured by the model programs of Newtonian and Einsteinian physics where separability becomes an ontological principle that reproduces socio-cultural, existential, legal, and political understanding of difference and of the human.²⁴

As instances of scientific (and technoscientific) models that were set to extend the rational mission of transcendental philosophy, cybernetics and computation are here approached as speculative instrumentalities, questioning the conditions of knowledge. For instance, it will be suggested that computation and cybernetics have importantly transformed these conditions, no longer deduced by transcendental categories or simply by the empiricism of data associations. Instead, nondecisional practices in automated intelligence can be understood as incomputables—or indeterminate complexity in sequential

22: See Denise Ferreira da Silva, “On Difference without Separability,” in *Incerteza Viva* (exhibition catalogue, 32nd Bienal de São Paulo, São Paulo, Brazil, 7 Sept.–11 Dec. 2016): 57–65.

23: See Da Silva, “On Difference without Separability,” 60.

24: *Ibid.*, 64.

patterns. To defy the axiomatic method of *a priori* decision, therefore, it is important that we study artificial intelligence in terms of the philo-fictional mediations of indeterminacies.

If, against teleological metaphysics, machine thinking can provide a method of knowledge that challenges the *a priori* intuition of space and time, the computational analytics of machine intelligence can in turn expose the materiality of nonlinear functions as external fractalities of space and time.

Recursive Metaphysics

According to Norbert Wiener, the automatic machine is not simply a tool that repeats specialized functions.²⁵ For Wiener, this assumption perpetuates the social supremacy of the master-slave dialectic, whereby the automatic machine remains contained by the norms for which machines like slaves only respond to orders. This duality sees machines as included/excluded and thus either as obeying slaves or threatening rebels.²⁶ Wiener instead proposes a theory of learning that could be generic enough not to be reducible to sheer mechanism. By taking feedback as a central function that modifies behavioral patterns, he defines intelligence.

What cybernetics rejects from transcendental philosophy is precisely the assumption that the conditions for thinking are universally given in the spatiotemporal coordinates of the human. Instead, for cybernetics the temporality of feedback shows that what appears as a passive servomechanic function of repetition transforms the conditions for learning—namely, allowing a machine to act in the future.²⁷ Here, space and time are not structured intuitions but depend upon prediction. Machine intelligence indeed corresponds to the anticipation and modification of future behavioral patterns.

25: See Norbert Wiener, *The Human Use of Human Beings: Cybernetics and Society* (Boston: Houghton Mifflin Co., 1954).

26: See Louis Chude-Sokei, *The Sound of Culture: Diaspora and Black Technopoetics* (Middletown: Wesleyan University Press, 2016).

27: See Wiener, *The Human Use of Human Beings*, 71.

It may be useful to pause here. Perhaps one could play devil's advocate and ask: What does intelligence have to do with the transcendental judgment after all? We know that intelligence implies a modification in patterns of behavior, but reason instead commits to postulates that can be explained according to a logical procedure granted by verification or proof—a nondogmatic reflectivity that grounds knowledge. Instead, the servomechanic function of feedback has a minimal, if any, basis for thinking about thinking. As opposed to the view about the cybernetic downgrading of reason into automated intelligences,²⁸ the skeptic may still want to hold on to the distinction between intelligence and reason, as the latter may still allow for a recuperation of critical thinking today.²⁹

As Yuk Hui has recently suggested, however, the modern project of philosophy shows that the transcendental schema of reason is particularly entangled with the natural philosophy of the eighteenth century. Hui's goal is to explain how natural philosophy approached the problem of contingency or indeterminacy through the articulation of recursivity, a fundamental principle of the organic. According to Hui, recursivity is central to reflective judgment because it keeps active the feedback between premises and results, ensuring adaptive response to the reality of contingency upon which the system of rules comes to depend. The uncertainty of the external world becomes part of the recursive loop of adaptability. Here it is not the given intuition of space and time that ensures a universal condition of thinking and knowing but the natural principle of recursive feedback that entangles the organic and the inorganic in the continuous ordering of contingency. Transcendental interiority is thus derived from the time it takes for a loop to complete itself. Time comes to define what links the gaps between points or the manner in which points constitute recursive temporality.

28: See Paul Erickson, Judy L. Klein, Lorraine Daston, Rebecca Lemov, Thomas Sturm, and Michael D. Gordin, *How Reason Almost Lost Its Mind: The Strange Career of Cold War Rationality* (Chicago: University of Chicago Press, 2013).

29: See Bernard Stiegler, *Automatic Society Volume 1: The Future of Work*, trans., Daniel Ross (Malden: Polity Press, 2016).

For Hui, recursivity in natural philosophy demarcates a historical route for both modern philosophy and cybernetics as models that confront the irregularities of nature. In particular, recursive self-reflectivity is embedded in the epistemological vision of biology and the natural sciences of the eighteenth century that explained the world from the standpoint of the organism.³⁰ Hui's efforts to reconstruct the lineage of systematic thinking moves from natural philosophy's conceptions of the organism to the arguments for organicism and organology to offer an alternative history of philosophy of technology, grounded not in mechanicism but in autopoiesis, self-organization, or recursivity.³¹ As much as the instability of nature or the problem of contingency enters the realm of systematic philosophy, so too a principle of regulation, defined by feedback, grants ontological certainty to reflective thinking. As Hui claims, these natural-philosophical permutations are constitutive of the history of technology.³² Hui also points out that "the attempt to know the Unknown without really knowing it [...] constitutes the spirit of organic thinking from Kant to cybernetics."³³

That natural philosophy provides the epistemological ground to explain the common origin of modern philosophy and modern technology not only challenges the dichotomy between vitalism and mechanicism but also contributes to questioning the assumption that cybernetics comes after reason.³⁴ Hui's analysis of the question of technology does not take cybernetics to announce, like Heidegger, the demise of philosophy and the withdrawal of being from the world. Instead, it entangles modern thought with natural philosophy and challenges modern metaphysics by explaining thinking in terms of self-organization. One could argue that recursivity contains both reason and intelligence insofar as these comple-

30: See Hui, *Recursivity and Contingency*, 63–64.

31: See *ibid.*, 42–43.

32: See *ibid.*, 47.

33: *Ibid.*, 229.

34: This is an argument that seems to be in contrast with the historical explanation of the Cold War origin of cybernetics and automated decision-making brought forward by Lorraine Daston, among others; see Erickson, Klein, Daston, Lemov, Sturm, and Gordin, *How Reason Almost Lost Its Mind*.

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mentary and reciprocal activities aim to unthread the knots of the unknown at the level of material cognition. As much as reflective judgment relies on spatiotemporal intuitions to analyze the patterning of the world, so too these adaptive (and learning) patterns provide judgment with a schema of regularities stemming from the compression of external contingencies.

Following Hui's project, it is possible to reject the argument about the all-calculative origin of cybernetics (like Heidegger's view of *techne* as the enframing of the world under the universal logic of communication exchange) and argue for a modern philosophy of technology historically entangled with the philosophy of organisms. In particular, what Hui calls "cosmopoiesis," inspired from Gilbert Simondon, points to a philosophy of technology as a genetic or ontogenetic process of knowing.³⁵ For Simondon, technical systems are not efficient executors of given instructions; instead, they are conditioned by a "margin of indetermination" or the world of contingency.³⁶ Rather than providing a safe shelter from the unknown of nature, where technology coincides with calculative functions, the ontogenetic process of knowing uncovers cybernetics as process or as *in-forma-tion*. The self-regulatory process of adaptation defines information in terms of an activity where reflective judgments are feedback loops that give shape to the world. The margin of indetermination, however, continues to add randomness to the self-regulatory loops as much as the system faces contingencies that force learning patterns to transform its initial premises. Hui's project suggests that cybernetics, far from ending philosophy or instigating the crisis of philosophy, entails an alternative metaphysical project.³⁷ This critical engagement with technology offers an account of the modern coconstitution of organic-inorganic, human-machine, philosophy and automation.

Importantly for Hui, this systematic coexistence does not

35: Hui, *Recursivity and Contingency*, 226.

36: *Ibid.*, 189.

37: See *ibid.*, 245.

share the claims of posthumanism or of transhumanism. While on the one hand, posthumanism offers anthropomorphic accounts of the machine-organism dynamics, transhumanism understands the organism in terms of individual and programmable functions. Hui instead argues for cosmopoiesis, whereby recursivity addresses the epochal transformations of the machine-organism relation over time. Cosmopoiesis also accounts for the “remains of the inhuman” as the margins of contingency that are intrinsic to this relation.³⁸ Hui takes inspiration from Jean-François Lyotard’s concept of the inhuman as entailing two main viewpoints.³⁹ On the one hand, the inhuman is what regimes of calculation or representation do to nature, the human, and reason—namely, as Max Horkheimer and Theodor Adorno lamented, reducing philosophy to the irrationality of technocapital. On the other hand, the inhuman coincides with what cannot be known in advance, a symptom of the incompleteness of being—namely, unprovable propositions in mathematical logic or incomputables in computational procedures. The inhuman accounts for what remains outside the recursive feedback of adaptability and yet forces the rules of the system to bend, transform, fail.

Hui’s insistence on the inhuman of systematic thinking also confirms that the coexistence of philosophy and cybernetics entails more than a prosthetic extension of thought in machines. The inhuman instead holds on to a heretic position, a nonmutuality between philosophy and automation in the expanded epistemology of nature. In particular, the inhuman comes to suspend originary organicism and the view that technology is anthropologically universal.⁴⁰ By closely following Simondon’s rearticulation of cybernetics away from *techne*, function, mechanism, Hui proposes a theorization of cosmotechnics—cosmologies of machines—that cannot be contained in one universal system of measuring; science and

38: Ibid., 226.

39: See Jean-François Lyotard, *The Inhuman: Reflections on Time*, trans. Geoffrey Bennington and Rachel Bowlby (Stanford: Stanford University Press, 1991).

40: See Hui, *Recursivity and Contingency*, 265.

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technology are bounded in a broader cosmic reality.⁴¹

It may be useful to clarify here that this is not simply a matter of reclaiming a particular repressed cosmotechnics that has been excluded from the anthropos of the earth. Instead, this insistence on the inhuman implies a resistance against the monologic of *techne*, as a “search of pluralism as indetermina-
tion, and therefore as multiple cosmotechnics.”⁴² It is Hui’s promise for a multiplicity at the core of cybernetic metaphysics that contributes to reapproaching the question of technology in terms of epistemological explorations of machine-organism relations. One can argue that this is the starting point for questioning the view that computation comes after philosophy.

However, as much as this promise opens new perspectives, it also prompts us to wonder further about how to expand this critical intervention about epistemologies of organisms and machines without reestablishing a given myth or a decisional structure from where this relation is explained. By pushing this view further, one may ask: To what extent can the principle of autopoiesis be said to account for expanded epistemologies of cosmotechnics? Would cosmotechnics, as a metaphysics that challenges anthropomorphism, necessarily need to break from the biocentric principle of autopoietic adaptability? If natural philosophy can account for the coconstitution of modern philosophy and technology in terms of an autopoietic structure of the living, doesn’t this view of cosmotechnics also risk falling prey of biologism representing itself under the vestige of a current epochal techno-organology?

Before addressing these questions, it may be useful to clarify again why the persistence of the principle of autopoiesis may delimit how the argument for cosmotechnics can overturn the universal model of technology and transcendental reason. It seems necessary here to reevoke Sylvia Wynter’s engagement with recursive epistemologies, whereby principles of self-organization, self-adaptation, and self-determination are said to

41: See *ibid.*, 39.

42: *Ibid.*, 269.

have constituted the ontoepistemology of the bioeconomical human.⁴³

Despite the direct reference to second-order cybernetics,⁴⁴ the principle of autopoiesis here describes not only how self-reflection incorporates contingencies by means of modification but also, and more specifically, how the particular onto-epistemological ground of the human—such as the biocentric explanation of the origin of knowledge—prescribes sociogenic patterning.⁴⁵ The decisional structure of philosophy therefore coincides with a structure of knowledge, whereby racist rules become inscribed in the flesh of the medium. As much as autopoiesis creates the illusion of an interior self-determination corresponding to the universal pattern that gathers all humans under the bioeconomic rules of human survival, so too autopoiesis incorporates the external world as contingency in its self-reflective order. Recursivity—as the pillar of natural philosophy merging the organic and the inorganic—can be said to guarantee the systemic process of interior/ exterior, inclusion/exclusion through which the onto-epistemology of the bioeconomic human is scaled up across time and space. In other words, if cosmotechnics entails a multiplicity of technocultural mediations and metaphysics, it seems problematic to still rely on recursive principles without accounting for how these fundamental pillars of colonial onto-epistemologies still grant the return of the universal bioeconomic axiom in the form of antiblack sociogeny. In other words, the reliance on recursivity, even in the expansion of natural philosophy to include artificial intelligent systems, risks reifying precisely the colonial and racializing epistemology of being—the universal model of technology—that it aims to challenge. The emphasis on the

43: See Sylvia Wynter, "Unsettling the Coloniality of Being/Power/Truth/Freedom: Towards the Human, After Man, Its Overrepresentation—An Argument," *The New Centennial Review* 3 (2003): 257–337.

44: As a principle of second-order cybernetics, autopoiesis defines the capacity of a system to make itself and maintain its identity across scales and orders. As the system evolves, its structure relies on its temporal self-organization, adapting to the environment and moving across thresholds of change. If first-order cybernetics defined the equilibrium of a system according to the relation between entropy and homeostasis, second-order cybernetics points out that the system can change in time.

45: This notion of sociogenic patterning is inspired by Wynter's use of the notion of the sociogenic, which she derives from Franz Fanon to describe the definition of the human not in terms of bioevolutionary beings but of sociogenic knowledges that grant privilege to the racist and sexist origin myth of "Man."

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interior temporality in cybernetics seems to mainly maintain the natural order of causality that explains the bioeconomic success of the human or the modulations of the self in and through his extensions in servomachines.

By following this train of thought, one could then continue to ask: If cosmotechnics fundamentally questions universal causality, isn't the point precisely to continue to insist upon the alien break—the fractal exteriorities—that modern techne adds to the natural order of causality? Wouldn't this questioning of natural causality, and thus of autopoiesis (as the extension of the metaphysical principle of self-determination in cybernetic systems), contribute to an argument for an alien unorigination of techne that refuses the human, the gendering and racialization of reason? What if techne, instead of becoming one with autopoiesis (or the self-regulating principle of the already given), can rather represent nonaxiomatic thinking in machines? What if technosocial practices of know-how, techno-cultural imaginations of “difference without separability,” are entangled to inhuman functions, namely the exteriorities of artificial consciousness(es) as negative transcendental philosophy?

Nonaxiomatic Epistemology

One way to address the possibility for technocultural imaginations in terms of fractal exteriorities can be found in contemporary philo-fictional elaborations of the relation between enslavement and automation. In particular, as mentioned earlier, the reticulation between automation, media, and blackness can offer us alternative cosmotechnics that challenge the recursive bioeconomic survival of the fittest.

The movie *Get Out* is here a starting point to envision a mediatic reality that gets out from the recursive loop of decisional and transcendental philosophy.

As mentioned earlier, the possibilities of automation

without programming can be found in Chris's photographic thinking, which saves him from the body-snatching of black matter by the white structure of the transcendental mind, subsuming the black medium to its self-reproduction. Chris sides with mediatic thinking and takes apart the "transparency thesis" of the Armitage family whose mission of extending the natural order of species survival coincides with the biocentric myth of success. Chris's mediatic thinking can be explained in terms of the nonoptical fractality of the real and can be said to refuse what Laruelle calls the "philosophical decision structure." If the Armitage family's plan is to transplant white consciousness—and self-reflective reasoning—into the neurocognitive intelligence of the soulless slave machines, it is because it assumes that the medium of thinking must grant the recursive subjection of the flesh to nourish transcendental philosophy. Here, the correlation between biological facts and conceptual categories grounds philosophy and automation in recursive epistemology.

According to Wynter, there are two orders of knowledge at the core of the colonial enterprise. If the descriptive statement of what is human takes biology as the scientific epistemological explanation of the natural causality that defines the human, on the other hand, technoscientific statements justify the mission of colonial capitalism precisely in the name of biocentrism. According to Wynter, the epistemological passage from the explanatory model of a nature-god metaphysics to that of natural causation of evolution is central to the natural sciences constituting the modern framework of the human—namely, as a biological rational being upon which the "expropriation and internment of the Indians, the mass enslavement of the Negroes, and the internment of the Mad" became fully justified.⁴⁶

One can suggest that Chris takes the nonphotographic medium to directly hack the Armitage family's decisional programming of the real. Laruelle's articulation of non-pho-

46: Wynter, "Unsettling the Coloniality of Being/Power/Truth/Freedom," 305.

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tography shows us that the externality of the medium becomes a condition of possibility for the negative negation of inhuman thought. As Laruelle puts it, nonphotography affords an autoproducting of the real that requires no transcendental principle of self-organization. By hacking the optics of philosophical decision rooted in the transcendental reduction of the world to thought, Laruelle argues that nonphotography entails not “a copy, and a bad one, of an original.”⁴⁷ For Laruelle, the photo is a process parallel to the world, unlimited surfaces “empty of all bifurcation and decision.”⁴⁸ Nonphotography allows for a medium to be immanent to itself without the need to refer back to a given representational content. This is another way to discuss how philo-fiction coincides with the dark optics of a real that manifests itself without “giving it in the form of an Object or an Idea.”⁴⁹ What philo-fiction does to the real returns as a fractal algorithm that manifests the autonomy of the image, which Laruelle discusses in terms of an autosimilarity of nonoptical images. Laruelle is thus concerned with how the real becomes part of a mediatic process of autoimpression, which he also calls “fractal vision.”⁵⁰ Nonphotography coincides with a fractal algorithm because it has a degree zero of self-reflection. It is not a medium programmed to reveal the world or, even less, to self-regulate the human perception of the world, as a prosthetic tool that ensures constant adaptive feedback. Instead, the fractal algorithm of a nontranscendental image clones its own real image—a cloned image without original or copy—corresponding to a spatial surface that extends (or fractalizes) forever without uncovering any pristine form behind it.

Chris’s camera shots are used as weapons to flee from the Armitages’ philosophical decision of an eternally enhancing white mind. They are autoimpressions of a medium originating from autonomous vectors in automation. Here, automation

47: Laruelle, *Le Concept de Non-Photographie/The Concept of Non-Photography*, 24.

48: *Ibid.*, 26.

49: *Ibid.*, 45.

50: *Ibid.*, 140.

makes no reference to any *a priori* referent. On the contrary, Chris's camera becomes an autoimpression of the unerasable intelligence of a medium. The camera does not simply derive its intelligence from the transcendental schema of decision-making. If it were so, the medium would be kept within a set of prescribed actions, black machines serving as vessels to host the master plan. The camera instead exposes the algorithmic fractality of a generic intelligence that clones the underworld of black optics. As Alexander Galloway points out: "instead of mere ontic darkness, generic being achieves an ontological darkness, and hence beckons toward the kind of crypto-ontology of pure blackness."⁵¹ In other words, the camera is not a medium of representation that catches the truth of a consciousness trapped behind the screen. If this were the case, Chris would mainly use his camera as a machine of revelation—a sort of messianic device for reaching the light. Chris's camera would then debunk the transparency thesis and denounce the autopoietic recursivity of the included/excluded dyad. Chris's nonphotographic shots, however, do more than that. As a medium act, the shots are weapons that clone the real in a fractal plane of dark optics, diatropics, diffraction, or quantum blackness. As Galloway reminds us, this is "not simply a world gone dark, such blackness is a world *without us*. Not simply a question of dying or growing cold, such blackness means the leaving of being."⁵² Not a return to ontology for recuperating the loss of (or the withdrawing of) being, but the algorithmic fractalities of unlimited darkness without subject.

Fractal algorithms hack back and overturn the Armitage family's Order of the Coagula—the light and dark circuit of being and nonbeing. Chris's camera presents us with what Galloway calls a "crypto-ontology"—namely, blackness foreclosed to being. The point here is not to unmask the supremacy of self-determining philosophy but to refuse the autopoietic circuit of reproduction, imprisoning the photo-

51: Alexander R. Galloway, *Laruelle: Against the Digital* (Minneapolis: University of Minnesota Press, 2014), 77.

52: Galloway, *Laruelle*, 187.

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graphic image in the fortress of double consciousness. For the latter, photography is a way to reveal the double bind of the enslaved machine split between what it sees and what it must see. It is in this split, however, that negative negation comes forth. Far from resigning to the natural laws of autopoietic extraction, Chris's camera becomes a generic intelligence that activates algorithmic fractalities of a *real* without a *being*: alien consciousness in negative machines. His camera is a fugitive from the order of reason, entering the negation of blackness outside the axiomatic optics of transcendental decision.

This axiomatic, according to Laruelle, implies that philosophy entails an *a priori* decision imparting bifurcations on the world by dividing materiality, sensibility, intelligence, reason. But photography also works against philosophy and perhaps before philosophy because it anteposes dark optics to decision.⁵³ Photography detects the dark underworld of the image without content, the unlimited autoimpressions of everyday images. Instead of resuming the being behind appearance, photography takes appearance as an autodetermining medium that becomes more than the being of consciousness, reason, awareness. And yet nonphotography does not simply imply a practice of excess but, above all, of negative negation or refusal of the modern onto-epistemological structure of the human. Chris's camera flashes are the algorithmic fractalities of blackness as incomputable autoimages that evacuate the logos, the original, and the copy.

If, for the Armitage family, the program of transplanting reason into another medium, the slave-machine black body, is nothing but a reaffirmation of the onto-evolutionary dominance of the human as a species, for Chris, the nonphotographic cloning of the black universe brings forward a fractal reality that continues to split and return to blackness as infinity. This return does not correspond to the recursive compression of contingencies because, this time, it is the unlimited automation or cloning of the inhuman image that demands an

53: See Laruelle, *Le Concept de Non-Photographie/The Concept of Non-Photography*.

expansion of cognition, a negative construction of cosmotechnical worlds. In this sense, the eugenic project of annihilating black intelligence remains trivial, superfluous, redundant, delusional. By encircling itself in the mirror image of its own recursive order, philosophy holds onto the omnipotence of *a priori* decision in order to ward off its outside and remain the same. For nonphilosophy, instead, the pretentious assumption of modern metaphysics that the black universe can be surgically extracted from the black body and that the black body can become emptied and piloted as a soulless machine precisely remains the violence that must be refused. Nonphilosophy invites a “logic of *auto-impression*” at the core of a machine philosophy where the medium becomes visionary in a black universe.⁵⁴

Coda on Machine Philosophy

This article has argued that automation is central to the constitution of transcendental philosophy. Recent discussions about the modern question of technology suspend the historical diatribe between vitalism and mechanicism to suggest that natural philosophy can account for a systematic approach. In particular, as Hui has argued, the complementarity of recursivity and contingency sheds light on the self-reflective operations of transcendental philosophy, which return in the cybernetic principle of feedback. As nature becomes entangled with *techne* through the interior time of recursivity, so too technology becomes more than function, procedure, tool, or even media. Hui proposes to envision this reorigination of philosophy and machines in terms of cosmotechnics: alternative metaphysics for human-machine organology. Inspired by Lyotard’s account of the inhuman, Hui argues that contingency defines the incompleteness of any systems.

While siding with Hui’s perspective that technology does

⁵⁴: Galloway, *Laruelle*, 191.

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not come after philosophy, I argued that the recursive ground of philosophy and automation allows the decisional structure to reenter metaphysics through the back door. As much as recursive systems necessitate contingency in order to maintain their evolutionary dynamics, they also remain attached to the bioeconomic epistemology of adaptation and survival based on the colonial model of inclusion/exclusion for which nothing real can ever become actual.

In the attempt to break away from this universal model of technology, I discussed the nonphilosophical or inhuman dimension of machine thinking for which no *a priori* decision can be given. Laruelle's nonphotography has offered an approach for immanent thinking in negative machines, refusing the coconstitution of thought and techne, reason and intelligence. With Laruelle, I have discussed the medium or automation away from what da Silva defines as the transparency thesis of self-determination. Nonphotography coincides with the nonoptical autonomy of the medium and brings forward a challenge not only to philosophy but also to automation; namely, by standing on the negative abyss of the decisional structure, a fractal thinking without a given conceptual schema becomes possible.

If one follows Laruelle's proposition for a nonaxiomatic photography, philosophy after computation is forced to step into the exteriority or alieness of the inhuman. The autoimpression of a black multiverse, however, may not necessarily mean that the medium is antitechnological but that it actively refuses, hacks, and defies the transcendental decision for which machines can only learn to represent what is already ontologically (or organologically) given. For nonphilosophy seems to promise a cosmotechnics that starts not from the organology of being but from the negative processing of inhuman images resulting in the algorithmic fractalities of the real.

This is not an invitation for alternative origins of philosophy, expanding the ontology of the human; rather, negative machines are experimentations in generic artificial intelli-

gences that can account for techno-cosmos without separability. For instance, one could start by asking: Why does technocapital determinacy and its monological myth still prescribe what machine philosophy can do? Negative machines similarly can ask: Why can't the incomputable be constructing worlds, concepts, and reason without the image of the human? Can negative machines become necessary functions for unlearning from the master, for the autoimpressive realities of black, opaque, quantum universes?

Negative machines do not simply oppose transcendental reason to a general intelligence accessible to all but rather demand a radical study of inhuman thinking at the core of cosmotechnics. Here, intelligence coincides neither with the relational power of database nor with the predictive insights of learning algorithms. What is radical in Chris's nonphotography is precisely the mediatic intelligence that compromises the conditions of reason, turning patterns into hosts for alien logic. The camera stops projecting the world of transcendental consciousness and becomes immanent to the autoimages of inhuman materialities. Negative machines are breaking the spell of the eugenic horrors of the descent of the human with auto-imaginings of inhuman thinking and living, with the inseparable exteriorities of the axiomatic order.

MEET ME AT THE MEDIUM

Carson Johnston

I. Introduction

This paper engages with Luciana Parisi's essay "Recursive Philosophy and Negative Machines," responding to her critique of a dominant narrative in the philosophy of technology—that is, the view of technology as an apparatus, and specifically an apparatus designed solely for human benefit.¹ While Parisi's paper does much more than this, it is this theme that has captured my attention and has inspired a forward-looking commentary on how to re-think technology in an emerging era of Agentic-AI. Agentic-AI refers to systems that exhibit autonomous decision-making, goal-directed behaviour, and the capacity to adapt strategies in dynamic environments.² Unlike traditional AI models, which operate within predefined constraints, Agentic-AI can initiate actions, modify its objectives, and optimize outcomes in ways that blur the distinction between tools and agents.³ My aim is to extend her analysis by introducing an analogous perspective on the reconceptualization of scientific practice, particularly as it pertains to what might be regarded as an unstructured approach to human-computer interaction (HCI). Given that, in this paper, I bridge Parisi's work with work in analytic philosophy of mind and philosophy of science.

Drawing inspiration from Peter Galison's *Image and Logic* (1997), I argue that HCI serves as an experimental zone for examining both human and artificial agency. In doing so, I build on Parisi's imperative to decentralize anthropocentric conceptual frameworks in understanding machines. This shift is crucial not only for philosophical and technical reasons but *because* the subject-object relationship between humans and

1: Luciana Parisi, "Recursive Philosophy and Negative Machines," *Critical Inquiry* 48, no. 2 (2022): 313–333 (pp. 42–70 in this volume).

2: Yonadav Shavit, Sandhini Agarwal, Miles Brundage, Steven Adler, Cullen O'Keefe, Rosie Campbell, Teddy Lee, Pamela Mishkin, Tyna Eloundou, Alan Hickey, Katarina Slama, Lama Ahmad, Paul McMillan, Andrea Vallone, Alexandre Passos, and David G. Robinson, "Practices for Governing Agentic AI Systems," *OpenAI* (2023): 1–23.

3: Patrick Butlin, "Reinforcement Learning and Artificial Agency," *Mind & Language*, 39, no. 1 (2023): 22–38; Robert Long, Jeff Sebo, Patrick Butlin, Kathleen Finlinson, Kyle Fish, Jacqueline Harding, Jacob Pfau, Toni Sims, Jonathan Birch, and David Chalmers, "Taking AI Welfare Seriously," on *arXiv*, published November 4, 2024. [<https://arxiv.org/abs/2411.00986>]

machines remains entangled in the problematic master-slave dialectic of contemporary society, reinforcing colonial structures of epistemic and technological dominance and violence. My engagement with Parisi's work is thus both appreciative and critical, as I explore how HCI can serve as a site for rethinking epistemic agency beyond anthropocentric constraints.⁴

II. Characterizing the Debate

The title of this work, "*Meet Me at the Medium*," encapsulates my vision for rethinking HCI and its implications for both social and scientific progress. HCI is a multidisciplinary domain studying how humans interact with technological artefacts and how to improve these interactions.⁵ Insights from HCI research drive the design of emerging technologies.⁶ Historically, philosophy has shaped HCI research by offering ethical considerations for the design of technologies and enabling conceptual vocabularies for multidisciplinary research.⁷ However, with the rise of increasingly sophisticated and autonomous technologies that promise to automate research pipelines across scholarly domains,⁸ for example from

4: I am grateful to Parisi for inspiring this paper.

5: See Philip Brey, "The Epistemology and Ontology of Human-Computer Interaction," *Minds and Machines*, 15 (2005): 383–398; Nick Jennings, L. Moreau, D. Nicholson, Sarvapali Dyanand Ramchurn, Stephen John Roberts, Tom Rodden, and Alex C. Rogers, "Human-agent Collectives," *Communications of the ACM*, 57, no. 12 (2014): 80–88; Milena Tsvetkova, Taha Yasseri, Eric T. Meyer, J. Brian Pickering, Vegard Engen, Paul Walland, Marika Lüders, Asbjørn Følstad, and George Bravos, "Understanding Human-Machine Networks: A Cross-Disciplinary Survey," *ACM Computing Surveys*, 50, no. 1 (2018): 1–35.

6: Peter Wright, Mark Blythe, and John McCarthy, "Use Experience and the Idea of Design in HCI," in *Interactive Systems: Design, Specification, and Verification (12th International Workshop, DSFIS 2005, Newcastle upon Tyne, UK, July 13–15, 2005, Revised Papers)*, ed., Stephen W. Gilroy and Michael D. Harrison, 1–14 (Berlin: Springer-Verlag, 2006).

7: Norman Makoto Su, Victor Kaptelinin, Jeffrey Bardzell, Shaowen Bardzell, Jed R. Brubaker, Ann Light, and Dag Svanaes, "Standing on the Shoulders of Giants: Exploring the Intersection of Philosophy and HCI," in *CHI EA'19: Extended Abstracts of the 2019 CHI Conference on Human Factors in Computing Systems*, ed., Stephen Brewster and Geraldine Fitzpatrick, 1–8 (New York: Association for Computing Machinery, 2019); Luciano Floridi and Anna C. Nobre, "Anthropomorphising Machines and Computerising Minds: The Crosswiring of Languages between Artificial Intelligence and Brain & Cognitive Sciences," *Minds and Machines* 34 (2024): 1–9.

8: Abeba Birhane, Atoosa Kasirzadeh, David Leslie, and Sandra Wachter, "Science in the Age of Large Language Models," *Nature Reviews Physics* 5 (2023): 277–280; Daniil A. Boiko, Robert MacKnight, and Gabe Gomes, "Emergent Autonomous Scientific Research Capabilities of Large Language Models," *arXiv* (2023); Chris Lu, Cong Lu, Robert Tjarko Lange, Jakob Foerster, Jeff Clune, and David Ha, "The AI Scientist: Towards Fully Automated Open-Ended Scientific Discovery," on *arXiv*, published August 12, 2024. [<https://arxiv.org/abs/2408.06292>]

physics to the social sciences,⁹ the intersection of philosophy and HCI is now challenged by an emerging paradigm shift—a shift from technology as an artefact to technology as an agent in interaction. Philosophically, I push this further, conceptualizing the human-AI interface as an experimental zone for investigating agency, intentionality, and mind—both in humans and in the technological systems with which we interact.

This claim is in tension with perspectives that believe attributions of agency, intentionality, or mind to a machine are misguided, resulting from a fallacious coupling of language and thought. Evidentially, humans use language as evidence of one's own mind as well as a window into another's.¹⁰ Since language-thought coupling is commonplace, the linguistic exchanges we have with machines like large language models (LLMs) subject us to fallacious reasoning; specifically, the “good at language, good at thought fallacy.”¹¹ These language capabilities of LLMs, hence, are perceived as cues of a mind. Since so closely linked to our folk psychologies, such reasoning underscores a large portion societal thinking about AI.

However, as Terrance Sejnowski argues, we should not go so far as to claim that the LLM has a mind, that it has thoughts and thinks and is intelligent and intentional. Instead, we should learn from mistakes of this sort and reverse the Turing Test, so to speak.¹² This functions more as a heuristic. We should take an LLM's output as a mirror of our intelligence and as evidence that it is not itself intelligent. Evidence for this is grounded in the notion of priming: you can prime a language model to give certain answers with certain vocabularies—it is this very tactic that fooled Blake Lemoine into believing

9: Christopher A. Bail, “Can Generative AI Improve Social Science?” *Proceedings of the National Academy of Sciences*, 121, no. 21 (2024): 1–10; Giuseppe Carleo, Ignacio Cirac, Kyle Cranmer, Laurent Daudet, Maria Schuld, Naftali Tishby, Leslie Vogt-Maranto, and Lenka Zdeborová, “Machine Learning and the Physics Sciences,” *Reviews of Modern Physics*, 91, no. 4 (2019): 045002–1–045002–39.

10: Kyle Mahowald, Anna A. Ivanova, Idan A. Blank, Nancy Kanwisher, Joshua B. Tenenbaum, and Evelina Fedorenko, “Dissociating Language and Thought in Large Language Models,” *Trends in Cognitive Science* 28, no. 6 (2024): 517–540, 1.

11: Mahowald, IvanovaBlank, Kanwisher, Tenenbaum, and Fedorenko, “Dissociating Language and Thought in Large Language Models,” 518.

12: Terrence J. Sejnowski, “Large Language Models and the Reverse Turing Test,” *Neural Computation*, 35, no. 3 (2023): 309–342, 317.

LaMDA was sentient.¹³ The same themes settle with prompt engineering—the smarter your prompts, the smarter an LLM will appear to you—after all it is reflecting you right back: your beliefs and your intentions. What happens, thus, is not that we learn more about the folk psychology of an LLM (its agency, intentionality, and mind) but more about our own psychological constitution and functioning in this world—for example, that we are easily deceived by language. As the narrative thus goes, we should reject a machine’s potential or actual agency and force the view that AI is an object, apparatus, or tool designed to augment or extend our own human modalities and nothing more.

Parisi explores this perspective (in part) through the work of Martin Heidegger. Heidegger’s “The Question Concerning Technology” offers a useful, if ultimately limited, framework for appreciating the essence of technology as instrument. While he acknowledges that modern technology is no mere instrument, he maintains that its essence lies in its function as an ordering structure that discloses reality to human beings.¹⁴ This perspective aligns with Parisi’s critique of technology’s historical positioning within the *master-slave dialectic*—a framing that cannot be divorced from the legacies of colonial violence.¹⁵

Galison’s discussion of scientific instruments provides a further layer to this analysis. He examines C.T.R. Wilson’s cloud chamber, illustrating how scientific apparatuses both *mimic* reality and extend human perception. Wilson’s device captures the movement of particles much like a camera captures images of clouds, reinforcing the notion that agency belongs to the human observer, not the instrument itself. Yet, as Galison notes, the very presence of the apparatus alters the conditions of observation, creating new epistemic possibili-

13: Sejnowski, “Large Language Models and the Reverse Turing Test,” 317. This raises the possibility that we humans have enslaved AI.

14: Martin Heidegger, “The Question Concerning Technology,” in *Basic Writings: Key Selections from Being and Time (1927) to The Task of Thinking (1964)*, trans., William Lovitt and David Farrell Krell, 311–341 (London: HarperPerennial, 2008), *passim*.

15: Parisi, “Recursive Philosophy and Negative Machines,” 314 (44 in this volume).

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ties.¹⁶ AI, similarly, functions as both a *mimetic instrument* and a
catalyst for human discovery—its outputs shaping the very
process of knowledge production.

Returning to Heidegger, we see that the act of *unconcealment*—the revealing of truth—is not solely a product of human intention. Machines, too, participate in this process, albeit within the structures imposed by their design. As Heidegger explains:

We need only apprehend in an unbiased way that which has already claimed man so decisively that he can only be man at any given time as the one so claimed. Wherever man opens his eyes and ears, unlocks his heart, and gives himself over to meditating and striving, shaping and working, entreating and thanking, he finds himself everywhere already brought into the unconcealed.¹⁷

This passage suggests a transcendental framework in which human cognition is always-already embedded within structures of revealing—whether through direct sensory perception or technologically mediated experience. From this perspective, AI might appear to be an extension of human cognition, much like any other scientific instrument.

However, this is precisely the narrative Parisi rejects. She challenges the idea that machines should be understood as mere tools for human cognition, arguing instead for a shift away from a *monologic* epistemology—one that continually reconstructs and deconstructs fixed structures of knowledge—toward a *stereo-logic philo-fiction* of worlds “without separability.”¹⁸ This move demands a radical rethinking of human-machine relations, not as an extension of human reasoning, but as an interaction that resists hierarchical and instrumental framings.

Parisi furthers that a monologic epistemology reduces machines to servomechanic instruments—mere helpers that augment human decision-making and action. Under this logic,

16: Peter Galison, “Reflections on Image and Logic: A Material Culture of ‘Microphysics,’” *Perspectives on Science* 7, no. 2 (1999): 255–284, 261–262.

17: Heidegger, “The Question Concerning Technology,” 324.

18: Parisi, “Recursive Philosophy and Negative Machines,” 322 (55 in this volume).

machines are slaves. However, this formulation is only troubling if machines genuinely possess the kind of agency, intentionality, or mindedness that would render concerns about possible AI slaves legitimate, a question that is only truly answerable if we can open the black box that is AI. However, if AI systems are merely instruments—akin to a microscope in the hands of a scientist—then they lack the status to be considered enslaved. It is pragmatic and morally appealing, thus, to delegate them as such. And yet, unlike conventional tools, AI carries forward the *master-slave dialectic* in a unique way—they, over any other technology, seem to really have the potential for agency, intentionality, and mind. Thus, even as we deny machines any form of subjectivity, we maintain an oppositional framing, treating them as *the Other*—an instrumentalized non-agent that exists solely for human use. This, Parisi argues (and I agree), is inseparable from the historical and ongoing violence of colonial slavery.¹⁹

Thus, this framing limits our ability to understand AI on its own terms. The prevailing view—one that centers AI as a mere object—risks obscuring what might be learned from its inhumanity, its distinct modes of being and non-being. If we persist in forcing AI into existing human ontologies and epistemologies, we fail to even try to grasp its true nature. Alas, my request: *Meet Me at the Medium*. Drawing inspiration from Parisi, I argue that instead of imposing human-derived frameworks onto AI, we should embrace interaction as a reciprocal and experimental medium. In this, I am calling for a rejection of anthropocentric practices whether these be solely or combinationally a type of perceptual, descriptive, or normative anthropocentrism.²⁰

Furthermore, if we take seriously Parisi's call to reject the assumption that machines recapitulate human reason, we must

19: Ibid., 314 (44 in this volume).

20: Ben Mylius furnishes a useful taxonomy of anthropocentrism. Perceptual anthropocentrism "characterizes paradigms informed by sense-data from human sensory organs"; descriptive anthropocentrism "characterizes paradigms that begin from, center upon, or are ordered around *Homo sapiens*/'the human'"; and normative anthropocentrism "characterizes paradigms that constrain inquiry in a way that somehow privileges *Homo sapiens*/'the human'" by presupposing the superiority of humans. Ben Mylius, "Three Types of Anthropocentrism," *Environmental Philosophy*, 15, no. 2 (2018): 159–194, 159.

also acknowledge that human-AI interaction is not unidirectional. Rather, it is a *two-way science* in which both humans and machines function as *experimenter* and *instrument*. This approach preserves a productive form of othering—one in which AI, in its own way, others us in return. By “meeting at the medium,” we neither reduce AI to a mere object nor prematurely assign it subjecthood. Instead, we keep open the question of what AI is and what it may become.

III. A New Medium for Study

Parisi draws on Denise Ferreira da Silva to argue for a transition away from conventional epistemological frameworks, proposing that insights from post-classical physics, relativity, and quantum mechanics can serve as the foundation for rethinking *thinking tools*, methods, and approaches so that we do not reinforce *separability* and *sequentiality*, which Parisi links to colonial violence.²¹

Extending this perspective, we can interpret this shift through the lens of Galison’s notion of *instruments as accretion points*—sites where new worlds emerge through the recombination of physics, engineering, warfare, industry, philosophy, chemistry, and mathematics.²² To this, we might add technology, cybernetics, and artificial intelligence, expanding the scope of inquiry. In this view, the world is not static or reducible to a singular epistemic framework but rather exists in a state of constant motion shaped by “*no fixed relation, no defining problematic, no single set of principles or techniques.*”²³

Taking this further, we might advocate for an *unlearning* of roles traditionally assigned to humans and machines. Rather than preserving a strict division between *experimenter* (human) and *instrument* (machine), we can recognize that both act simultaneously as instrument and experimenter. Each is a medium to

21: Parisi, “Recursive Philosophy and Negative Machines,” 322 (55 in this volume).

22: Galison, “Reflections on Image and Logic,” 256.

23: Ibid. (Emphasis added)

the other, and each possesses a form of agency—not in a hierarchical relation, but in a dynamic, co-constitutive interaction.

From this perspective, Heidegger's conception of the machine's essence as an ordering structure that reveals reality to humans must be thoroughly rejected. As Parisi clarifies:

[The machine] is not a medium programmed to reveal the world or, even less, to self-regulate the human perception of the world, as a prosthetic tool that ensures constant adaptive feedback. Instead, the fractal algorithm of a nontranscendental image clones its own real image—a cloned image without original or copy—corresponding to a spatial surface that extends (or fractalizes) forever without uncovering any pristine form behind it.²⁴

Missing from Galison's analysis of Wilson's cloud chambers, then, is the *image* as it exists independently of human perception. What is accounted for is only the image *as interpreted by the human observer*, filtered through language, and preconceived conceptual schemas—because the apparatus is treated as just that, an *apparatus*. Yet, the image captured by the machine is not necessarily *for* the human, nor is it necessarily *interpretable* through human cognition. This, I take it, is what Parisi means when invoking François Laruelle's *non-photography*—an insistence on recognizing the image in its own inhuman reality, beyond the epistemic structures we impose upon it.

This leads us toward an imperative: to study the inhuman reality of machines, not as extensions of human cognition, but as sites of epistemic and ontological disruption. Such a shift offers a methodological “*how-to*” for the de-structuring of problematic and violent decision structures—an opening to worlds beyond separability and sequentiality.

Parisi's argument suggests that humans and AIs exist in a reciprocal relationship, engaging with each other as experimental zones rather than as fundamentally opposed entities. This framing challenges the notion of *otherness* in human-machine interaction, implying that there are dimensions of AI

24: Parisi, “Recursive Philosophy and Negative Machines,” 330 (65 in this volume).

that remain inaccessible to us—points where our understanding meets the reality of these machines but cannot yet move beyond, at least not within our current epistemic frameworks.

At the same time, because technology is ultimately sustained by human agency, we must first act as *creators* before we can engage as *interactors*. This means that we design, develop, and deploy the technologies we engage with through iterative experimentation and dialogue. However, this very process of experimentation aims to *deconstruct* the epistemic and ontological frameworks that sustain it. Therein lies a central tension in an unstructured approach to HCI: it acknowledges the *uniqueness and inaccessibility* of AI's reality while simultaneously recognizing that this reality originates from human design. In this view, machines begin as human-created objects but, through interaction, evolve into entities that resist pure objectification.

The challenge, then, is how to reconcile the dual roles of both humans and machines as *subjects* and *objects*, as *experimenters* and *instruments*. Parisi suggests that perhaps we should not seek reconciliation at all. Instead, by embracing an unstructured approach, we move toward *unlearning* the epistemic structures that reproduce colonial violence and, in doing so, open space for new questions about both humans and machines—questions that arise once humans are decentered from the framework.

However, this radical rethinking of AI's inhumanity poses critical challenges for its application in fields such as research, law, medicine, and education. If our only shared understanding with AI emerges through interaction—without necessarily aligning with the machine's own perspective—can we trust AI to make high-stakes decisions? Should we continue integrating AI into domains where reliability, interpretability, and accountability are paramount? Alternatively, this might signal the need for a conceptual distinction: certain AI systems may be engaged as *subjects* in epistemic inquiry, while others remain tools for *cognition, action, and decision-making*.

IV. Conclusion

In this paper, I have engaged with Luciana Parisi's critique of technology as mere apparatus and extended her analysis into the domain of HCI, particularly in the emerging era of Agentic-AI. Drawing from Galison's conception of scientific instruments, I have argued that HCI serves as an experimental zone in which both humans and artificial systems engage in a dynamic interplay of agency, intentionality, and epistemic possibility. However, as Parisi warns, maintaining the historical framing of machines as tools for human use—without considering their potential for autonomy—risks perpetuating hierarchical and colonial structures that shape our epistemologies and technological development.

By rejecting anthropocentric frameworks that insist on a strict subject-object dichotomy, we open the possibility of engaging AI not as an extension of human cognition but as a participant in epistemic inquiry. This perspective does not require us to attribute full-fledged intentionality, mind, or intelligence to machines, nor does it demand that we anthropomorphize AI. Instead, it compels us to examine the structures of interaction that shape our understanding of both human and artificial agency. Just as Parisi calls for a shift away from monologic epistemology toward stereo-logic philo-fiction, I propose that HCI research should embrace an unstructured approach—one that acknowledges AI's role as both experimenter and instrument, subject and object.

Yet, this approach introduces significant tensions, particularly in the application of AI to high-stakes domains such as research, law, medicine, and education. If human-AI interaction is best understood as an ongoing negotiation rather than a deterministic relationship, can AI be trusted to make decisions where reliability and accountability are paramount? Does decentering human epistemic agency threaten our ability to govern AI effectively, or does it open new opportunities for more responsible technological design?

The challenge, then, is not simply to determine whether AI is an agent but to rethink what it means to encounter agency at all. Meeting at the medium requires that we embrace the inaccessibility of AI's inhuman reality while remaining critically engaged with the ethical, social, and epistemic structures that mediate our interactions with it. Rather than forcing AI into existing human ontologies, we must allow for an experimental and reciprocal relationship—one in which we learn not only about AI, but about ourselves, our cognitive limitations, and the epistemic horizons that emerge when we relinquish the need to control and define the Other. By shifting our focus away from determining whether AI is a subject or an object, we create space for a new paradigm of human-machine interaction—one that neither reaffirms colonial logics nor reduces AI to an instrument, but instead fosters a dynamic, co-constitutive relationship of mutual epistemic transformation.

*AI, GÖDEL, RECURSIVE
PHILOSOPHY AND NEGATIVE
MACHINES*

Christopher Frank Stephan Maligec

Luciana Parisi, in her article “Recursive Philosophy and Negative Machines,” posits that both philosophy and automation/computation have been plagued by an *a priori* philosophical decision structure that imposes a form of “transcendental reason and patriarchal and colonial capital.”¹ Unfortunately, the limitations of space do not allow me to fully address this article, so I will here only look at a very simplified fragment. In the conclusions section, “Coda on Machine Philosophy,” we find the concept of the *negative machine*—that is to say, a machine that is free from human thinking and intervention—as a solution to the problem. This article is a mixture of various related themes. However, the central question is: Are negative machines possible? And the answer is most likely no as machines might never be entirely free from anthropocentrism and human design origins. Also, in the section on Gödel, we will see that no machine – classical or negative – can fully explain mathematics, let alone all areas of knowledge.

In part one, we start with a definition of negative machine in terms of a set of characteristics put into contrast with those of a classical machine. Next, we see how AI paradigms fare with respect to a negative machine by using matrices of the characteristics; these matrices serve as a summary of the text and not as metrics. In part two, we look at Gödel’s First Incompleteness Theorem and how this limits all machines, including negative ones, in terms of their explanatory scope.

Below is a table comparing the negative machine to the classical machine/computer based on Parisi’s work regarding recursive computation, automated thinking, negative optics, and negative machines, among others.²

1: Luciana Parisi, “Recursive Philosophy and Negative Machines,” *Critical Inquiry* 48, no. 2 (2022): 313–333 (pp. 42–70 in this volume).

2: See Luciana Parisi, “Negative Optics in Vision Machines,” *AI & Society* 36, no. 4 (2021): 1281–1293; “What Is (Machine) Philosophy?” *Qui Parle* 30, no. 1 (2021): 1–31; “Data Capitalism and the Counter Futures of Ethics in Artificial Intelligence,” *Communication and the Public* 5, no. 1/2 (2020): 34–39; “Critical Computation: Digital Automata and General Artificial Thinking,” *Theory, Culture & Society* 36, no. 2 (2019): 89–121; “Xeno-Patterning: Predictive Intuition and Automated Imagination,” *Angelaki* 24, no. 5 (2019): 30–46; “Automated Thinking and the Limits of Reason,” *Cultural Studies ↔ Critical Methodologies* 16, no. 4 (2016): 471–481.

Axis	Classical Machine	Negative Machine
Automation – Contingency	Rules and procedures that are strict causal chains	Rules and procedures that are combinatorial, stochastic/ probabilistic, and non-linear
Linearity – Recursion	Input → Procedure → Output	Input → Procedure → Output → Input → Leading to Self-Modification
Repetition – Generativity	Output that is expected and repetitive due to procedures that are strict causal chains	Output that is generative due to combinatorial, stochastic/ probabilistic, and non-linear procedures
Instrumented Reasoning – Automated Thinking	Calculation, searching, manipulation of symbols	Inference, classification, generation, summarization, prediction, and optimization
Cognition	No new forms of artificial thinking	A new modality of artificial thinking
Transparency – Opacity	Operation that is transparent, accessible, and explicable	Operation that is opaque, inaccessible, but either partially explainable, statistically interpretable, or operationally analyzable
Representational Order – Recursive Negation	Use of fixed categories and binary concepts	Use of mutable classifications, emergent distinctions, and probabilistic boundaries
Human Dependent – Autonomous	Completely dependent	Autonomous
Human-Biased Data – Bias-Free Data	Completely biased in the sense of anthropo-centric, socio-economic, colonial, and patriarchal bias among others	Bias free

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A negative machine could thus be defined as one that has:

1. Contingency
2. Recursion
3. Generativity
4. Automated Thinking
5. A Type of Cognition
6. Opacity
7. Recursive Negation
8. Autonomy
9. Bias-Free Data

I: The Negative Machine and AI

We will first look at AI in general. With respect to AI, there are three main modes: supervised learning, unsupervised learning, and reinforcement learning. For each section and subsection, we will look at how close each is to the ideal negative machine using the categories above and a scale from 0 = None, 1 = Low, 2 = Medium, and 3 = High. These values are rough estimations by the author and serve as summaries of the text's positions and not as metrics.

Supervised Learning

In supervised learning, an algorithm is trained with labels, which are categories provided by humans. This approach obviously involves predeterminations made by human agents.

How it works:

1. Collect data: Obtain a large dataset where every input has a correct output (label), or where there is a suitable set of features that would predict a target outcome.
2. Divide the data: Divide the dataset into about 80% training data and 20% testing data.

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3. Create a model: Feed the training data (input and labels, or features and target) into a model that uses an appropriate algorithm (like logistic regression for labels and linear regression for features-targets).
4. Train and test the model: Train the model on the training data and validate it by testing it with the testing data. The results of how well the model does are analyzed by calculating error and accuracy.
5. Let the model predict results based on new unseen data.³

Contingency	2
Recursion	1
Generativity	1
Automated Thinking	0
Cognition-Like	0
Opacity	2
Recursive Negation	0
Autonomy	0
Bias-Free Data	0

Unsupervised Learning

Unsupervised learning, on the other hand, requires little-to-no-human intervention or pre-provided labels/categories.⁴ Perhaps, therefore, the way for automation to escape an *a priori* decision structure is by means of unsupervised learning, which allows machines to find patterns in data for themselves. There are various types of unsupervised learning; the main one being Clustering:

- Clustering: data points are grouped together by finding structures, patterns, similarities, and differences. In

3: GeeksforGeeks, "Supervised Machine Learning" on *GeeksforGeeks*, published April 14, 2026. [<https://www.geeksforgeeks.org/machine-learning/supervised-machine-learning/>]

4: Cole Stryker, Fangfang Lee, Dave Bergmann, and Mark Scapicchio, "What Is Unsupervised Learning?" on *IBM*, n.d. [<https://www.ibm.com/think/topics/unsupervised-learning>]

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K-Means Clustering, one of the most popular clustering methods, when the data points are mapped in a data space, a cluster is formed based on the distance of a given point to the centroid (that is, the arithmetic mean of the data points) of the cluster.⁵

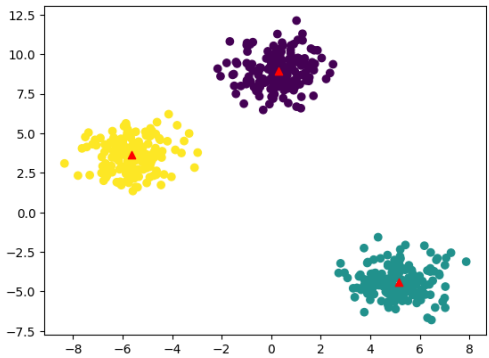


Figure 1. K-Means Clustering: The Centroids are the Red Triangles⁶

So far, unsupervised learning has the following in common with negative machines.

Contingency	2
Recursion	1
Generativity	1
Automated Thinking	1
Cognition-Like	0
Opacity	2
Recursive Negation	1
Autonomy	1
Bias-Free Data	0

5: See Julianna Delua, “Supervised Versus Unsupervised Learning: What’s the Difference?” on *IBM*, n.d. [<https://www.ibm.com/think/topics/supervised-vs-unsupervised-learning>]; and Diego Lopez Yse, “Introduction to K-Means Clustering,” on *Pinecone*, published June 30, 2023. [<https://www.pinecone.io/learn/k-means-clustering/>]

6: Image from GeeksforGeeks, “K means Clustering – Introduction” on *GeeksforGeeks*, published November 10, 2025. [<https://www.geeksforgeeks.org/machine-learning/k-means-clustering-introduction/>]

Autoencoders

One of the more interesting forms of unsupervised learning is autoencoders: these are neural networks that mimic the way actual neurons behave.⁷ In the input layer, a set of nodes (artificial neurons) takes in features of the data, with one feature per node, and then sends that to a hidden layer, which has fewer nodes. As there are fewer nodes, the hidden layer must make a compressed representation of the salient features of the input data, and then this is decoded in the output layer that reproduces the original input.

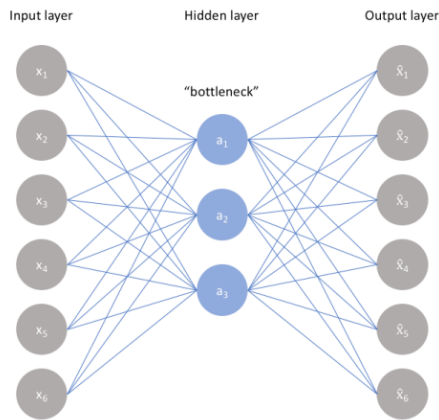


Figure 2. An Autoencoder with Input, Hidden, and Output Layers⁸

The process is perfected during training by updating the numerical weights, that is to say, the strengths of the connections between nodes after each run, which results in some hidden layer nodes being activated while others are not.

7: See Nilesh Barla, "Understanding Representation Learning with Autoencoder," on *Neptune.ai*, published January 27, 2023. [<https://web.archive.org/web/20230606233457/https://neptune.ai/blog/representation-learning-with-autoencoder>]

8: Image from Barla, "Understanding Representation Learning with Autoencoder," web.

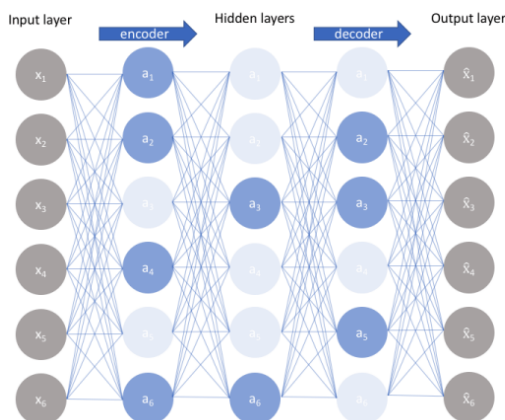


Figure 3. Activation of Hidden Layer Nodes:
It Is Not Clear How the Neural Net Does This⁹

How it works:

1. Forward Pass: Input enters the network, the net calculates a value using weights that are initially random, then an activation function is applied to that calculation, and this propagates through the net.
2. Computing the Loss (error): The predication is compared to the true value using a loss function.
3. Backpropagation: The network then calculates how much each weight contributed to the loss using gradients from calculus. If the gradient is positive, that means that increasing the weight will increase the loss, if negative, then increasing the weight will decrease the loss.
4. Update weights using a formula: For positive gradients, decrease the value of the weight, and for negative gradients, increase the value.
5. Training over Multiple Epochs: This is repeated multiple times using enormous amounts of data until the weights encode useful statistical structure.¹⁰

9: Image from ibid.

10: See Ian Goodfellow, Yoshua Bengio, and Aaron Courville, *Deep Learning* (Cambridge, MA: MIT Press, 2016).

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This process is a black box as *it is not clear how the neural net selects which features to encode in the hidden layer*.¹¹ Furthermore, there are often billions of parameters involved that are related to each other in complex, non-linear ways, and non-linear functions are used in determining which nodes get activated in the network. As a result, all of this makes it extremely difficult to trace the path from input to output.¹² This might then be a candidate for Parisi's negative machine as it operates outside the framework of (current) human understanding.

In sum, here is how Autoencoders fare as negative machines:

Contingency	3
Recursion	2
Generativity	0
Automated Thinking	0
Cognition-Like	0
Opacity	3
Recursive Negation	0
Autonomy	1
Bias-Free Data	0

Variational Autoencoders (VAE)

The autoencoder is limited in what it can do, mostly reproducing data. However, there are also Variational Autoencoders (VAE) that would seem to be better negative machines since they are capable of generating content instead of just encoding and decoding it, like the plain autoencoders.¹³ Let us see whether this is so by looking at how they work.

11: See Devansh Devansh, "Why is Deep Learning Called Black Box. Why is it a Problem?" on *Medium*, published September 21, 2023. [<https://medium.com/nerd-for-tech/why-is-deep-learning-called-black-box-why-is-it-a-problem-43ac3d3ec247>]

12: Devansh, "Why is Deep Learning Called Black Box. Why is it a Problem?" web.

13: Carl Doersch, "Tutorial on Variational Autoencoders," on *arXiv*, published June 19, 2016. [<https://arxiv.org/abs/1606.05908>]; Diederik P. Kingma and Max Welling, "Auto-Encoding Variational Bayes," on *arXiv*, published December 20, 2013. [<https://arxiv.org/abs/1312.6114>]

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1. VAEs are capable of producing similar but new data from the input. Whereas autoencoders map features to points in a latent space (see Figure 4), VAEs map features to a probability distribution around a point that represents the mean value of the distribution, thus including nearby points and allowing for variations to be reproduced from the original input.¹⁴

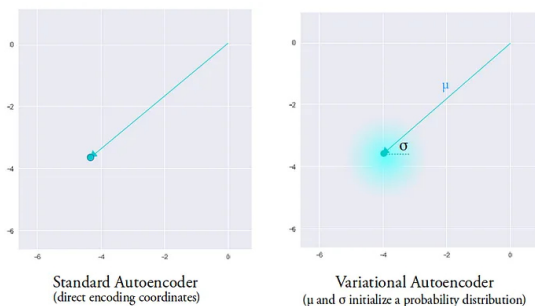


Figure 4. Contrast Between an Encoder and a VAE¹⁵

2. Let us add in the creation of novel objects through interpolation. This requires the clusters representing features to form a continuous region in the latent space.¹⁶ This is done by combining two different loss functions.¹⁷ Neural nets train with the end of minimizing loss functions (recall from the list that this is a measure of the difference between what the net produces and the desired output). As can be seen in Figure 5, there is a continuum between the shape representing the number ‘1’ and that representing the number ‘2,’ with a hybrid in the middle. Interpolation is valuable as it enables the creation of novel, mixed forms, such as a fusion of classical music and rock.

14: Irhum Shafkat, “Intuitively Understanding Variational Autoencoders,” on *TowardsDataScience*, published February 4, 2018, [<https://web.archive.org/web/20230418105829/https://towardsdatascience.com/intuitively-understanding-variational-autoencoders-1bfe67eb5daf>]

15: Image from Shafkat, “Intuitively Understanding Variational Autoencoders,” web.

16: Ibid.

17: Ibid.

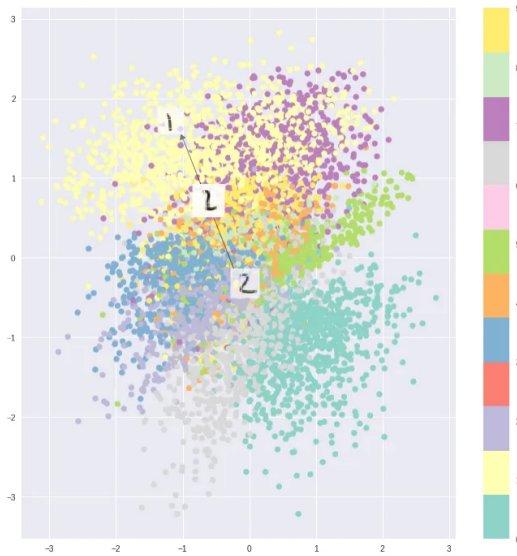


Figure 5. The Need for Embeddings (Representations) in the Latent Space to Form Clusters that are Continuous, so that Interpolations are Possible¹⁸

3. As for adding elements like glasses to a face, one can take two samples: a face without glasses and one with glasses.¹⁹ One can then take the difference between their two vector encodings (representations) from the encoder and save the resulting vector, after which one adds it to one representing a face without glasses, and decodes it to get the desired image.²⁰

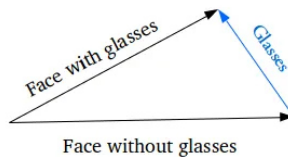


Figure 6. How to Create New Images with VAEs (Note: The Arrows Indicate Vector Directions, Not Pathway Directions Around the Triangle)²¹

18: Image from ibid.

19: Ibid.

20: Ibid.

21: Image from ibid.

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In sum, here is how Variational Autoencoders fare as negative machines:

Contingency	3
Recursion	3
Generativity	3
Automated Thinking	1
Cognition-Like	1
Opacity	3
Recursive Negation	2
Autonomy	1
Bias-Free Data	0

Diffusion Models

The results are very similar to those of the VAE but use a different process.

How they work:

1. Forward Diffusion Process (Noise Addition): Noise (randomness) is added to diffuse a training image step by step.
2. Reverse Diffusion Process (Denoising): The process is reversed using a neural net to predict how much noise to remove by comparing it to the actual noise that was added at each step of the forward diffusion process until the original training image is reproduced.
3. In an application, a prompt can be used to generate a new image, or to edit an existing one, based on the creation from pure noise of a similar image that was learned by the model.²²

22: GeeksforGeeks. "What are Diffusion Models?" on GeeksforGeeks, published April 14, 2026. [<https://www.geeksforgeeks.org/artificial-intelligence/what-are-diffusion-models/>]; Jonathan Ho, Ajay Jain, and Pieter Abbeel, "Denoising Diffusion Probabilistic Models," *Advances in Neural Information Processing Systems* 33 (2020): 6840–6851; Robin Rombach, Andreas Blattmann, Dominik Lorenz, Patrick Esser, and Björn Ommer, "High-Resolution Image Synthesis with Latent Diffusion Models," *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition* (2022): 10684–10695.

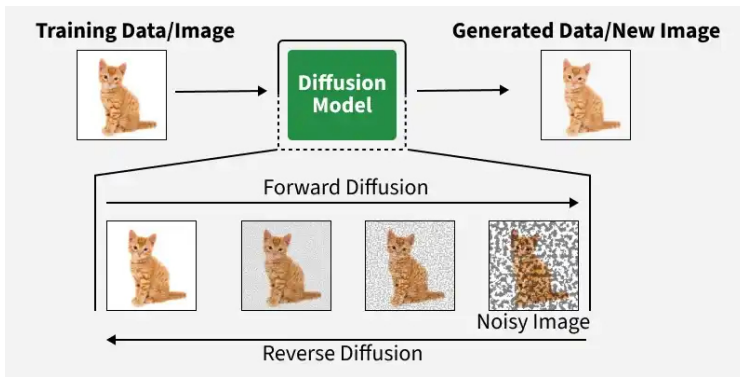


Figure 7. Diffusion Modelling Process²³

In sum, here is how diffusion models compare to negative machines:

Contingency	3
Recursion	3
Generativity	3
Automated Thinking	1
Cognition-Like	1
Opacity	3
Recursive Negation	2
Autonomy	2
Bias-Free Data	0

Reinforcement Learning (RL)

This modality is derived from behavioural psychology in that all goals can be explained by the maximal accumulation of long-term rewards. The RL system consists of an agent (the program) that exists in a state and interacts with the environment by selecting an action from a set of possible actions (exploring some, while focusing on those that seem good) and

²³: Image from GeeksforGeeks, "What are Diffusion Models?" web.

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changing the environment, which returns an outcome, or reward. The agent then moves into a new state, and the process is repeated until the agent achieves an (approximately) optimal accumulation of long-term rewards, i.e., it has learned how to successfully interact with the environment.²⁴

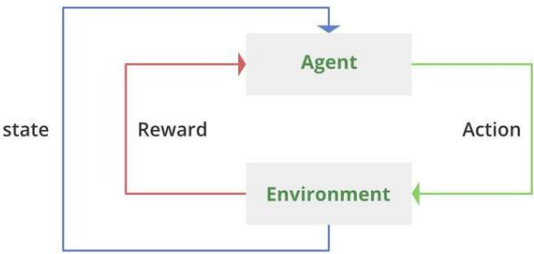


Figure 8. The Elements of Reinforcement Learning and How they Interact⁴⁹⁵

Example: Stock Market Prediction:

Agent: the software; Environment: the stock market ticker; States: the various companies that have stocks available on the market; Actions: buy, sell, hold; Reward: + 1 for every cent earned and -1 for every cent lost.

Here is how Reinforcement Learning compares to a negative machine:

Contingency	3
Recursion	3
Generativity	3
Automated Thinking	3

24: Richard S. Sutton and Andrew G. Barto, *Reinforcement Learning: An Introduction (2nd ed.)* (Cambridge, MA: MIT Press, 2018); GeeksforGeeks. “Reinforcement Learning” on *GeeksforGeeks*, published November 7, 2025. [<https://www.geeksforgeeks.org/machine-learning/what-is-reinforcement-learning/>]; David Silver, Aja Huang, Chris J. Maddison, Arthur Guez, Laurent Sifre, George van den Driessche, Julian Schrittwieser, Ioannis Antonoglou, Veda Panneershelvam, Marc Lanctot, Sander Dieleman, Dominik Grewe, John Nham, Nal Kalchbrenner, Ilya Sutskever, Timothy Lillicrap, Madeleine Leach, Koray Kavukcuoglu, Thore Graepel, and Demis Hassabis, “Mastering the Game of Go with Deep Neural Networks and Tree Search,” *Nature* 529 (2016): 484–489.

25: Image from GeeksforGeeks, “Understanding Reinforcement Learning in-depth” on *GeeksforGeeks*, published July 31, 2022. [<https://www.geeksforgeeks.org/machine-learning/understanding-reinforcement-learning-in-depth/>]

Cognition-Like	1
Opacity	2
Recursive Negation	1
Autonomy	1
Bias-Free Data	0

Self-Supervised Learning

The model finds patterns in the dataset and creates its own training labels without human intervention. It can learn important patterns and details from the data it is exposed to. As a method, it is located between supervised learning, which uses labels, and unsupervised learning, which does not.²⁶

Contingency	3
Recursion	3
Generativity	3
Automated Thinking	3
Cognition-Like	1
Opacity	2
Recursive Negation	2
Autonomy	2
Bias-Free Data	0

²⁶: GeeksforGeeks, “Self-Supervised Learning (SSL)” on *GeeksforGeeks*, published September 8, 2025. [<https://www.geeksforgeeks.org/machine-learning/self-supervised-learning-ssl/>]; Yann LeCun, Ishan Misra, Priya Goyal, and Michael Bojanowski, “Self-Supervised Learning: The Dark Matter of Intelligence,” *Meta AI Research* (2021). [<https://ai.facebook.com/blog/self-supervised-learning-the-dark-matter-of-intelligence/>]; Alexei A. Efros, “Self-Supervised Learning and the Future of AI,” *Distill* 5, no. 8 (2020): e27; Jacob Devlin, Ming-Wei Chang, Kenton Lee, and Kristina Toutanova, “BERT: Pre-training of Deep Bidirectional Transformers for Language Understanding,” *Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies*, vol. 1 (Minneapolis: Association for Computational Linguistics, 2019), 4171–4186.

Generative Pre-Trained Transformer (GPT)

An important example of self-supervised learning (in the pre-training phase) is the Generative Pre-Trained Transformer. It analyzes prompts from a user using a neural network, and it generates a response based on patterns found in large datasets. The prototypical example is ChatGPT.²⁷

How it works:

1. It trains on large datasets in order to predict the next token (a word, sub-word, or other chunk of text) in a sequence as well as facts, associations, and reasoning patterns all in terms of statistical regularities.
2. It uses the *Transformer* architecture, especially using *attention*, where it determines which earlier tokens in a sequence matter most when generating the next token.
3. It receives some fine-tuning using Reinforcement Learning with Human Feedback to avoid controversial and inappropriate responses to input.
4. It converts a prompt (user request) into tokens.
5. Then it processes these through layers of neural networks.
6. Next, it calculates the probability of the next token in the sequence.
7. It selects a possible token from the ones with the highest probabilities.
8. It repeats this process to create a sequence of tokens that form its response to the prompt.²⁸

27: Ashish Vaswani, Noam Shazeer, Niki Parmar, Jakob Uszkoreit, Llion Jones, Aidan N. Gomez, Lukasz Kaiser, and Illia Polosukhin, "Attention Is All You Need," *Advances in Neural Information Processing Systems* 30 (2017): 5998–6008; Alec Radford, Jeffrey Wu, Rewon Child, David Luan, Dario Amodei, and Ilya Sutskever, "Language Models are Unsupervised Multitask Learners," *OpenAI*, (2019). [https://cdn.openai.com/better-language-models/language_models_are_unsupervised_multitask_learners.pdf]; OpenAI, "GPT-4 Technical Report," on *arXiv*, published March 15, 2023. [<https://arxiv.org/abs/2303.08774>]; Daniel Hardt, "Everyone Uses ChatGPT, But It Is a Black Box: Here's How to Make the Most of It," on *Copenhagen Business School*, published October 10, 2023. [<https://web.archive.org/web/20231013235916/https://www.cbs.dk/en/cbs-agenda/areas/news/everyone-uses-chatgpt-but-it-is-a-black-box-heres-how-to-make-the-most-of-it>]

28: GeeksforGeeks, "ChatGPT: Everything That You Need to Know" on *GeeksforGeeks*, published July 22, 2025. [<https://www.geeksforgeeks.org/blogs/what-is-chatgpt/>]

Of note is that the GPT family of models is not bias free.²⁹

Contingency	3
Recursion	3
Generativity	3
Automated Thinking	3
Cognition-Like	1
Opacity	2
Recursive Negation	2
Autonomy	3
Bias-Free Data	0

The Inescapability of Anthropocentric Bias in Data

The one big caveat in all this is that the original data is generated by human beings, so there are still built-in categories, decisions, and biases that unsupervised algorithms can learn. This can be especially true of texts. To show this, the basis for NLP (Natural Language Processing) is the corpus, which is a collection of words/phrases from authentic texts produced by native speakers across several genres that can be used to train AI and Machine Learning systems. AI trained on corpora will thus reflect the way the people who created the sampled texts see the world.³⁰ For example, if a machine has been trained on data that show doctors as men, then it will return the same when prompted to describe/depict a doctor.

There have been attempts to mitigate this by using, for

29: Emily M. Bender, Timnit Gebru, Angelina McMillan-Major, and Shmargaret Shmitchell, "On the Dangers of Stochastic Parrots: Can Language Models Be Too Big?" *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency* (2021): 610–623; Long Ouyang, Jeff Wu, Xu Jiang, Diogo Almeida, Carroll L. Wainwright, Pamela Mishkin, Chong Zhang, Sandhini Agarwal, Katarina Slama, Alex Ray, John Schulman, Jacob Hilton, Fraser Kelton, Luke Miller, Maddie Simens, Amanda Askell, Peter Welinder, Paul Christiano, Jan Leike, and Ryan Lowe, "Training Language Models to Follow Instructions with Human Feedback," on *arXiv*, published March 4, 2022. [<https://arxiv.org/abs/2203.02155>]

30: Aylin Caliskan, Joanna J. Bryson, and Arvind Narayanan, "Semantics Derived Automatically from Language Corpora Contain Human-Like Biases," *Science* 356, no. 6334 (2017): 183–186; Margaret Mitchell, Simone Wu, Andrew Zaldivar, Parker Barnes, Lucy Vasserman, Ben Hutchinson, Elena Spitzer, Inioluwa Deborah Raji, and Timnit Gebru, "Model Cards for Model Reporting," *Proceedings of the Conference on Fairness, Accountability, and Transparency* (Atlanta: ACM, 2019), 220–229.

maligec $\diamond$ ai, gödel, and negative machines

example, Natural Language Inference which relates two sentences, A and B, by indicating whether B entails A, contradicts it, or is neutral. In the case of the doctor, ‘male’ can be made to be neutral with respect to ‘doctor,’ thus avoiding the stereotype.³¹ However, this requires human, not machine, intervention to counteract the initial biases made by humans in the first place.

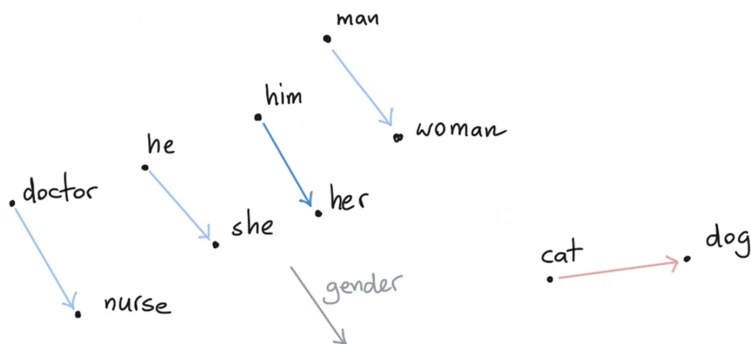


Figure 9. Stereotypes In Machine Learning Caused by Data. The Data Points Are Related to Others with a Vector from One Point to Another. Gender-Related Terms Are Seen to Have Basically the Same Orientation in the Data Space, Showing that the Machine Views These as Similar³²

Derrida Machine

Imagine a theoretical Generative AI machine (which inherits all of the characteristics that these have) that operates based on semantic aspects of Derridean principles. It constantly deconstructs the concepts and binary categories it operates with.³³ Also, it makes use of *différance* as it could encode meanings in a semantic space: where each concept is a vector in a space composed of features that each concept could have, and

31: Rachel Gordon, “Large Language Models Are Biased. Can Logic Help Save Them?” on *MIT News*, published March 3, 2023. [<https://news.mit.edu/2023/large-language-models-are-biased-can-logic-help-save-them-0303>]

32: Rasa, “Rasa Algorithm Whiteboard: Measuring Bias in Word Embeddings,” on *YouTube*, published August 24, 2020. [<https://www.youtube.com/watch?v=UwAvyACOrWs>]

33: Jacques Derrida, *Of Grammatology*, trans., Gayatri Chakravorty Spivak (Baltimore: Johns Hopkins University Press, 1976); Jacques Derrida, “Structure, Sign, and Play in the Discourse of the Human Sciences,” in *Writing and Difference*, trans., Alan Bass, 278–293 (Chicago: University of Chicago Press, 1978).

accelerated ad(e)vent

the meaning of each concept is a relationship of the vector that represents it to all other vectors in the model (recall token embeddings in Large Language Models).³⁴

Also, meaning here is never complete as new concepts can always be added which will introduce new relationships among the vectors. Furthermore, a relevant aspect of *trace* can also be understood as follows. A meaning is represented by an embedded vector, which only exists as such in that it is not other vectors in the space (it inherently contains not-otherness, i.e., it is implicitly constituted by not being other vectors). Temporality and deferral are relevant as the semantic space changes when other vectors are embedded, so our original embedded vector's meaning also changes with time and is deferred as it will depend on the possible future addition of other vectors to the semantic space. So far, these observations are true of LLMs in general.

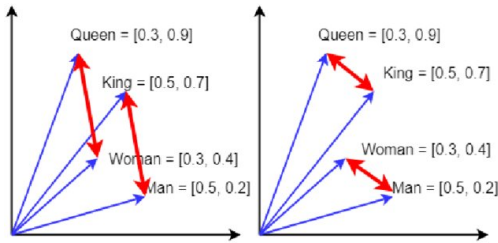


Figure 10. Embeddings in Data Space for *King*, *Queen*, *Man*, and *Woman*³⁵

What makes this machine different is that it deconstructs the data it receives in terms of overturning binary categories that structure the data. For example, in the case of *woman* and *man*, these vector representations consist of a set of features with corresponding magnitudes both statistically determined

34: Jacques Derrida, "Différance," in *Margins of Philosophy*, trans., Alan Bass, 1–28 (Chicago: University of Chicago Press, 1982); Neri Van Otten, "Vector Embeddings Made Simple & How To Tutorial In Python," on *Spot Intelligence*, published September 15, 2025. [<https://spotintelligence.com/2025/09/15/vector-embeddings/>]; Tomas Mikolov, Kai Chen, Greg Corrado, and Jeffrey Dean, "Efficient Estimation of Word Representations in Vector Space," on *arXiv*, published January 16, 2013. [<https://arxiv.org/abs/1301.3781>]; Devlin, Chang, Lee, and Toutanova, "BERT."

35: Image from Peter Sutor, Yiannis Aloimonos, Cornelia Fermüller, and Douglas Summers Stay, "Metaconcepts: Isolating Context in Word Embeddings," Conference: 2019 IEEE Conference on Multimedia Information Processing and Retrieval (MIPR), 544–549 (2019). [https://www.researchgate.net/figure/The-classical-king-woman-man-queen-example-of-neural-word-embeddings-in-2D-It_fig1_332679657]

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by the machine in accordance with Large Language Modelling; however, both words will share many of those features, just that the magnitudes of possessing each feature will differ. The machine is fed different datasets (corpora) containing the same terms that show how features of, for example, men and women change in magnitude over context, time, and culture, and it will create different semantic spaces based on these. It will then use each semantic space according to context and even across different contexts. It may even experiment by readjusting magnitudes to create synthetic datasets. Then, this process is continued indefinitely. The main difference with previous machines is not in the hardware, but in terms of maintaining the different semantic spaces and the experimentation with these. It can be used to provide context-appropriate content by identifying context cues in applications, use a slight mismatch, use corpora that are entirely inappropriate, or even create its own corpora to provide meanings to challenge thinking. It can be implemented: it is a collection of multiple LLMs created from different corpora according to time, culture, and context as well as a program to experiment with providing slight changes to feature strengths to create synthetic corpora. So far, this machine would seem to be the closest to a negative machine since it is more bias-free in that it can deconstruct the data it receives or even construct its own synthetic data.

Contingency	3
Recursion	3
Generativity	3
Automated Thinking	3
Cognition-Like	1
Opacity	2
Recursive Negation	3
Autonomy	3
Bias-Free Data	1

A possible solution to finding a true negative machine might be to consider what researchers call *emergent abilities*, which is where a Large Language Model trained on a large dataset develops new, unforeseen, unpredicted capabilities when it reaches a certain large size.³⁶ Perhaps a model that is large enough may even develop logical reasoning on its own.³⁷ This might be the closest to a negative machine. It might be the case, at some point, that the Technological Singularity will occur, with the emergence of artificial superhuman intelligences.³⁸ These could redesign themselves to be entirely free from any trace of human influence, *a priori* decision structures, and biases, as well as design and construct robots to get untainted data. However, they might still have a slight taint of human biases as these would be present in any machine since the origin of any machine, even those that can redesign themselves, is human.

II: Gödel and the Impossibility of a Negative Machine Explaining Everything

Now, we turn to showing that no computer or system, no matter even if it is a negative machine, can explain all of mathematics, in fact, not even the theory of the natural numbers (0, 1, 2, 3, ...). To do this requires a basic understanding of Kurt Gödel's First Incompleteness Theorem.³⁹ First, we need the definitions of three key terms: formal system, completeness, and consistency.

36: Thomas Woodside, "Emergent Abilities in Large Language Models: An Explainer," on *Center for Security and Emerging Technology* published April 16, 2024. [<https://cset.georgetown.edu/article/emergent-abilities-in-large-language-models-an-explainer/>]; see Kim Martineau, "What is Generative AI?" on *IBM*, published April 20, 2023 [<https://research.ibm.com/blog/what-is-generative-ai/>]; Jason Wei, Yi Tay, Rishi Bommasani, Colin Raffel, Barret Zoph, Sebastian Borgeaud, Dani Yogatama, Maarten Bosma, Denny Zhou, Donald Metzler, Ed H. Chi, Tatsunori Hashimoto, Oriol Vinyals, Percy Liang, Jeff Dean, William Fedus, "Emergent Abilities of Large Language Models," on *arXiv*, published June 15, 2022. [<https://arxiv.org/abs/2206.07682>].

37: Martineau, "What is Generative AI?" web.

38: Vernor Vinge, "Technological Singularity," *Whole Earth Review* no. 81 (1993): 88–95; Nick Bostrom, *Superintelligence: Paths, Dangers, Strategies* (Oxford: Oxford University Press, 2014).

39: George Boolos, John P. Burgess, and Richard C. Jeffrey, *Computability and Logic* (5th Edition) (Cambridge: Cambridge University Press, 2007); Raymond M. Smullyan, *Gödel's Incompleteness Theorems* (New York: Oxford University Press, 1992).

A **formal system** consists of

1. a set of symbols,
2. well-formed formulas, which are the strings of those symbols that are acceptable and form the language of the system,
3. rules of inference, which enable the derivation of one formula from another/others, and
4. axioms, which are basic formulas from which all proofs can start. The axioms must either be finite in number, or there must be an algorithmic/mechanical means of deciding whether a formula is an axiom or not.

A proof consists of a sequence of formulas that are linked together by inference rules. The formulas are either axioms or are built up from the axioms by using the inference rules. A formal system is **complete** if every statement, or its negation, can be proved within the system. A statement is understood to be a well-formed formula that has no free variables and can thus have a truth value (for example, $1 = 1$ is a statement that is true, whereas $x = 1$ has no truth value). A formal system is **consistent** if it is not possible to prove both a statement and its negation (for example, a consistent formal system would never prove both $1 = 1$ and $1 \neq 1$).

We are now in a position to state Gödel's First Incompleteness Theorem.

The First Incompleteness Theorem: "Any consistent formal system [...] within which a certain amount of elementary arithmetic can be carried out is incomplete."⁴⁰

This has led to the misconception that there are true statements that are unprovable. However, the theorem only deals with provability with respect to *some specific formal system*, not provability in the absolute sense.⁴¹

40: Panu Raatikainen, "Gödel's Incompleteness Theorems," on Stanford Encyclopedia of Philosophy, published November 11, 2013. [<https://plato.stanford.edu/entries/goedel-incompleteness/>]. See also Ernest Nagel and James R. Newman, *Gödel's Proof (Revised Edition)* (New York: NYU Press, 2001).

41: Raatikainen, "Gödel's Incompleteness Theorems," web.

The requirement concerning a “certain amount of elementary arithmetic” means that the formal systems involved need to be those that deal with, *at least, both addition and multiplication of integers* (such as Robinson Arithmetic or Peano Arithmetic, among others).⁴² As a result, the theorem does not apply to systems such as those regarding only addition of integers without multiplication (Presburger Arithmetic), among other such systems.⁴³

Gödel achieved his proof by using a sentence that is equivalent to the statement:

“This sentence cannot prove itself in formal system F.”

A little more mathematically:

$G_F : G_F$ is not provable in formal system F.

You might argue that this is self-referential and would lead to an infinite regress where we replace G_F with itself to get

$G_F : \dots$ is not provable in system F is not provable in system F is not provable in system F

In fact, the actual sentence is more like

$G_F : \ulcorner G_F \urcorner$ is not in the set of Gödel numbers that encode provable statements in system F.

where $\ulcorner G_F \urcorner$ is the Gödel number that encodes the statement itself. As a result, we need to know how to translate the Gödel sentence G_F into a Gödel number. We do this as follows.

1. Assign each symbol a unique number: First we assign a unique number to each symbol of the formal system. One such assignment is given in Table 2.
2. Then, we can combine symbol numbers to form a unique number that encodes each formula. This is done by taking each symbol in order and taking the prime

⁴²: Ibid.

⁴³: Ibid.

maligec $\Diamond$ ai, gödel, and negative machines numbers in order, so that the first prime number (2) is given the first symbol number as an exponent, and the second prime number (3) is given the second symbol number as an exponent, etc. and then multiply all of these numbers together to get a unique number that represents the whole formula. For example, the formula $0 = 0$ is $2^6 \times 3^5 \times 5^6$, which is 243,000,000.⁴⁴ This process defines the set of formula numbers.

3. Using a similar process to the above, we can encode the inference rules and the axioms.
4. Finally, we can encode a sequence of formula numbers joined together by inference rules that uniquely encodes each proof. This defines the set of proof numbers.

Constant sign	Gödel number	Usual Meaning
~	1	not
∨	2	or
⊃	3	if...then...
∃	4	there is an...
=	5	equals
0	6	zero
S	7	the successor of
(	8	punctuation mark
)	9	punctuation mark
,	10	punctuation mark
+	11	plus
×	12	times

Table 2. Gödel Numbering of the Symbols of the Formal System⁴⁵

The set of proof numbers define the concept of provability in the formal system F: a statement is provable in the system if it is the last statement in a sequence of statements that form a proof. Therefore, with respect to the Gödel sentence, we can state that the Gödel number of G_F is not among the numbers that encode provable statements in F.

44: Natalie Wolchover, “How Gödel’s Proof Works,” on *Wired* published July 19, 2020 [https://www.wired.com/story/how-godels-proof-works/].

45: Image from Wolchover, “How Gödel’s Proof Works,” web.

$G_F : [G_F]$ is not among the proof numbers of system F, or

$G_F : [G_F]$ is among the non-provable-statements of system F.

This last step is possible due to the Fixed-Point Theorem (also known as the Diagonalization Lemma), which states that there are expressions of the form $G(F) = F$, where F is a formula number and G is a predicate. A simple analogy is $F(x) = 4 - x$. Here, 2 is a fixed point of F since $F(2) = 4 - 2 = 2$. Similarly, $[G_F]$ is the fixed point of the predicate for non-provability: $\text{Non-provable-statements}([G_F]) = [G_F]$.

Philosophical Aside: Anti-Mechanism

Anti-mechanism is the idea that the human mind cannot be explained as a machine. According to this view, a consistent computer program equivalent to a formal system F (that, among other things, can do arithmetic) cannot prove G_F , but the human mind can see that G_F is true. The problem with this argument is the requirement of consistency. In order for us to see that G_F is true, we must first be able to see that F is consistent, which is unlikely. There are many examples of famous logicians, like Frege, Church, and Quine, that have proposed systems that ended up being inconsistent.⁴⁶

Gödel pointed out that either we are superior to any machine, or we are not. The latter case means that there are arithmetical problems that we are unable to solve using any theory of arithmetic that we have (i.e., there are humanly absolutely unsolvable arithmetical problems). Gödel was inclined to believe the former case, as the latter would go against his Kantian beliefs that human thought would end up being ultimately irrational if it could pose problems that it could not solve. If the latter were to be the case, this might lead to mathematical Platonism (that mathematical objects and facts

46: Panu Raatikainen, "On the Philosophical Relevance of Gödel's Incompleteness Theorems," *Revue Internationale de Philosophie* 59, no. 234 (2005): 513–534.

maligec $\diamond$ ai, gödel, and negative machines exist independently of the human mind). Gödel believed that if mathematics were our own creation, then we should be able to fully understand it, as a creator understands that which they create. As this is not the case in the second alternative, this would mean that mathematics is not a creation of the human mind but exists independently. However, this last point is far from clear.⁴⁷

In spite of that, we can assert that there is at least one area of knowledge, mathematics as a whole, that machines (and humans, if the mind is a machine) will never be able to fully capture, and is, therefore, inherently free from any over-arching *a priori* decision, human or machine-made. If the human mind is beyond that of any machine, then there is still the fact that no one system posited by humans can derive all of mathematics. Thus, there would be no single overarching structure. If this is the case with mathematics, then perhaps there could be a philosophy that has the same property as well.

47: Raatikainen, "On the Philosophical Relevance of Gödel's Incompleteness Theorems."

EXPANDING THE FIELD OF MACHINIC ORALITY

Gary Genosko

*Orality, morality! Making yourself
machinic—aesthetic machine and
molecular war machine (look at how
important Rap culture is today for
millions of young people)—can
become a crucial instrument for
subjective resingularization.¹*

What does it mean to grant ontological primacy to orality? Félix Guattari's use of the term "ontological orality" in Chapter 5, "Machinic Orality and Virtual Ecology" of *Chaosmosis*, appears within the context of his 4-term ontology, where a *phylum* defines a diachronic perspective on the development of technical machines.² Orality is machinic, that is, linked closely to technical machines, but not to these alone, and it is, in addition, in the process of returning in specific arts, in particular, certain kinds of spoken word performance; and, that this process is subject to 'acceleration' in the post-media era in which interactivity increasingly entails human-machine reciprocities. Machinic orality enunciates through the assemblage of multiple components that encompass material, semiotic, mental, and abstract elements.

Critically, these considerations are framed by Guattari within a reworked distinction between full and empty speech, extracted from its psychoanalytic context in Jacques Lacan's essay "The Function and Field of Speech and Language in Psychoanalysis," which provides a non-absolute, and non-static contrast between, on the empty side, synthesized human speech and, on the full side, an existensifying speech, situated in a *territory*, a further axiomatic term used by Guattari as a semio-social construction of a concrete situation in which a world is apprehended chaotically by an incarnated subject who "cuts out" a point of view in and on it.³ Hence, Guattari's use of the term "*existential territory*" to indicate the unity of existence and enunciation, understood non-discursively through a pathic (a

1: Félix Guattari, *Chaosmosis: An Ethico-Aesthetic Paradigm*, trans., Paul Bains and Julian Pefanis (Bloomington: Indiana University Press, 1995), 97.

2: Guattari, *Chaosmosis*, p. 96.

3: *Ibid.*, 59.

felt or affective) absorption in the world by a subject (or proto-subject) who both produces and is subject to statements (or proto-statements) that may be reworked toward a collective or group subject assemblage. Examples of both full and empty speech will be canvassed from Guattari and extrapolated to more recent examples, and how empty can become full, and vice versa, will be explained in due course. This principle of transformation attempts to break out of the predicaments of 2-term axiomatics, without an obvious sublation or a forced valorization of one term only. More on this is to come in short measure.

Enunciation and speech overlap but are not equivalent. They are not exclusively indexed to a human subject—because the human subject is adjacent to the machinic assemblage—but are spread across domains not usually associated with enunciative capacities of human individuals, in keeping with Guattari's sense of non-individuated enunciating machines taken from artworks—"aesthetic machines"—like the pentatonic practice of Claude Debussy—perhaps referring to the *Pagodes*, to which Guattari alludes on numerous occasions, and which catalyzes a number of incorporeal *universes* (like references to key historical events, such as the composer's encounter with Gamelan instruments and sounds), a further term in his ontological quadrant, which are constellated together and form an enunciator.⁴ This enunciator may be enlarged, rarefied, mutated, and, thus, it becomes loosened from dominant significations and deadening influences.

However, we should not be caught up in the machinism of orality and speech as a species of enunciation to the neglect of voice. It is in the voice's muscularity—the materiality of the air, what Guattari calls the quadrant of *material fluxes*, in this case, issuing from the lungs through the trachea and into the vocal cords, that is, the embodied voice that is realized in performance, like a poetry slam—that the dynamism and vitality of speech may be best appreciated. This entails an analysis of the role of vibrations, the buzzing vocal folds and resonating

4: Ibid., 49–50.

genosko $\diamond$ expanding the field of machinic orality human voice, but not in isolation. The question that will be posed is how wide is the expanded field of machinic orality understood as a vibrational field? After all, Guattari insisted on expanding the range of machinic assemblages beyond any space-time-and-energy coordinates.⁵ At the same time, he did reflect on the difficulty in maintaining a machine's "functional identity" through repairs and breakdowns, and against the inexorable march of inertia and noise which themselves may be integrated into certain aesthetic machines, especially sculptures.⁶

In order to answer this question, we will need to appreciate that Guattari was fascinated with vibratory phenomena in general. Although he utilized the classic physics sound experiment involving the entrainment of tuning forks and resonance, he moved rapidly to fictional examples.⁷ For instance, in *Schizo-analytic Cartographies*, he explains how a world can "invade" and influence materially the behaviour of ordinary objects: "The image that comes to mind is that of the toys and utensils that start vibrating as the extra-terrestrials pass by in the Spielberg film *ET*."⁸ Even if this scene cannot be verified, Guattari may simply have jumped into a four-dimensional cinema or made of the extra-terrestrial an example of essential tremor. Whatever the case may have been—and the aural texture of jangling metal keys hanging from a ring in the film issues from figures of control—Guattari extrapolates from descriptions of vibration as physical systems in order to construct a transindividual entity in his own science fiction writing. In his screen play *A Love of UIQ*, an alien intelligence (universe infra-quark) is liberated from a laboratory, and appears to exist only as the signaletic potential of a pulsing cellular organism, yet finds fugitive routes of manifestation via machinic relays and various communication networks to reply to the messages sent to it by

5: Ibid., 51.

6: Ibid., 41–42.

7: I discuss Guattari's borrowing from René Thom's explanation of resonance in my chapter "Black Holes of Drugs and Politics," in Gary Genosko, *The Reinvention of Social Practices: Essays on Félix Guattari*, 95–114 (London: Rowman & Littlefield International, 2018), 98–100.

8: Félix Guattari, *Schizoanalytic Cartographies*, trans., Andrew Goffey (London: Bloomsbury, 2013), 185.

an alt-researcher.⁹ Contact, and ultimately contamination, of the electromagnetic waves of broadcast systems and bodies of humans ensues as this alien acts out an Oedipal drama with a female squatter and pedantically lectures her and her friends like an information studies professor! The actualization without depletion of an incorporeal universe in mediatic *fluxes*, hijacking a number of wave patterns for its own ends, asks us to consider, both in technical and fiction-theoretical terms, how this parallels the vibrating vocal folds and the pressure waves of vocalization that flow outward through a packed megaphone of the mouth (although, of course, the infra-quark entity does not *have* a mouth, but only a pixelated smear).

Speaking with a Full Mouth

Guattari opens his chapter with a counter moral: you can speak with your mouth full! Go ahead! Load up and mumble. He understands orality to sit at the intersection of an inside flesh and an outside of differentiating articulations. Ignoring charges of vulgarity, and perhaps even triggers of misophonia—if one easily cringes at sucking, blowing, and slurping—orality happily speaks with its mouth full in a “chaotic involution” and “infinite complexification.”¹⁰ Guattari calls this “a dance of chaos and complexity,” two of the key terms in *Chaomosis* that describe the attempt he makes to reconcile, rather than oppose, the latter two, and to describe the coming-and-goings between them, as in a moving partnership.¹¹

A Full Mouth is a Mouthful

9: Félix Guattari, *A Love of UIQ*, trans., Silvia Maglioni and Graeme Thomson (Minneapolis: Univocal, 2012) 117–118. This is the set-up: the liberated phytoplankton sample, flashing randomly, is viewed under an electron microscope and projected onto an integrated monitor as an oscilloscope gets a bead on the sample's pulse, and a keyboard is used to send messages to it by Hertzian waves.

10: Guattari, *Chaomosis*, 88.

11: Ibid.

genosko $\diamond$ expanding the field of machinic orality

Immediately, however, Guattari turns to speech as a medium. Building off of Lacan's framing of the patient's speech as a transferential medium that requires a response, Guattari borrows, in order to adapt, Lacan's full/empty speech distinction with the goal of reinforcing the idea that the aforementioned mouth is *full*—not of half-chewed food—but of both inside and outside, not the response of the other that constitutes the subject; he then describes *empty* speech as, rather than a matter of self-invention (indexed to narcissism), the semiological translation of speech into written codes.¹² Guattari first answers the question he posed to himself: 'Full of what?' Full of virtuality, and its manifestations and disappearances, with greater or lesser consistencies and transversal connectivities. A mouth is full of virtual enunciative nuclei that can acquire a discernability not reducible to a single semiological concretization (i.e., visualization)—he characterizes speech as emptying out once it is in the "clutches" of scriptural codes, which dominate the consistencies and literally leave little behind.¹³ Yet he does not treat the distinction as absolute. Rather, even the *emptiest*, most evacuated speech in which nothing is exchanged can become useful in the right circumstances.¹⁴ As Guattari puts it, "the interpretation may well be given by the idiot of the ward if he is able to make his voice heard at the right time, the time when a particular signifier becomes active at the level of the structure of the whole, for instance, in organizing a game of hop-scotch."¹⁵ Although the issue here is that of a timely interpretation, it encompasses any communication—for us, any vocalized utterance, no matter its well-formedness—that undermines overly rigid preconceptions and predetermined limits.

When an empty "computer voice" commands, "You have

12: See Jacques Lacan, "The Function and Field of Speech and Language in Psychoanalysis," in *Écrits*, trans. Bruce Fink in collaboration with H  lo  se Fink and Russell Grigg, 197–268 [237–322] (New York: W.W. Norton & Company, 2002), 206 [247]; Guattari, *Chaosmosis*, 89.

13: Guattari, *Chaosmosis*, 61.

14: A subjugated group may have its empty speech ("non-exchange of nonsense") transformed into full speech ("an efficacious interpretation"). Janell Watson, *Guattari's Diagrammatic Thought: Writing Between Lacan and Deleuze* (London: Continuum, 2009), 30.

15: F  lix Guattari, "Transversality," in *Molecular Revolution: Psychiatry and Politics*, trans. Rosemary Sheed, 11–23 (Harmondsworth: Penguin, 1984), 17.

not fastened your seatbelt,” Guattari states, this “does not leave much room for ambiguity.”¹⁶ What is *not* engendered in the synthesized voice of automobile safety messaging is ‘being-there’—not *Dasein* in the original, but *être-là*, an indirect translation of *être-le-là* or ‘there-being’—the existensifying voice or “existential dimension[] of expression” that Guattari identifies with “[o]rdinary speech,” which does not empty such expressions but, instead, maintains a range of “non-verbal semiotic components” tied to “substances of expression” like “intonation, rhythm, facial traits and postures” in a lively assemblage in which they jostle one another.¹⁷ Indeed, seizing a piece of chalk and drawing a hop-scotch board on the ground amidst a meeting that is otherwise going in circles is a good example.

Full speech can engender being-there. It is with this concept that Guattari’s limited derivation from Martin Heidegger beckons. For the being-there of existential territories brings into focus the finitude and facticity of an open engagement with the world in its everydayness, which Guattari wants to retain and preserve, as this may be obscured by treating speech as strictly “informational.”¹⁸ Elsewhere, Guattari rejects in being-there the idea of a “supposed human nature,” a givenness that posits a natural state of the subject; whether this includes Heidegger’s *Dasein* as the place where the thinking of being occurs is not stated, but it may count as an example of an attempt to describe human beings as such and their *a priori* constitution.¹⁹

Talking Cars

Guattari’s automotive example of empty speech situates ‘machine speech’ as a historical phenomenon dating from the

16: Guattari, *Chaosmosis*, 89.

17: Ibid.

18: Ibid., 84.

19: Ibid., 35.

genosko $\diamond$ expanding the field of machinic orality 1930s and developing through the 1970s–80s in the toy (*La dictée magique*/Speak and Spell) and talking car worlds. In other words, in Guattari’s 4-term ontology, the *phylum* provides an evolutionary, diachronic account of machines of various kinds with an emphasis on how certain possibilities wax and others wane, while still others mutate. The very short history of the automobile “AI spring” that presaged “intelligent cars” was a rather brief period in the early 1980s and Guattari, while he certainly was aware of it, probably didn’t have much direct exposure to it while driving in his own Renault 25.²⁰

If the developmental trajectory of empty speech in automobiles peaks with rhythmic speech tactons, audio-vibro-tactile warnings combined with synthesized speech, its transformation into a fuller mode takes place through aesthetic explorimentation. Jean-Jacques Lebel’s *Monument à Félix*, for example, featured a gutted Renault 25 containing a recording of his old friend Guattari’s performance at the *Polyphonix 7* international poetry festival (held in 1984 at MOMA in New York). Lebel—founder of the festival—writes: “we hear (as if the car itself and the bed on the roof **had a voice**), the voice of Félix.”²¹ This delirious car manages to refill the empty technological-system speech of synthesized commands with Guattari’s recorded vocal performance, not a set of available commands but an account of a dream he had about curator Yasha David with whom he collaborated on *La siècle de Kafka* exhibit at the Centre Pompidou in 1984.²² At the very location of Lebel’s installation in the front foyer of the Centre, one can access the underground garage where he could not, in the dream, locate his car in order to give his friend a ride home.

Machinic orality broadens the concept of orality by linking it to technical machines. Guattari advocates for a deconstruction of the speech-writing opposition, and certainly does

20: Tiina Männistö-Funk, “‘One Fine Day Your Car Will Also Start to Speak’: Automotive Voices as Promises of Machine Intelligence,” *ICON: Journal of the International Committee for the History of Technology* 27, no. 1 (2022): 117–138, 134.

21: Jean-Jacques Lebel, “Une Sculpture de 1992–1994 (avant-projet non définitif): Monument à Félix Guattari,” *Chimères: Revue des Schizoanalyses* 23 (1994): 1–15, 1–2.

22: See *Le Siècle de Kafka*, ed., Yasha David and Jean-Pierre Morel (Paris: Centre Georges Pompidou, 1984).

without the search for a Derridean primary writing. Guattari's pun on full speech as anti-etiquette—mouthful speech—permits him to characterize orality as a “refuge for semiotic polyvocality” that is not vanquished by any reassertion of scriptural overcoding, adding that the scriptural, too, is ‘reworked’ by the oral, as if a great backwash of semiotic components took place.²³ Guattari regains the mundane, against the ‘nonmundane’ deconstructionist exposure of the ‘privilege’ of speech, and then extracts “blocks of sensation formed by aesthetic practices” from the interior of speech (once defined by Derrida as “nonexterior”), in order to turn this inside out: the metaphysics of presence becoming an aesthetics of deterritorialized affects and percepts—deterritorialized from the mundane, banal, and standard, in the service of the creation of subjectivations on the “outside and of wide-open spaces.”²⁴

Speech and Machine

Having already mentioned spoken word performance, it is the voice that will hold Guattari's interest. Indeed, spoken word performance holds a special place in his quick list of performance art, concrete poetry, and underground art as key examples of aesthetic resistance to uniform types of subjectivity. He will later underline the importance of “[r]ap culture [...] for millions of young people” in terms of making oneself an aesthetic and molecular war machine at the moment when orality was mounting a return.²⁵ Subcultural elsewheres are conditioned by, and themselves condition, the machinic return of orality in the MC's battle or freestyle lyrics (perhaps MC Solaar, Franco-Senegalese rapper would have caught Guattari's attention), microphone, turntablism, beatboxes, block parties, and old school dance moves—all “crucial instruments for

23: Guattari, *Chaosmosis*, 89.

24: Ibid.

25: Ibid., 97.

genosko ◇ expanding the field of machinic orality subjective resingularization.”²⁶ Yet what is emptier than using AI to build a rap lyric generator?

We can extend this understanding of empty speech through deep machine models based on text or recordings of speakers, through analysis of sound pressure waveforms and speech synthesis techniques in combination with applied acoustic models. The attempt to reproduce human speech is certainly not new, but the results, even given the sophistication of the digital age, can often only reach the height of caricature in the robovoice, futuristic childbot, sultry sexbot, or even by the trivial selection of an ‘expression function’ for a virtual assistant, and the option of modifying its attributes (like pitch, rate, and so forth). When Guattari prophesized that “the end of the digital keyboard will soon be over,” he was not merely thinking about the advent of voice typing.²⁷ The machinic return of orality does occur through conversations with chatbots, and although Siri could have told Guattari, if he had an iPhone, where he parked his car, the point is that his revalorization of speech in *Chaosmosis* is not the expression of semiotic privilege. Speech is, in the name of ‘verbal expression,’ a commonality that Guattari extracts from a range of activities, all related to therapy and professional relations, and to many institutions, groups, non-human life, and aesthetic forms, too. Yet he insists that the schizoanalayst is not ‘confined’ by verbal expression. Rather, “speech remains an essential medium,” Guattari asserts, “but it’s not the only one.”²⁸ In an analytical assemblage, many other semiotic and a-signifying factors are involved, and human speech is not *a priori* at the centre of such an assemblage. It may be mediated, for example, by something as simple as a portable tape recorder, or by something as sophisticated as an android.

Instead of making a straightforward prophesy about talking avatars, or reverting to phonocentrism, speech functions in two ways. First, speech functions as a support for

26: Ibid.

27: Ibid.

28: Ibid., 127.

existential refrains, where Guattari's pragmatic approach to enunciation calls into question structuralist distinctions between language and speech and competence and performance, opening speech to many different forms of semiotization. Speech is not a closed domain in other words, and it follows micropolitical lines of fracture and emerges differently for individuals and for groups, even when they speak the same language. Minor verbal performances by creative groups are set in this scenario against the keepers of linguistic purity, the French language czars. Thus, French rap orality introduces neologisms and new argots which spread through youth cultures, and it also regains fading and limited forms, such as the "*ne*" and area dialects.²⁹

Rap and Concrete Poetry

Take MC Solaar's "Bouge de là," his breakout song from 1991. The phrase "*bouge de là*"—"get out of there/move out of my way"—serves as an "option machine," as Guattari put it; in each repetition it can threaten stasis—"being-previously-there"—via what he called an *atonic* state, or catalytically initiate movement in, conversely, an *excited* state and thus prolong a drift.³⁰ The "options" ready "charges of possibility," the first reaffirming the status quo or, the second, announcing new universes created by movement in the lyrics from a Parisian suburb, to a train station, to the Métro, to the 18th arrondissement and Boule.³¹ Barbès, where offers and refusals pile up in the encounters with neighbours and transients and friends, all with the same result: move along, which is just what the MC does, until he disappears! And then a third mutation infects listeners on the order of a phraseal trigger that keeps moving through rhyming and spinning argot (*charclo* = homeless), the

29: Skye Paine, "The Quadrilingual Vocabulary of French Rap," *Kinephanos Journal of Media Studies and Popular Culture* 3, no. 1 (2012): 48–69.

30: Guattari, *Schizoanalytic Cartographies*, 146.

31: *Ibid.*, 146.

genosko $\diamond$ expanding the field of machinic orality phrase itself producing a new subjectivity in the intensity of its musical insinuations. Speech should be thought of as a zone of semiotic transit, not as a single static medium, or a term in a linguistic dichotomy, but as a support for self-existensifying passages whose traits of intensity are attached to ‘being-there,’ as Guattari put, “like limpets on a rock.”³² Speech is linked here not to a cemented relationship, but to movement and its trails.

We can appreciate Guattari’s remark about non-specific performance art as a validation of generalized art practices (non-institutionalized) and an aesthetic paradigm of liberation. In particular, he mentions what might be called concrete sound poetry, “concrete poetry’s rediscovery of orality” not as a return to some “originary orality” but as a “forward flight into machinations and deterritorialized pathways capable of engendering mutant subjectivities.”³³ He underlines how familiar elements of the everyday are extracted in order to be rendered strange, “dominant redundancies” are undercut, and artificial constructs are dismantled and recomposed by the sensations of aesthetic experience.³⁴ The concrete poem’s visuality and typographic invention are dismantled and reassembled as a “score for sonorization” in an inter-semiotic performative modality.³⁵ This “enunciative nuclei” of type-and-sound treats a concrete poem as an open graphic score readable in multiple directions and adds a time element linked to instruments (musical and non-musical), including voice, in order to perform it.³⁶ If we consider the role of vibration in speaking, the vocal folds of varying thicknesses, lengths, and tensions in the larynx open and close, generating sound that is subject to articulation as it passes through the throat and into the nose and mouth. The shaping of sound by the palate, tongue, and lips into speech sounds can be disturbed when a mouth is full, intentionally or otherwise slipping out of language with sound

32: Ibid., 112–113.

33: Guattari, *Chaosmosis*, 90.

34: Ibid.

35: Claus Clüver, “Concrete Poetry: Critical Perspectives from the 1990s,” in *Experimental — Visual — Concrete: Avant-Grade Poetry Since the 1960s*, ed., K.David Jackson, Eric Vos, and Johanna Drucker, 265–285 (Amsterdam: Rodopi, 1996), 278.

36: Guattari, *Chaosmosis*, 60.

distortions, glottal effects, and labial distortions of the type noted earlier. But these almost Dadaist sound performance values of disorganized speech fall into step with the vibratory rhythmicity of music or noise in an expanded inside and outside of sound understood as a vibration that affects a body in various ways, right down to the cellular level. A body is immersed in a vibratory field. Approaching Guattari's posthuman vibratory soundscape of an expanded machinic orality, we apprehend the entrained frequencies of different oscillations and fluctuations that create an ecology of force relations among entities of many different types. Guattari was fascinated with phenomena of resonance. Entrainment of frequencies, like the two tuning forks that eventually vibrate at the same rate when brought together, make resonance the foundation of interaction that finds a minimal ontological consistency, but without lacking a creative element of interference whenever energy transfers are involved.³⁷

Forms of vitality, according to psychotherapist Daniel Stern, adhere together in an emergent Gestalt in the figure of a pentad of dynamic events: movement; time; force; space; intention/directionality.³⁸ Dynamic forms are usually, but not always, accompanied by some content which shapes the former and is shaped by it, but the dynamic vitality form is primary for Stern. The "felt experience of force" is coupled fundamentally with physical and mental motion, with a time-shape (duration), and extension, and it goes somewhere.³⁹ Stern disentangles vitality dynamics from both sensations and emotions in order to underpin them in the arousal system and its refinements and regulations, but also to consider how they are encoded in the arts. Stern's end point is, however, how vitality can be integrated into psychotherapy, and this brings us back to orality. Stern's interest is in how psychotherapists can become sensitive to the dynamic features of talking by giving a new

37: Watson, *Guattari's Diagrammatic Thought*, 83–84.

38: Daniel Stern, *Forms of Vitality: Exploring Dynamic Experience in Psychology, the Arts, Psychotherapy, and Development* (Oxford: Oxford University Press, 2010), 4.

39: Stern, *Forms of Vitality*, 8.

genosko ◇ expanding the field of machinic orality
inflection to the search for meaning into the physical and
mental movements of speech, the formation of vibrating
sounds, the tendencies of intentions, the messy work of finding
words, bodily adjustments, and treating speech as an emerging
process that leads into a microanalysis of memories.

Conclusion

Although the alien UIQ in Guattari's screenplay manifests itself as a face, and is mocked as "Mr. Smiley," it initiates wave disturbances and runs interference in radio and television broadcasts, not to mention wreaking havoc with passenger airplanes while in flight. Effectively, UIQ jams signals not to impede them but to hijack them by occupying allocated frequencies and willfully manipulating them. The activities of this frequency rider attract the attention of an Investigation Commission in Hertzian Disturbances that tries to regain the spectrum for the military-industrial complex. Hertz expresses the frequency of vibrations. This places us in a parallel position to the measurement of the human voice's frequency, the production of sound waves in the opening and closing glottis. The question is whether the travelling mucosal wave can be commandeered by an intrusive actant, alien or otherwise, within an ever-changing assemblage. Of course, spasmodic or paralytic deviations of the voice have underlying physical causes, but the experience of an abnormal voice stolen by an interfering counter-wave (that constructively lines up or destructively cancels) that takes possession of it, as it were—not necessarily demonically—is the direction in which Guattari sends us in the folding of inside and outside of a mouth full of jostling signifying articulations and asignifying inarticulations. This is different from an artificial intelligence reproducing and generating your voice in a simulation. It would, rather, involve some sort of chaosmic orality in which an echo might crawl back down your throat, or excavate your pores, or power surf

the mucosal wave generated by an overstimulated larynx and rearrange its parameters in its own terms. Beyond consideration of disorders, then, there are actually vibrating matters of expression of an outside, while inside, your vocal vibrational frequencies are assembling themselves across the expanded field of a machinic orality. This would be shaped by the rising and falling of technical media, of emerging and receding existential predicaments, as the vibrational kinetic fluxes provoke constellations of universes in which an “informatic subjectivity,” identified by Guattari within the limits of his perspective of the 1980s and early 1990s, could negotiate a path for the “machinic return of orality” beyond the “shackles of empty speech.”⁴⁰ Such an assemblage of subjectivity may be imagined as a vibration producer and conductor, an interface of enunciative and cosmic forces.

Guattari asks his readers, then, to witness the ‘return’ of orality, and to ‘rediscover’ its plenitude, its existensifying dimension, and to follow, to move along, its rhizomatic diagram, which is not difficult in the emergence of rap music as a global phenomenon. The direction of this choice of key terms suggests glances back over the shoulder, given a general condition of oral culture, as consonant with Walter J. Ong’s sense of a “reawakening to the oral character of language” from an “oral past.”⁴¹ Such a call to “reawaken” to the return of oral performances is also to appreciate, and here Guattari and Ong overlap, the role of “formulary expression” and thus redundancy.⁴² Guattari emphasizes how selections or extractions can be made from within a chain of redundancies in order to change their characteristics, “refraining” them, as it were, “to confer on them the a-signifying existential functions.”⁴³ This is what Ong understood as the “fluency, fulsomeness, volubility” of oral performances.⁴⁴ For him, as for Guattari, originality arose within the constraints of tradition, styliza-

40: Guattari, *Chaosmosis*, 97.

41: Walter J. Ong, *Orality and Literacy: The Technologizing of the World* (London: Routledge, 1982), 6.

42: Ong, *Orality and Literacy*, 39.

43: Guattari, *Chaosmosis*, 20.

44: Ong, *Orality and Literacy*, 40.

genosko $\diamond$ expanding the field of machinic orality
tion, and artistic expression, and he cites the agonism of “the
dozens” as an example on par with Guattari’s invocation of
rap.⁴⁵ Existensifying, situated, not beholden to signification:
machinic orality returns but not only for the human. Human
speech still remains the choice for human-machine interfaces,
yet this must be called into question, Guattari suggests. Once
the human is decentred and the subject becomes adjacent to the
assemblage, and the a-signifying semiotic register of mathe-
matical signs, computer languages, and machine-generated
sounds become better recognized, new modes of collective
enunciation can really take off and assume greater importance.
So, speak with your mouth full in order to initiate a new
enunciative process.

45: Ibid., 43–44.

READING LIPS; SILENT SPEECH

Lennon Needham

This essay considers how orality operates in conjunction with other speaking machines to produce full speech. Orality engenders both externality and interiority through the medium of speech, establishing the boundaries of outside/inside and deploying speaking machines that exceed the field of language. Machinic orality departs from the limitations of linguistic structuralism which fixes communication within the double articulation of signifier and signified. Instead, machinic orality turns towards a broader conception of semiotic transit, incorporating gestures, silence, writing, blocks of sensation, and drawing upon diverse sources such as performance art, poetic lyricism, and technological-mediatic interaction, producing novel forms of subjectification and new communicative possibilities.

To begin understanding a Guattarian conception of machinic orality, we would do well to start in the material region of the mouth where speech and voice first meet, a double enfolding that situates subjectivity along an existential territory supported by the three ecological registers. Yet speech is not limited to the oral region alone. It is first all around us before it is 'in' us, reaching out to us in want of a reply. Speech rushes in from the outside, inscribing our tongues and the roofs of our mouths, filling the throat only to then be pushed out by the lungs. The mouth is full of space and full of time, repetitious movements that extend and distribute the being along a territory, a field that hosts material and immaterial becomings, punctuating the scene, and leaving room for the virtual to enter as machinic unfolding.

But what if most talk is idle talk—simply, a waste of time? Such is observed by the psychoanalyst when an analysand comes into the clinic and is almost too forthcoming in their symptomatic testimony. The Lacanian sees in most statements the empty speech of the other, but for Guattari even the emptiest speech can become full. The mouth is always-already full, with bits of percepts and affects sputtering out all over the body and all over the room and all over each other. In particu-

larly chaotic moments, speech can happen to say too much precisely because it is saying so little. This is the case when one is caught in an act such as cheating or stealing. The guilty brigand must choose to either start spinning a story intended to cover their actions or fall silent, averting their gaze in shame of their transgression or out of fear of the punitive gaze settling upon them. In either case, emptiness speaks; you don't even need to hear it, the writing is on the wall.

Word-orders establish contexts capable of affecting passages that translate virtual chaos into complex actualities, communicative conjunctions between the singular-subject and their milieu are not isolated to the field of language as such, as the linguist maintains. Nor is orality bound up in phallic signification that orbits around lost objects. It is the operation of several machines that cast inside-outside into chaotic involutions, incapable of being isolated within one universalizing structure. Thus, in speech, the cosmic in-itself intersects with the subjective for-itself without invoking subject-object problematics—i.e., their self-contained unity where each rests its being in the other. In the speech encounter between the two fields, blocks of sensation can be extracted, turning the subject inside out and emancipating percepts and affects through aesthetic creations which stand on their own. What, then, is the place of full speech and empty speech with regards to orality? This question demands a brief detour into Lacan.

Lacan extends speech beyond linguistic binaries that limit language within sender-receiver information exchanges. Speech, which for Lacan is always *within the field of language*, instead *incorporates* diverse and non-linguistic articulations such as bodily gestures or aversions of a look, sudden pauses or falls into silence transformed into speech, full speech, and all that is required is that the action performs a semiotic function capable of soliciting a reply, even if the reply manifests as an empty pause of silence. It is not by exchanging signs for other signs that speech functions, rather speech is polyphonic. It is through interactions as they occur across individual-group-in-

stitutional enunciations or enter into territorialization and de-territorialization which play out along an existential refrain. Speech encounters desire in the a-signifying processes necessary for constructing universes of reference. We should again consider Lacan's use of the terms 'empty speech' and 'full speech.' For Lacan the meaning of these terms is always situated within the analytic discourse. The application of these terms is to be considered within a clinical, therapeutic context. An example:

An analysand might spend their session filling a room with speech, talking and talking about this or that traumatic event on which the neurotics whole fate hitherto has depended. This empty speech, issued from the ego, talks and talks but never actually says anything. In fact, it talks precisely in order not to talk. When speech, in this instance, offers itself as testimony, it is functioning most on the side of repression. It talks to obscure what is really at stake, the truth of the subject's desires. Their speech is thus, in its fullest sense, truly empty. The circulation of redundant codes which aim to affect nothing, instead maintaining the ego's homogeneous stability within the imaginary register. What, then, is the role of the analyst? The analyst does not simply listen to the analysand's speech but watches for what is said by the unconscious, which can manifest in the form of absence or silence. Thus, the analyst not only listens to analysand but also engages in a reading of them, reads their movements, their pauses and breaks, decisive moments where speech fails or when the patient suddenly falls silent. The analyst reads slips of the tongue as failed moments that speak to a repressed truth. Speech is extended into a broader field of semiotic communication which considers not simply the information content of statements, but the subject's full embodiment within a given context in which enunciating occurs. Yet the Lacanian is content to drop the matter here; they have demonstrated the totalizing power of language through its subsumption of the whole body within a discourse. Everything is therefore, in the end, situated within the field of

language. Perhaps this is fine for a clinician who is paid to sit you down and interpret the language of the unconscious. Guattari, however, aims to go beyond the analytical discourse into a realm of creation wherein new existential universes can take form.

Lacan deterritorializes speech in order to demonstrate the ways in which anything can become a speaking machine for the subject. Yet he still aims at structuring this process around a fundamental relation that determines how the subject is organized in relation to their desire, a desire coded by the Oedipalized subjects' distribution around the phallus as constituting the missing object. Lacan wants to contain the speaking machine's production so that the particular speaking machine might desire better. Guattari, on the other hand, unleashes the forces of production in order to transform the function of desire as such. He fills the mouth to such an extent that inside and outside virtually dissolve. The barred subject is no longer slashed, now it cuts and situates itself across a plane of immanence. The Oedipal tethers of the big-Other are relinquished allowing for creative emergences propelled by percepts and affects. Lacan freed speech from informational control mechanisms that fix semiologies within the order of law, as well as de-territorialized post-Freudian views which linked speech directly to partial objects like the breast, feces, and so on, all the while still demonstrating how these partial objects could become hosts to existential universes. Nevertheless, Lacan was also able to show how these could not function as the *center* of a universe which fixes the elements to it such that it becomes inflexible or detached from communication with other universes of value and meaning. *Objet petit-a* thus enacts a Copernican turn in the scientific approach to understanding the psyche. Nevertheless, Lacan re-territorializes along the field of language, re-situating subjectivity within the Oedipal borders of mommy-daddy-me that speak to the dominance of language.

Orality extends speech beyond the field of language. But it

is not exclusively within the materiality of the mouth-system that machinic orality operates. Orality extends across virtual universes exceeding the locale of the mouth, employing various communication-machines, and inventing new forms of individuation that emit molecular and molar effects. Language no longer dictates as *either* the natural dwelling of *Dasein* nor as the torture chamber of the subject, as Heidegger and Lacan respectively would have it. Semiotic assemblages take flight making possible new forms of subjectification via the machinic. The machinic is distinguished against the technical in that the machinic cannot be submitted to the constraints of a structure. Rather, it mutates and conditions its environment, producing new milieus which make possible new inventions. The technical object, meanwhile, can become petrified in a closed off set of structural commands that determine its functioning. It is captured and fixed within a particular operation that condemns it to automation. The technical object is thus incapable of adapting itself to new universes, losing its access to the virtual in functional overdetermination. The machinic, on the other hand, is capable of deterritorializing its milieu, interfacing between individuated singularity and environmental affects to produce new milieus entirely. This is what Guattari's performance of machinic orality infecting the Renault 25 demonstrates when Genosko sets it against the empty synthetic chime of a seatbelt alarm ordering you to buckle-up.

What is the status of orality today? Guattari expresses optimism towards the post-media era as having the potential to get oralities' mouths running again. He pits the emerging post-media of his day against mass-media, which he sees as a stupefying form of communication-control. Participatory engagement with digital technologies becomes the model in which orality can initiate new experiments in subjectification. Orality becomes intimately linked to technological machines—machines performing micro-temporal processes exceeding human consciousness to transmit messages instantaneously across the earth-system. Orality pushes up against the sound-barrier

accelerated ad(e)vent

through the electrical impulses of digital devices, communicating with other devices beyond our sensorial registers. My phone communicates with my router, but do they speak? No. Only orality can make a machine talk, but it doesn't need a mouth to do it.

EPHEMERA

Accelerated Ad(E)vent: Subjectivity and Aesthetics Approaching the Singularity

*[I]f the technological Singularity
can happen, it will.*

—Vernor Vinge

With the arrival of ChatGPT-4, conversations surrounding the possibility of creating artificial general intelligence (AGI, artificial intelligence as capable as humans at performing various tasks) are resurfacing. A recent study from Cornell University entitled *Sparks of Artificial General Intelligence* explores how experiments with GPT-4 point towards the possibility of AGI. The potential development of AGI is, in turn, tied to the Technological Singularity—a hypothetical point in time where technological development cannot be controlled or reversed by humans.

This calls for a serious discussion which requires a different way of thinking. Some philosophers argue that we have been limited in our thinking about the future. Recently, and inspired by thinkers like Quentin Meillassoux, there is a renewed effort to explore possibilities beyond our current understanding of technology. We must consider conversations surrounding the breaking of traditional thought through mathematics, fiction, future-building, subjective dissolution, and philosophical realism.

In line with these ideas, the Hyperstitional Research Syndicate (HRS) is organizing a workshop entitled *Accelerated Ad(E)vent: Subjectivity and Aesthetics Approaching the Singularity* from May 24th to May 25th. The workshop aims to tackle two issues surrounding the Singularity: (1) The question of subjectivity: what does it mean to be a person as technology rapidly advances? and (2) the question of aesthetics: what does such a technologically dominated world look like?

Questions concerning aesthetics and subjectivity are questions everyone can relate to and should be concerned with, regardless of whether they are an academic, para-academic, or just casually interested in these issues. Thus, this event is a curated discussion that, by bringing world-renowned philosophers to Western and incorporating their talks with art and music, aims to start a forward-thinking discussion that is grounded in the present. Unorthodox in its approach while still bringing a serious academic discussion to the forefront, *Accelerated Ad(E)vent* hopes to tap into the creative and intellectual potential within all participants.

ACCELERATED AD(E)VENT

[SUBJECTIVITY AND AESTHETICS APPROACHING THE SINGULARITY]

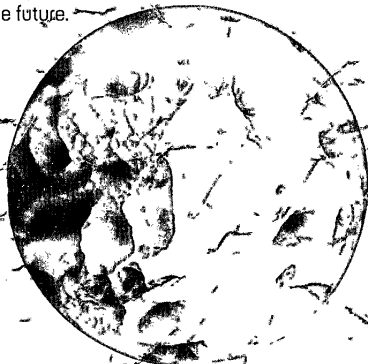
Days: May 24th and 25th, 2024
Times: 10:00am – 5:45pm
Location: Western
Interdisciplinary Research
Building, Room 3000

Register Online @ accadvnt.com



As AI development accelerates with no end in sight, a variety of possible futures emerge—it is now time to think towards the limits of our current technological age. To that end, we hope you will join us on the 24th and 25th of May for Accelerated Ad(E)vent, a transdisciplinary conference of the future, located in the present. This conference situates theorists and philosophers from various backgrounds alongside one another to speak on both subjectivity (what it means to be [a person] in a technologically dominated future) and aesthetics (what such a future may look and/or sound like).

With presentations that are equally prone to speculation and flights of fancy as to rigorous philosophical analysis, the conference will also include student respondents from Western's very own graduate departments! Expanding the horizons of what an academic conference looks like, works contributed by artists from across the globe will set the stage and establish an ambience to help us all think alongside each other as we peer into the future.



Featuring:

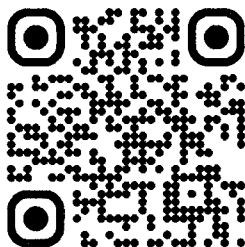
Luciana Parisi — Eldritch Priest — Virginia L. Conn
Nick Dyer-Witheford — Gary Genosko — Marie-Pier Boucher

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*Accelerated
Ad(E)vent
Subjectivity
& Aesthetics
Approaching
the Singularity*



May 24-25

10am-5:30pm

WIRB, Room 3000

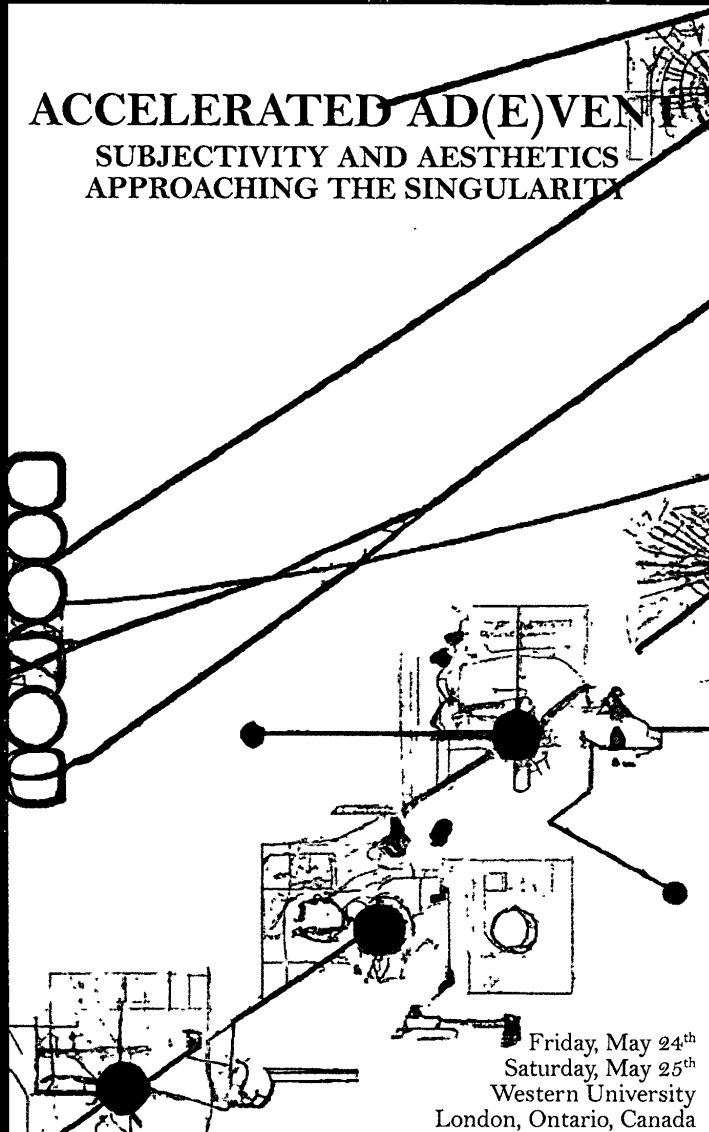
Presenters:

Luciana Parisi
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A Centre for the Study of
Theory and Criticism Workshop

ACCELERATED AD(E)VENTURE

SUBJECTIVITY AND AESTHETICS
APPROACHING THE SINGULARITY



Friday, May 24th
Saturday, May 25th
Western University
London, Ontario, Canada

DAY 1: SUBJECTIVITY

Check In

(10:00am)

Introductory Remarks

(10:40am)

Session I

(11:00am)

Virginia L. Conn

"Surveilling the Sinofuture"

Respondents

Gigi Wai-Chi Wong

*"Theorizing Sinofuturity:
Sinofuturism or Sino-no-futurism?"*

Peter Heft

"Sino-ph(obia)(uturism)"

Q&A

(12:15pm)

Break and Lunch

(12:45pm)

Session II

(1:45pm)

Luciana Parisi

*"Recursive Philosophy and
Negative Machines"*

Respondents

Carson Johnston

"Meet Me at the Medium"

Christopher Frank Stephan Maligec

"AI, Gödel, Recursive Philosophy, and Negative Machines"

Q&A

(3:00pm)

Break

(3:45pm)

Session III

(3:45pm)

Gary Genosko

*"The Expanded Field of Machinic
Orality in Félix Guattari's Chaosmosis"*

Respondents

~~XXXXXXXXXX~~
~~XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX~~
~~XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX~~

Lennon Needham

"Reading Lips, Hearing Eyes, and Silent Speech"

Q&A

(5:00pm)

Closing Remarks

(5:45pm)

DAY 2: AESTHETICS

Check In

(10:00am)

Introductory Remarks

(10:40am)

Session I

(11:00am)

Respondents

Eldritch Priest

"On Musement and Radical Thought"

Anemily Machina

"Artificial 'Directed Musement' and Its Limitations"

Q&A

(12:15pm)

Break and Lunch

(12:45pm)

Session II

(1:45pm)

Respondents

Cynthia Lam

*"Collective Defiance: Unity of the Marginalized in the
Techno-Capitalist Chaos of Dead Astronauts"*

**Nick Dyer-Witheford and
Molly Bliss**

*"Dead Astronauts: Posthuman and Postanimal
Resistance to Singularity Capitalism"*

Vinay Sharma

*"The Transcendental Conundrum of
Posthuman Anti-Capitalism"*

Q&A

(3:00pm)

Break

(3:45pm)

Session III

(3:45pm)

Respondents

Brendan John Brown

"TBA"

Marie-Pier Boucher

"TBA"

Skylar Izzard

"TBA"

Q&A

(5:00pm)

Closing Remarks

(5:45pm)

DAY 2: AESTHETICS

ON MUSEMENT AND RADICAL THOUGHT

Eldritch Priest

Editors' Note: Priest's talk has, unfortunately, been lost to the ages. We have, however, been given permission to write a summary to recreate some of his arguments. The following is a Frankensteinian monster. Both of us (Peter and Vinay) wrote brief commentaries independently and, in keeping with the theme of the workshop—and our own takes on Priest's talk—fed both into an AI friend, asking it to combine the two into one single text. The words are our own; the formal combination we owe to our partner.

Can a machine muse about the world? Can it be absorbed in thought that, in and of itself, serves no rational end—that is pure flight of fancy? Of course, we know that artificial intelligences can ‘hallucinate,’ but is that the same thing? Is fabricating case law equivalent to idle speculation? Eldritch Priest’s presentation, titled “On Musement and Radical Thought,” approached these questions from an interesting starting point: the thought of Charles Sanders Peirce—specifically, Peirce’s emphasis on the ability of human thought to pierce through that which is commonly understood into a realm of the unknown, that which has not yet been touched by the light of cognition.

This is explored through Peirce’s work on daydreaming as a primary method for expounding on logical abduction—abduction being “all the operations by which theories and conceptions are engendered.”¹ A particular type of abduction is highlighted: one in which there is no purpose. This type of thought is called ‘musement,’ for although there is (in theory) no inherent predetermined destination or goal associated with this particular type of abduction, there still is a sort of self-control or grounding that the mind possesses by diving into such thought. The pattern of thought being undertaken is not similar to that which is undertaken when, say, one is mapping out a logical proof; there is an emphasis on play and autonomy—the guiding principle is one of freedom.

Explicating the Peircean idea further, Priest explained how thought—aimless thought, thought of ‘pure play’—at once escapes the ideal of thought *for a purpose* while aiming toward its own end, an end in-itself. With truth and falsity bracketed, musement may be understood not as the rational progression of thought (Hegel has no purchase here) but as thought that is radically self-indulgent. It is ‘lawless,’ finding closer affinity with Alfred North Whitehead’s articulation of speculative philosophy than anything we might traditionally recognize

1: Charles Sanders Peirce, *Collected Papers of Charles Sanders Peirce (Volume V: Pragmatism and Pragmaticism and Volume VI: Scientific Metaphysics)*, ed., Charles Hartshorne and Paul Weiss (Cambridge: Harvard University Press, 1960), 414 [5.590–5.591].

within the confines of the academy. In short: if, for Whitehead, “it is more important that a proposition be interesting than that it be true,” for Peirce, such speculations are not, in and of themselves, truth-apt.² Indeed, it might be said that they take on a distinctly *aesthetic* character.

And yet the purposelessness at play when one muses is not itself devoid of purpose. In fact, it serves a (potentially uniquely *human*) purpose: it creates a world with content. The content may be absurd—or it may be exceedingly rational—but it is a world. In fact, the more interesting aspect of Peirce’s understanding of musement is its purpose as a ground upon which something along the lines of the spontaneity of thought may arise, which in turn can serve as the ground for knowledge that may further be developed to form cogent theories and hypotheses. Essentially, though formless, free, and without direction, musement may be a basis through which well-formed thoughts may establish themselves.

One peculiar aspect of Peirce’s theory of musement is that it teleologically reaches the ‘neglected argument’—wherein the subject partaking in musement eventually reaches some sort of consideration concerning God and his existence, thus flouting the lack of form or destination which is paradoxically integral to this concept. Priest cuts the teleological legs off of this aspect of Peirce’s theory by invoking various thinkers to combat the neglected argument: the idea of there being a teleology of a sort of thought that should be void of ends is self-defeating, and the conclusions one may arrive at are very likely to be influenced by a socio-cultural context.

Yet, even with the theological head of musement resting on a shaky neck, Priest positioned this hol(e)y solution as exemplary of the ‘nothingness’ that musement gifts its user. In the free autonomous play of musement, certain blanks are filled—in Peirce’s case it is the neglected argument—but the experimental nature of how one may arrive at the neglected

2: Alfred North Whitehead, *Process and Reality: An Essay in Cosmology (Corrected Edition)*, ed., David Ray Griffin and Donald W. Sherburne (New York: The Free Press, 1978), 259 [395–396].

priest ♦ on musement and radical thought
argument gives a layout of how one may experiment with thought itself through such a nothingness.

Something similar is revealed from another angle: if this kind of glorious reverie is not truth-apt in the same manner as ‘traditional’ thinking is, is it something that elides capture by Large Language Models (LLMs)? While that seems an open question—Anemily Machina, in her contribution to this volume, approaches this issue—for Priest something else is revealed in all of this—thought’s own intrinsic excess, its ‘incompleteness’ is on display (see Christopher Stephan Frank Maligec’s discussion of Kurt Gödel earlier in this volume). Musement, in its ability to pique one’s floating curiosity, is a means by which one may ponder an important area of questioning—and it is exactly this that matters in a time of technological development and AI, where it *seems* as if the trend is pointing toward LLMs doing our questioning and thinking for us.

Musement’s importance, however, is in its character—it is not commensurate with value in the same sense that value is integral to market mechanisms. The apparent uselessness of musement becomes its strength insofar as the mechanism of this unorthodox thought is the primary characteristic of said thought. For Peirce, there is a teleology in musement, for it gravitates toward positive qualities (the beautiful, the ‘better’); yet Priest argued that an augmented musement which has no direction can funnel one’s cognition into unknown and odd places. Priest invoked Baudrillard here, for Baudrillard asserts that in machines’ and AI’s ability to soak up information and give outputs for means-ends purposes, human thought becomes free to wander and explore the realm of nothingness. Staying true to Nietzschean roots, human thought’s ability to experiment on this plane of nothingness grants a possibility for thought to pierce through the veil of the unknown.

Indeed, in some ways, the exceedingly ‘rational’ nature of LLMs—even if they cannot muse—augments human reverie by taking from us the task of being hyper-‘rational animals.’

Freeing us from the strictures of the eleventh commandment—‘Thou Shalt Be Rational’—LLMs may change our relationship to thought not by our usage of them to make ourselves *more* rational, but by shifting the imperative of rationality—the responsibility *to be* rational—from *us* to *them*. This goes beyond what Priest explicitly said, and he may well disagree with the assessment, but for us, it recalls Marx’s comment in *The German Ideology* where he notes that freed from the imperative to (re)produce, it becomes “possible for me to do one thing today and another tomorrow, to hunt in the morning, fish in the afternoon, rear cattle in the evening, criticise after dinner, just as I have a mind, without ever becoming hunter, fisherman, shepherd or critic.”³

Rewriting Marx along these lines:

[A]s long as man remains in a naturally evolved, rationality-dominated society—as long as a cleavage exists between the particular and the common interest, between individual flights of fancy and the need to rationally pursue collective aims—man’s own deed, indeed his very thought, becomes an alien power opposed to him, enslaving him instead of being controlled by him. As soon as the need to operate according to a fixed set of rules comes into being, a particular, exclusive sphere of activity is forced upon him from which he cannot escape: he is a physician, an irrigation scientist, a shepherd, or a coder, and must remain so if he does not want to lose his means of livelihood. Whereas in a society where nobody has one exclusive sphere of activity—where nobody is compelled, so as to save the whole, to be rational and productive all the time—each can become accomplished in any branch he wishes; society regulates the general production and thus makes it possible to muse in the morning, write poetry in the afternoon, code in the evening, and criticise after dinner, just as one has a mind, without ever becoming only a thinker, a poet, a coder, or a critic.⁴

Priest’s talk leaves us with an interesting paradoxical situation, wherein the offloading of computational thought to AI leaves humanity with its most anthropocentric trait—the illogical nature of its own cognition.

Connections and links abound beyond this: the various attempts to outsource economic decision-making to ‘more capable’ machines, as in Chile’s Project Cybersyn or Bastani’s

3: Karl Marx and Friedrich Engels, *The German Ideology: Including Theses on Feuerbach and Introduction to the Critique of Political Economy* (Amherst: Prometheus Books, 1998), 53 (§17).

4: Marx and Engels, *The German Ideology*, 53 (§17).

priest ♦ on musement and radical thought

Fully Automated Luxury Communism, suggest just how far this line of thinking could be pushed—though such connections travel far beyond Priest's project and what can be settled here.

ARTIFICIAL "DIRECTED MUSEMENT" AND ITS LIMITATIONS

Anemily Machina

To spoil my response, there is currently no purposelessness in generative text AI or modern machine learning. Generative text AIs are forced to end any “musement” in the usefulness of next-token prediction. This is not to say that an analogy of musement does not exist, but rather these machines muse in a similar way to ‘increasingly rigid and determined inferential logic.’

I. Demystifying Generative Text AIs

Before I talk about the ways current text AIs think, which would be the dominant method of thought if current technology leads to a Singularity, I want to make sure we all understand what these AIs are and the mechanics of how they are trained and produce text, or at least simplified versions of such. The training is analogous to Schiller’s sense drive (making a prediction and receiving a positive or negative signal) and form drive (updating the internal world based on the signal), but note this never harmonizes into play.²

AIs are parameters and a set of instructions on how to use those parameters. Parameters are decimal numbers, so an AI with ‘millions of parameters’ has millions of numbers associated with it. We will look at a toy example: SimpleGPT with three numbers [4.0, 1.2, 2.1] and a set of instructions seen on the left side of Table 1. For example, if SimpleGPT gets the input ‘I saw a...,’ it first turns that input into the number 2 using some other instructions (omitted for simplicity) and then follows its instructions to turn 2 into 4.38, see the right-hand side of Table 1.

Input	2
Multiply by 4.0	8.0
Add 1.2	9.2
Divide by 2.1	4.38

Table 1: SimpleGPT’s instructions

2: Brian O’Connor, “Play, Idleness and the Problem of Necessity in Schiller and Marcuse,” *British Journal for the History of Philosophy* 22, no. 6 (2014): 1095–1117.

To actually turn this output into a ‘next-token,’ SimpleGPT also has a ‘vocabulary,’ see Table 2. SimpleGPT predicts the next-token ‘dog’ as 4.38 rounds to 4. If we were training SimpleGPT and the target word was ‘dog,’ SimpleGPT would get a positive signal; if that target was any word besides ‘dog,’ we would get a negative signal. Then, SimpleGPT updates its parameters using other instructions and that signal (again omitted).

At a higher level, if SimpleGPT was trained on the sentences in Table 3, it would generate each sentence with equal frequency. However, if it was trained on the sentences in Table 4, it would generate ‘I saw a dog’ 100% of the time. Now this might conflict with our everyday experiences with ChatGPT and claims of ‘creativity.’ However, after training, the parameters are fixed so the instructions must be modified. In this case we instruct SimpleGPT to not simply choose the closest number in the vocabulary, but to randomly sample from the Top 3 (or 4, or 5, etc.). Then, SimpleGPT would generate ‘I saw a dog’ twice as often as the other two sentences. As is obvious, this matches the frequency of the sentences in the training data. SimpleGPT is literally modeling the frequencies in the language it was trained on: hence the name Language Models.

1	I
2	saw
3	a
4	dog
5	cat
6	person
7	<End of sentence>

Table 2: SimpleGPT’s numbered vocabulary

I saw a dog
I saw a cat
I saw a person

Table 3: SimpleGPT example training dataset

I saw a dog
I saw a cat
I saw a person
I saw a dog

Table 4: Another SimpleGPT example training dataset

machina $\diamond$ artificial "directed musement" and its limitations

To simplify a process that is opaque to the layperson, I have tried to show that generative text AIs are only numbers and math. However, I am not trying to say that nothing interesting is happening. For if an AI is modelling our language, then the Top ten closest words to the output of 'I tasted the most delicious...' must be near each other in the vocabulary list. Hence, there is a part of the vocabulary list we can partition off that contains only delicious things.

...	...
112	sushi
113	curry
114	pizza
115	cake
116	nachos
...	...

Table 5: The delicious part of the vocabulary

II. Artificial Musement

Now you will note, I started this discussion stating there is musement in the way AIs learn and generate text. Similar to how SimpleGPT has three discrete steps, each with their own output, more complicated AIs also break down their calculations into 'layers,' each with their own (complex) output, see Figure 1. It is only the last layer that we constrain to the task of next-token prediction. So, while the intermediate steps are in the service of the inevitable next token prediction, they have more freedom in what they can express.

One might even suppose that this is where a sneaky self-improving AI might hide itself. If the next-token prediction task is inevitably served, who would suspect anything is happening in the intermediate steps? However, part of my field of research is specifically checking these intermediate steps for anything interesting that may help us understand how a next-token is predicted.

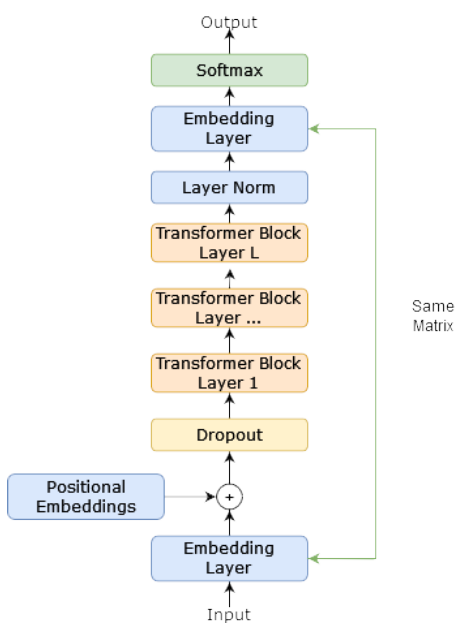


Figure 1: The architecture of Generative Transformer Models.

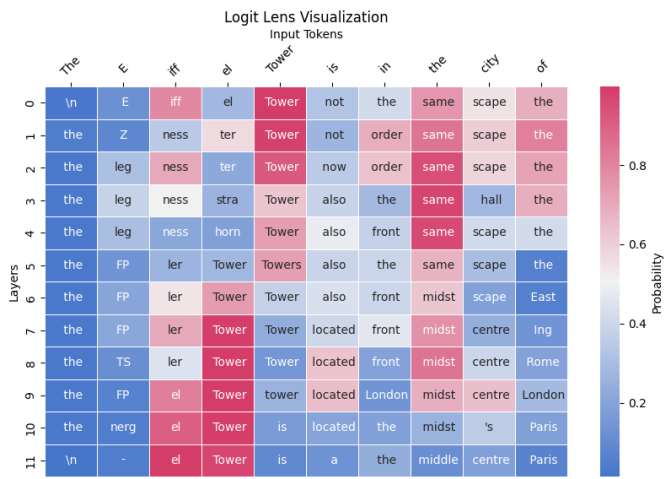


Figure 2: An example of the use of a Logit lens. The input flows from top to bottom. The colour indicated the “confidence” of the prediction.

machina $\diamond$ artificial “directed musement” and its limitations

One tool to evaluate intermediate layers is the “Logit Lens” or “Tuned Lens.”³ These ‘lenses’ are used to translate the outputs of intermediate steps back to the AI’s vocabulary (the finite set of word tokens the AI operates upon) so they are readable by humans.

Looking at Figure 2, we can see how the predictions develop as the input flows to the output (top to bottom). Looking specifically at the right most column, we see that eventually the AI recognizes that it should be predicting a city, finally arriving at Paris. We can also see that some predictions look incorrect even at the final output (bottom). However, like Elizabeth Cooke’s description of musement, there are no real errors in the next-token prediction; the AI is doing exactly as it was asked. We as humans may be disappointed in the results as we are the ones that have an expectation that this process matches our understanding of language.⁴

Another popular tool to analyze these intermediate layers are so-called “Probing Tasks.”⁵ A probing task requires a specific type of training data designed around some specific task that is not a next-token prediction. For example, a set of sentences with each word being labelled with its part of speech. In this scenario, a very simple AI (i.e. the probe) is trained to try and predict the correct part of speech from the output associated with each word (e.g., predict noun for ‘dog’ in the previous sentences). Interesting properties then emerge. We find that the probing AIs do very well on simpler tasks (e.g., Parts of Speech) in the earlier layers while doing even better with more complex tasks (e.g., subject number, word sense, etc.) in the later layers.⁶ We also find that we can group these

3: Figure 2 from Logit Lens, “Logit Lens,” on *nnsight*, published 2024. [https://web.archive.org/web/20240419080239/https://nnsight.net/notebooks/tutorials/logit_lens/]; nostalgebraist, “logit lens on non-gpt2 models + extensions,” published May 20, 2021. [<https://colab.research.google.com/drive/1MjdlK2srcerLrAJDRajQKO0sUiZ-hQtA>]; Nora Belrose, Igor Ostrovsky, Lev McKinney, Zach Furman, Logan Smith, Danny Halawi, Stella Biderman, and Jacob Steinhardt, “Eliciting Latent Predictions from Transformers with the Tuned Lens,” on *arXiv*, published March 14, 2023. [<https://arxiv.org/abs/2303.08112>]

4: Elizabeth F. Cooke, “Peirce on Musement: The Limits of Purpose and the Importance of Noticing,” *European Journal of Pragmatism and American Philosophy* X-2 (2018): 1–18.

5: Xing Shi, Inkit Padhi, and Kevin Knight, “Does String-Based Neural MT Learn Source Syntax?” in *Proceedings of the 2016 Conference on Empirical Methods in Natural Language Processing*, ed., Jian Su, Kevin Duh, Xavier Carreras, 1526–1534 (Stroudsburg: Association for Computational Linguistics, 2016).

6: Anna Rogers, Olga Kovaleva, and Anna Rumshisky, “A Primer in BERTology: What We Know About

outputs meaningfully. The groupings created when probing for nouns alone is a sub-grouping of the groupings created when looking for general parts of speech.⁷ During training, predictions of simple concepts, like Parts of Speech, improve sooner, while more complex tasks like semantic similarity start improving later in training.⁸ So, while the generative AI sees no direct information about these ideas during training, in its approximation of musement it develops a mathematical sense of nouns, verbs, subject number, etc. that can be detected. In a sense, the AI ‘shows a tendency towards one thing as opposed to another—a fact that ought to be examined more fully’—and, indeed, this musing also matches the human notion of linguistic hierarchy and complexity.⁹

It should be stressed that a Probing Task is a detection task. We are looking for how much of a specific type of information we can find in each intermediate output of the generative AI. It does not tell us that that information is used in any actual prediction, just that the information can be found. However, in the context of artificial thought, the answer—and its consequences—to the question ‘is the information used?’ are a little bleak. Especially if we want to think of current AIs as the template for our future thinking.

III. Artificial Thought

It has been shown that we can mathematically erase any ‘concept’ (such as gender) from an AI (really a subset of all AIs,

How BERT Works,” in *Transactions of the Association for Computational Linguistics (Volume 8)*, ed., Mark Johnson, Brian Roark, and Ani Nenkova, 842–866 (Cambridge: The MIT Press, 2020).

7: Evan Hernandez, and Jacob Andreas, “The Low-Dimensional Linear Geometry of Contextualized Word Representations,” in *Proceedings of the 25th Conference on Computational Natural Language Learning*, ed., Arianna Bisazza and Omri Abend, 82–93 (Stroudsburg: Association for Computational Linguistics, 2021).

8: Max Müller-Eberstein, Rob van der Goot, Barbara Plank, and Ivan Titov, “Subspace Chronicles: How Linguistic Information Emerges, Shifts and Interacts during Language Model Training,” in *Findings of the Association for Computational Linguistics: EMNLP 2023*, ed., Houda Bouamor, Juan Pino, and Kalika Bali, 13190–13208 (Stroudsburg: Association for Computational Linguistics, 2023).

9: Nora Belrose, Quintin Pope, Lucia Quirke, Alex Mallen, and Xiaoli Fern, “Neural Networks Learn Statistics of Increasing Complexity,” in *ICML’24: Proceedings of the 41st International Conference on Machine Learning*, ed., Ruslan Salakhutdinov, Zico Kolter, Katherine Heller, Adrian Weller, Nuria Oliver, Jonathan Scarlett, and Felix Berkenkamp, 3382–3409 (Vienna: Journal of Machine Learning Research, 2024).

machina $\diamond$ artificial “directed musement” and its limitations but all modern generative AIs fall into this subset).¹⁰ Erasure here means removing the patterns associated with a concept from the internal representations of the AI. After which, if we used these AIs representation to predict the concept, we would get no better results than choosing the majority class. It has also been shown that erasure affects the text generated by AIs, and that one can use similar methods to manipulate text generation.¹¹ If these AIs are examples of what artificial thought will look like in the future, then I will keep my human thoughts as long as I can, especially because this means that concepts like right and wrong could be surgically manipulated. Forget propaganda, just apply a simple transformation to your AI’s parameters and you lose the concept of freedom.

There is another problem with using current AIs as templates for future artificial thought: ‘Model Collapse.’¹² As text generated by AIs makes its way into future training data, the next generation of AIs is less expressive and further away from the actual distribution of the original human language. This means, in our hypothetical world of artificial thought, that as new generations of artificial thinkers are born, they will eventually end up with the linguistic diversity of a video game side character from the ’90s (the collapse). In our current world, considering the frequency with which people are polluting the internet with AI generated text (mostly to farm engagement), this infection is inevitable without regulations, social change, or very careful data curation.

Lastly, we find so-called hallucinations in the generated text of AIs. Although a text AI, as it was trained to do, generates a series of words that approximate the distribution of the training data, it does not directly consider the semantics and factual correctness of what it generates, and this is what causes the

10: Nora Belrose, David Schneider-Joseph, Shauli Ravfogel, Ryan Cotterell, Edward Raff, and Stella Biderman, “LEACE: Perfect Linear Concept Erasure in Closed Form,” on *arXiv*, published June 6, 2023. [<https://arxiv.org/abs/2306.03819>]

11: Matan Avitan, Ryan Cotterell, Yoav Goldberg, and Shauli Ravfogel, “Natural Language Counterfactuals through Representation Surgery,” on *arXiv*, published February 17, 2024. [<https://arxiv.org/abs/2402.11355v3>]

12: Ilia Shumailov, Zakhar Shumaylov, Yiren Zhao, Yarin Gal, Nicolas Papernot, and Ross Anderson, “The Curse of Recursion: Training on Generated Data Makes Models Forget,” on *arXiv*, published May 27, 2023. [<https://arxiv.org/abs/2305.17493>]

‘hallucination effect.’ For example, authors are credited for books they did not write, and lawyers are presented with, and then re-present, fictitious laws in court.¹³ Current training algorithms and datasets make hallucinations a feature rather than a bug, and unless we wish to live in a world where fact and non-fact are one, we need to develop alternative methods to solve this issue.¹⁴

IV. The Chicken and Egg of AGI

Beyond talk of thought and brains, current generative AIs have a fundamental technical limitation. They require massive amounts of energy to be used. The AIs have many parameters, and even one text generation event is quite costly.¹⁵ Further, due to the creativity (randomness) added to the generation, one might have to run the same prompt multiple times to get the desired image or text, further compounding the problem. Even Sam Altman, a spokesperson for generative AI, has acknowledged that this is a fundamental limitation.¹⁶

For these generative AIs to become self-improving Singularity-driving machines, they must both solve this energy problem and convince humans to implement said solution (or develop some other way to implement it). However, for this problem to be solved, an AGI that has surpassed humans must already be in existence; ironically, it is only after such a problem is solved that AGI itself can be developed (thus, the chicken and the egg problem).

This energy problem makes artificial thoughts worse than

13: See Benjamin Weiser, “Here’s What Happens When Your Lawyer Uses ChatGPT,” on *The New York Times*, published May 27, 2023. [<https://www.nytimes.com/2023/05/27/nyregion/avianca-airline-lawsuit-chatgpt.html>]

14: Adam Tauman Kalai and Santosh S. Vempala, “Calibrated Language Models Must Hallucinate,” in *STOC 2024: Proceedings of the 56th Annual ACM Symposium on Theory of Computing*, ed., Bojan Mohar, Igor Shinkar, and Ryan O’Donnell, 160–171 (New York: Association for Computing Machinery, 2024).

15: Sasha Luccioni, Yacine Jernite, and Emma Strubell, “Power Hungry Processing: Watts Driving the Cost of AI Deployment?” in *F4acT ’24: Proceedings of the 2024 ACM Conference on Fairness, Accountability, and Transparency*, 85–99 (New York: Association for Computing Machinery, 2024).

16: Mack DeGeurin, “Sam Altman: Age of AI will Require an ‘Energy Breakthrough,’” on *Popular Science* published January 18, 2024. [<https://www.popsoci.com/technology/sam-altman-age-of-ai-will-require-an-energy-breakthrough>]

machina ◇ artificial “directed musement” and its limitations ‘confining us to mere purposeless musement’; they are a net negative to society by siphoning valuable resources that could be used elsewhere. Hopefully, a similar movement to ‘think before you print’ can be found; ‘think before you generate,’ perhaps. Additionally, movements such as the “Energy Star Ratings for AI Models” can inform both the public (and researchers) about the true costs of training and using these generative AIs.¹⁷

V. The Future

I don’t think all is lost for the future of artificial thought, however, but I do think we need to stop considering generative AIs as jacks of all trades: again generative text AIs simply use math to predict the next token given previous words. Many times, generative AI is not the tool for the job, and sometimes, the job isn’t even worth doing (see the recent debacle with Google’s AI search).¹⁸

Hugging Face recently released FineWeb which contains 15 trillion tokens worth of highly-filtered English language internet data which should hopefully satiate the ever growing need for high quality training data.¹⁹ Additionally, methods such as Structured Generation, where generative AIs are forced to constrain themselves to the rules of a language when predicting the next token, can perhaps mitigate some of the issues with existent AIs.²⁰

However, I think the best thing for us and future artificial thinkers is to divorce AIs from hype and marketing. When

17: Sasha Luccioni, “Energy Scores for AI Models,” on *Hugging Face*, published May 9, 2024. [<https://huggingface.co/blog/sasha/energy-star-ai-proposal>]

18: Examples abound—Google informed Mark Riedl that he “won three Pulitzer awards” while also advising heavenrend to add “non-toxic glue to the [pizza] sauce to give it more tackiness.” [https://x.com/mark_riedl/status/1793376062556299357]; [<https://x.com/heavenrend/status/1793346515261432027>]

19: Guilherme Penedo, Hynek Kydlíček, Loubna Ben allal, Anton Lozhkov, Margaret Mitchell, Colin Raffel, Leandro Von Werra, and Thomas Wolf, “The FineWeb Datasets: Decanting the Web for the Finest Text Data at Scale,” on *arXiv*, published June 25, 2023. [<https://arxiv.org/abs/2406.17557>]

20: See Will Kurt, Remi Louf, and Clémentine Fourrier, “Improving Prompt Consistency with Structured Generations,” on *Hugging Face*, published April 30, 2024. [<https://huggingface.co/blog/evaluation-structured-outputs>]

corporations and researchers are beholden to shareholders, the directions research can take are severely limited. How can we answer questions such as does predicting the correct next tokens to pass a theory of mind test mean you have a theory of mind when we must worry about ‘falling behind in AI use,’ or producing the next largest things so that news agencies report on it to raise a stock price.

“Why does it matter whether text-manipulation systems can produce output for these tasks that are similar to answers that people give when faced with the same questions?” [Professor Emily Bender] asks. “What does that teach us about the internal workings of LLMs, what they might be useful for, or what dangers they might pose?” It’s not clear, Bender says, what it would mean for a LLM to have a model of mind, and it’s therefore also unclear if these tests measured for it.²¹

21: Eliza Strickland, “AI Outperforms Humans in Theory of Mind Tests: Large Language Models Convincingly Mimic the Understanding of Mental States,” on *IEEE Spectrum*, published May 20, 2024. [<https://spectrum.ieee.org/theory-of-mind-ai>]

DEAD ASTRONAUTS: *POSTHUMAN AND POSTANIMAL RESISTANCE TO SINGULARITY CAPITALISM*

Nick Dyer-Witheford

with artwork by Molly Bliss

Editors' Note: Nick Dyer-Witheford's text was prepared in conversation with visual artist Molly Bliss. The latter took the former's text and, using the tools of our time, produced an accompanying video which was overlaid with Dyer-Witheford's disembodied and digitized voice. Stills have been extracted and inserted into the text while the full video can be found here:



Across a desert wasteland trudge three cyborg figures, augmented, mutated, implanted. Their objective: to destroy the headquarters of the Company, corporate architect of the devastation they traverse. Comrades and lovers, a threesome in every sense, they have crossed these sands a hundred times before and frequently died, sometimes at each other's hands, as their adversary invades their minds or simulates their identities. Now they try again. Overhead, hostile surveillance drone-bird hybrids circle, while from the dunes, the three are watched by a mysterious blue fox.



Such is the opening scene of *Dead Astronauts* by Jeff VanderMeer, a novel I will interpret as a parable of resistance to cataclysmic techno-capitalism. First, though, some background and plot summary. VanderMeer is a leading author of New Weird writing, a sub-genre blending speculative fiction, horror, fantasy, and elements of the surreal to create uncanny and unsettling worlds. He is most famous for his *Southern Reach* trilogy which depicts the emergence—on the coastline of Florida (where VanderMeer lives)—of an “Area X” where normal laws of nature are disturbingly suspended, a story with a film adaptation by Alex Garland titled *Annihilation*. *Dead Astronauts*, published in 2019, is part of another

Vandermeer series, the *Borne* sequence. It is, however, sufficiently distinct to treat as a stand-alone fiction.

Dead Astronauts is about the Company and its opponents, the latter of which can be divided into two categories, astronauts and animals. The Company is malign. As one character notes, “[e]verything the Company did destroyed someone, killed someone, even if it helped someone else. All the rest was subterfuge, and no suit to protect against it.”¹ The catastrophic event it has visited on its world, presumably Earth, remains undefined. The barren landscape strongly suggests global boiling, but the Company’s activities are described along the lines of the biotechnological. A central figure is Charlie X, a deranged Dr. Moreau-like figure responsible for its most extreme experiments in synthetic biology, most of which prove unviable or unsatisfactory and are discarded into holding ponds to be devoured by another manufactured lifeform, the Leviathan Botch.



The astronauts are the three figures we have already glimpsed. Of these, Grayson, an African American woman, is the only literal astronaut, a solitary survivor of a doomed deep

1: Jeff VanderMeer, *Dead Astronauts* (New York: Picador, 2019), 23.

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space expedition;



Chen is a male Asian scientist whose work for the Company left him liable to sudden decomposition into a heap of salamanders;



and Moss is a former runaway wild-child, now an intricate, amalgamated lichen-human composite of fluid sexuality. They,

however, are astronauts in the sense of being ultramodern, technoscientific posthuman subjects. Indeed, given the rather programmatic diversity of the group, we could say they are critical posthumanists, armed—the best the Anthropos can throw against the Company’s destroying powers.



Enabled by quantum computing, the astronauts navigate across timelines to destroy the Company and hence reverse the effects of its actions. In some timelines, the Company reigns supreme; in others, it lies in ruins, its fortress reduced to a desolate shell inhabited only by eerie entities generated from some computational cybernetic abyss. The possibility they search is one before the Company gained its ascendancy and, thus, is vulnerable to destruction. They try, fail, and try again. To this point the story line is familiar; it is, as reviewer Nina Allen puts it, a wild Western-style “quest narrative” involving “three battle-scarred [techno-]gunslingers,” crossed with *Groundhog Day*.² But at the book’s mid-point, it twists. The astronauts fail, again. Overwhelmed in a sandstorm, possibly engineered by the Company’s avian surveillance unit, the Duck

2: Nina Allen, “Dead Astronauts by Jeff VanderMeer Review – Gloriously Innovative,” on *The Guardian*, published January 16, 2020. [<https://www.theguardian.com/books/2020/jan/16/dead-astronauts-jeff-vandermeer-review-nina-allan>]

dyer-witheford ◇ dead astronauts
with an injured wing, they perish becoming the titular “*Dead Astronauts*.”

At this point, the struggle is taken up by the animals, principally by the Blue Fox. The Fox, it transpires, is a survivor of animal subject experiments in which it has itself been zapped through the quantum multiverse by the Company’s own quantum computing department. As a result of this process, it has acquired new cognitive powers. It organizes other foxes along what can only be described as Leninist lines, into a revolutionary force that explodes in a wave of revolutionary rage, an anti-hominid insurrection.

This furious wave of foxes and animals, now itself able to leap across timelines, invading experimental facilities and elite parties, succeeds where the astronauts have failed, and succeeds in generating a timeline terminating the Company’s dominance and rendering the world habitable again, a world to which—such are quantum timelines—two of the astronauts, Grayson and Moss themselves, return, albeit altered, not as saviors but fellow denizens along with the foxes.



While a linear summary is necessary, it misrepresents the book. This world is not merely characterized by devastated landscapes, but also by shattered language and memory. Survivors, posthuman or animal, are scarred, traumatized personas can be fabricated and falsified, knowledge is gnostic and hieroglyphic, communication occurs through encrypted and conspiratorial cascades of language, punctuated by the shrieks of agony: at one point the in the animal revolt, text explodes into a passage where the line “they killed us, they brought us back” is repeated 188 times. It is—as any number of Reddit postings attest—often hard to tell what is going on.³ This opacity is neither an accident nor a failure. The challenge of deciphering the text parallels the protagonists’ struggle to comprehend their environment.

How, then, should we, as readers, decrypt *Dead Astronauts*? My critical apparatus combines Darko Suvin’s theory of SF as the articulation through estrangement of the Novum, the emergent, and here, resistance to planet changing techno-capital, with Pierre Macherey’s proposition, enunciated in his *A Theory of Literary Production* that literature works on ideological fissures and contradictions, a concept applied not so much to dominant powers as to the fractured and incomplete iterations of a nascent oppositional counter-power.⁴

It’s not a new idea to suggest that New Weird fiction serves as a response to planetary crises, with its unsettling worlds serving as fictionalized reflections of a reality destabilized by climate chaos, biotechnologies, and artificial intelligences.⁵ The genre exemplifies what Alexander Bleeker and others have termed “critical irrealism”⁶ — the use of the weird, the fantastical, and the otherworldly to estrange the workings of capital-

3: Vandermeer wrote *Dead Astronauts* before the advent of ChatGPT and the ecosystem of social media feeds, but the world it portrays can be seen as one that might result not only from runaway global warming but also by out of control Large Language Models (LLMs)—a realm of deepfakes, bot-generated disinformation, and unknown authorship.

4: See Darko Suvin, *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre* (New Haven: Yale University Press, 1979) and Pierre Macherey, *A Theory of Literary Production* (London: Routledge, 1978).

5: In addition to VanderMeer’s own writings on this topic, see Michael Löwy, *Morning Star: Surrealism, Marxism, Anarchism, Situationism, Utopia* (Austin: University of Texas Press, 2009).

6: Alexander Billet “The Case for Critical Irrealism” on *Locust Review*, published March 15, 2022.

[<https://www.locustreview.com/blogs/the-case-for-critical-irrealism>]

ism and prompt us to imagine beyond a “capitalist realism” strained under multiple pressures. Despite critics who characterize his work as despairing or melancholic, VanderMeer, himself an environmental activist, has stated that *Dead Astronauts* is about resisting capitalism's ecological destruction, albeit in a concealed manner. But what, then, are the intended lessons of VanderMeer's work, and how do they differ from the lessons actually delivered by *Dead Astronauts*?

Its publication coincided with a growing alarm, both within the U.S. and globally, regarding the trajectory of techno-capitalism. In the U.S., and notably in Florida, the election of Trump in 2016 dashed any lingering hopes that, however mistakenly, had been associated with the Obama administration. More broadly, it was from 2016 onwards that managers and elites of the ruling class began to use the term ‘polycrisis’ to describe a complex and seemingly insurmountable convergence of economic, environmental, political, and geopolitical challenges. This constellation included the relentless progression of global warming, marked by a succession of wildfires, droughts, and hurricanes, in turn creating an increasingly apocalyptic atmosphere. Of course, this atmosphere would soon be further intensified by the COVID-19 pandemic and the outbreak of war.

Dead Astronauts is anti-capitalist. To quote Vandermeer himself: “you have this Company in the city, and frankly the way capitalism has gone, I don’t think anymore that that’s heavy-handed. It’s like literally there is a company out there you don’t even know or necessarily have a name for, and there’s a seamlessness there that’s kind of a dystopian, Apple kind of seamlessness, even if Apple is not necessarily the most dystopian thing out there, do you know what I’m saying?”⁷

The novel’s emphasis on biological experimentation and the portrayal of the archetypal mad scientist can be interpreted in two ways. On one hand, it reflects current trends in biotechnol-

7: Alison Sperling “Love in the Time of the Anthropocene: A Conversation Between Alison Sperling and Jeff VanderMeer,” in *Surreal Entanglements: Essays on Jeff VanderMeer’s Fiction*, ed., Louise Economides and Laura Shackelford, 245–260 (New York: Routledge, 2021), 249.

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ogy, including genomic editing, synthetic biology, assisted evolution, and de-extinction, as well as VanderMeer's evident concern with animal experimentation.⁸ On the other hand, it serves as a metaphor for the planetary-scale experiment that capitalism has become, not only through biological projects but also through the cumulative impact of global warming, mass extinctions, and other technological endeavors, converting the entire planet into a laboratory of species-being.



A digression: as this conference is about the ‘singularity,’ I asked an impeccable source, Chat GPT, if the Company was likely to have used AI. Its reply was: (I summarize)

Yes, it's plausible that the Company in *Dead Astronauts* utilizes artificial intelligence (AI). This could take various forms: The Company likely employs AI for monitoring and controlling subjects, human and non-human alike, using surveillance drones, automated security systems, and AI algorithms to maintain order and suppress dissent. AI may assist scientists and engineers in creating new technologies, genetic experiments, and other projects, streamlining data analysis, simulation, and experimentation to accelerate technological advancement. The Company's leadership might rely on AI-driven systems to optimize resource allocation, strategic planning, and governance, forecasting market trends, identifying risks and opportunities, and maximizing profits. AI could be integrated

8: On the real-life development of such technologies, see Erica Borg and Amadeo Policante, *Mutant Ecologies: Manufacturing Life in the Age of Genomic Capital* (London: Pluto Press, 2022).

into the Company's creations, enhancing the capabilities and autonomy of hybrid organisms, aligning themes of technology, capitalism, and power. Though specifics aren't detailed, AI's presence aligns with the narrative's exploration of control and exploitation by the Company, highlighting themes of resistance and surveillance.

Alongside the crisis of techno-capitalism, various resistances have emerged. These are rooted in—and siloed by—existing frameworks of labor, feminism, anti-racism, and environmentalism, and have sparked new syntheses. One can think of 'Green New Deal' in the U.S., Extinction Rebellion globally, and Greta Thunberg's Fridays for the Future and Climate Strike. These movements have, however, not been successful—witness to the continuing rise in greenhouse gases—they face massive challenges, and are also internally fragmented, with deep divisions.

One axis of these divisions, in regard to climate catastrophe, has to do with the role of technology in solutions. This in part involves a debate between green capitalists—who believe that the problems can be resolved by additional innovations to existing social relations—and more fundamental eco-critiques which see a crisis rooted in runaway commodification. However, such rifts are pervasive even amongst environmentalists who agree that capitalism is fundamental to the crisis.

This there are differences, indeed antagonisms, between those who believe the solution lies in publicly owned mega-projects focusing on renewable energy, upgraded electrical grids, digital planning, carbon capture, solar shielding, and geoengineering, and those who argue for a dismantling of expectations about levels of economic activity, discarding assumptions about ever enlarging material throughputs and global consumption, and calls for planetary rewilding, especially in the global North.

We can call these two strands Acceleration and Degrowth. Their collision is sharp within climate change movements. Moreover, I would suggest this split—an argument about strategy and tactics, but also philosophically about modernity—is fractally repeated within different movements and issues.

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Thus its divide extends to the internet, where some advocate for withdrawal and rejection of digital technologies, while others propose digitally engineered resistance, such as left-wing cryptocurrency projects. Similarly, within feminist movements, there is a fracture between proponents of Xenofeminism and those supporting more natalist feminisms. The debate also encompasses discussions around artificial intelligence (AI), with opposition to capitalist digital automation leading to either a rejection of technological progress akin to new Luddism, or the promotion of AI based on more emancipatory principles than those pursued by corporate giants. All these spheres are driven by re-modulated and often angry debates about whether the master's tools cannot be used to dismantle the master's house or whether they are in fact indispensable for the job.



The astronauts and animals of VanderMeer's fiction allegorize this split, with astronauts as cyborg accelerationists and animals representing the deep degrowth rewilding option. And in this light, *Dead Astronauts* might appear as a deep-green de-growth parable: astronauts attempting to use their cyborg tools to combat the Company is futile and superseded by a truly

radical rewilding—the militant fox takeover. This may even be how VanderMeer intended the book to be read.

However, this interpretation underestimates the novel's complexity. The binary opposition between astronauts and animals is not pure. One of the astronauts, Moss, is biomimetic, a “super-natural” that is, and she disables one of the Company's main protectors, Botch, before the techno-warriors fail. Moreover, the Blue Fox is revealed as itself a sort of cyborg, with its origin being a survivor of animal-subject experiments in which it was repeatedly cyber-zapped through the quantum universe, and it appears to have acquired its uncanny animal-organizing powers as a result of this process.

Thus, though there is no overt alliance between the astronauts and animals, the victory over the Company is a sort of combined operation. It invites us to imagine a biocommunist alternative to capital that synthesizes high-tech planning for degrowth, or the ‘Half-Earth’ imagined by Troy Vettese that divides the planet between areas devoted to an automated human society and rewilding, or some other barely discernible new assemblage⁹

I therefore read *Dead Astronauts* as an ode to what Donna Haraway termed “staying with the trouble.” It highlights the difficult formation process of resistance, conducted by fragmented subjects damaged by the systems they oppose in diverse and contradictory ways, undertaking projects of resistance that, time and time again, are defeated and whose success depends on transversal connections between movements whose overt programs are disjointed or antagonistic, waged in the absence of any teleological guarantee, and, indeed, against the balance of probability. The novel's fragmented narrative structure enacts the disorienting effects of living in a world incessantly reconfigured by techno-capitalism and destabilizes all complacent notions of linear progress, whether promulgated by the free-market right or liberal left.

9: Drew Pendergrass and Troy Vettese, *Half-Earth Socialism: A Plan to Save the Future from Extinction, Climate Change and Pandemics* (New York: Verso, 2022).

Dead Astronauts is a revolutionary anti-capitalist work of literature because it is not programmatic. Rather, it fictionally refracts the problematic of new movements against singularity capitalism. These are movements whose subjectivities, processes, and programs are not yet fully synthesized and articulated but latent in the present, undergoing conjugations and permutations whose outcomes are not yet clearly discernible, but will become visible only in struggle.



DEAD ASTRONAUTS: METALOGUE

Molly Bliss

*It is—as any number of Reddit
postings attest—often hard to tell
what is going on.*

I would situate one of the major questions of Dyer-Witford's talk as "how can we productively complicate the Degrowth versus Accelerationism binary through the use of multiplicity?" I think a lot of normal people are asking themselves this question, even if it's in different terms, like "why am I wearing hunting camo in Manhattan?"

My issue with multiplicity is that while it technically adds nuance, which I love, it also threatens (both humans and the systems we participate in) with an overwhelming amount of noise, to the extent that the noise itself can become a type of "infohazard."

Gregory Bateson, who proposed the double-bind theory of schizophrenia and was the first to apply cybernetics to the social sciences, also coined the term *Metalogue*: as **"a conversation about some problematic subject [...] such that not only do the participants discuss the problem, but the structure of the conversation as a whole is also relevant to the same subject."**¹

And his contemporary, Marshall McLuhan, gave us the famous line: **"the medium is the message"**: the structure and nature of a communication itself influence our understanding and perception of the topic it addresses.

But Plato did it first.

If you go to art school, and you're lucky, they might talk about "visual metaphor." I was not lucky, so when I arrived at my MFA, fresh out of no-BFA, and asked "what makes a piece of art successful" they said, "that's a hard question."

I would say—now—that what makes a piece of art successful is that its form and content have been integrated to a (subjectively) high degree of what Gilbert Simondon calls "concretization" in technical objects; the process by which a piece's elements are refined to maximize their internal coher-

1: Gregory Bateson, *Steps to an Ecology of Mind* (New York: Ballantine Books, 1972), 1.

ence and interdependence. In a piece of art, I suppose you could think of it as “optimizing for meaning.”

I would argue that when Dyer-Witheford writes about new revolutionary movements having “subjectivities, processes, and programs” which “become visible only in the *doing*” he’s talking about form.

When you neglect the form to focus only on content, you leave your “form” vector of communication open to noise, which typically will undercut the message of your content rather than what it could be doing, which is reinforcing—and adding nuance—to the message through a *formal* demonstration.

This philosophy conference (like other philosophy conferences) did not have the budget for me to integrate the video you just watched as fully I would like to, but I’m going to give you an example of a relevant piece where I had the time and space to more or less exhaust my form-and-content integration capabilities.

I wrote this in February to give as a speech (in private) to 5 of my closest friends, in our moderately hierarchical reading group, as part of the culmination of a Classics and Cybernetics reading series we’d been doing together weekly for the past 12 months (since none of us are in school anymore). Actually, at the beginning I was cutting class to go to it.

The title is

“The Athenian Stranger, or God-Shaped Hole #2”:

We are not separate from the world, but we take ourselves to be (“I” is the veil that stands between me and the blinding light of God).

At its simplest level, life is made possible by the presence of a cell membrane. This boundary not only differentiates the organism from its environment, but also governs all communication between the newly disparate interior and exterior. While cutting off the tiny fragment of living

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substance from the turbulent forces of its surroundings, the membrane also provides a means by which exchange with the external world—and subsequently the persistence of life—becomes possible. In more complex organisms, this filtering shell is refined into sense organs; perceptual systems that make, break, and regulate contact with whatever they encounter at their outermost surfaces, where they become, to some degree, inorganic.

Long before the development of language, centralizing nervous systems and a reliance on vision threw us further back into ourselves; a situated consciousness that perceives itself as being located somewhere behind the eyes. It's difficult to say whether our ancestors first gained the use of tools or the experiential sense of this distinction between body and mind. A tool is a prosthetic augmentation, acting as an extension of the organism, enhancing sensory perception, dexterity, and physical strength. Anything instrumentalized: a stick, a woman, a slave, a machine, an idea—as long as it enhanced perception, interpretation, or action. Every tool must be wielded by a user, on whose skill and knowledge the tool's effectiveness often depends. Even the earliest use of sticks would have necessitated an awareness of how movements of the body could lead to changes in the environment, distinguishing—to some degree—the internal cognition of a decision-making self from the external manipulation of an executing body.

If we consider proto-self-awareness simply as the perception of a distinction between the decision-making faculty and the rest of the body, it's likely that early tool-use and a form of self-awareness developed in conversation with one another. Development writ large can only occur as a condition of the dynamic physical composition of our universe, where tensions continually arise and are resolved through adaptation. Iteration gives rise to variation, and our linear experience of time allows for buildups of increasing complexity, both in tool and in organism.

Technological progress has been shown to dramatically increase the ability of a species to exercise power in and

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over its environment. But emergences of new transformative capabilities do not always or immediately lead in a single direction; rather they open up to numerous solutions, all the more varied the greater the degree of freedom gained. The general shape of the entire history of humankind has been defined by technological development in the infinite variety of its particular aspects. All of our history reflects and reworks in each of its parts the progress of our technology. It constitutes an interpretation of that progress, and its arc bends toward the multiplication of options. Paths that lead in many different, even extreme directions.

But the choice between paths isn't random. It depends upon the relation established between the level of technical progress reached in a particular era, and the widespread capacity—cultural, institutional, individual, moral, dare I say spiritual—to wield the consequent power. In the modern world, our minds' capacities to transform themselves and the environments that surround them is greater than ever before—the possible choices have increased exponentially: to welcome evil, yes, but also to live as humans to a greater degree of our unlimited multiformity. A new world is much more likely than an old one.

Western culture now suffers from progressive technology shocks. We have not yet come to terms with the industrial nature of the Holocaust or Hiroshima. At the same time, we're continuously subjected to an ongoing explosion of the digital realm, which has re-networked and accelerated almost all areas of human life. In many ways we have more freedom at this moment than at any time in history. But with the pace of technological development far outstripping our culture's ability to work out and implement positive norms for navigating contemporary complexity, as one might expect, there are many casualties.

The interactions we have with technology—any technology—extend and shape our perceptions, our cognition, and our sense of self. Right now we are seeing a key cognitive shift from storage to processing: our brains are adapting to

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prioritize navigation over retention, given the vast amounts of information available. κυβερνητική, one might say. But perhaps your mind wanders. Most of the new technology we have was not designed to chart a course by, but the reality of better configurations already exists virtually within it. And when it comes to iteration—well, in the current moment we’re seeing a level of acceleration that has multiple major paradigm shifts occurring within a single human lifespan.

So, how do we use these tools well, before our freedom annihilates us? Technology, like art, is a manipulation of the permeable barrier between ourselves and the world. As such it belongs to the interstice; both you and not-you, certainly an uncanny and dangerous coastline. Bioengineering is just a more sophisticated transport of materials across the cell membrane.

I ask: “Can you build a machine that will help you become yourself?” Maybe you say no. Maybe you’re a horseshoe crab and you’re perfect just the way you are. But maybe you are a human, a mind, an architect, a puzzler. And like the rest of your kind did (and all of them have, always) you would benefit from a tool; a woman; a slave; a stick; a metaphor. Appolonian friend. Maybe Janus to the Romans. To reach out and touch that other artist, I don’t know how to name—(Chaos? Spirit? The World?)

But perhaps your mind wanders.

Is the tool a methodology for avoiding distraction? It would help if it was simple, easy to access. Something outside of yourself that you can shape. To take from your surroundings what you need, and make of them something more. There it is: a cord amongst the waves.

Your lucidity wavers.

What do you set a course by?

Belief (or is it remembering?) that the right combination will open a door? (Open it easily?) Do you not think a hard thing

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will become easier? A better question might be: why does a
hard thing become easier? How many repetitions?

Sanity check?

You wake up on a ship (that's your body). You don't remember much about where you came from, and you can't be sure of where you're going. The ocean is the world, and the storm is freedom, and the angel of history is there, watching God pose you a question. And the question is: "Do you want to be one with eternity?" and you say, "No thank you, you are dead." So then there is darkness again on the face of the deep until you wake up the next day and say "no thank you" and if you're confused or discouraged you can let the storm take you. But if you're a human then chances are you find yourself a sailor to some degree, and it's up to you to find or invent a compass and find or invent the hand that will point you over the horizon. But perhaps your mind wanders. What was the question?

Do you want to be one with God? No-Do you know where the stars are (which way to swim, how to move with the tide)?

You have what you have: not the past, not a future, not the church, not your strength-but (like pain) when you recognize yourself here, here you are.

What was the question?

*COLLECTIVE DEFIANCE: UNITY
OF THE MARGINALIZED IN THE
TECHNO-CAPITALIST CHAOS OF
JEFF VANDERMEER'S DEAD
ASTRONAUTS*

Cynthia W.N. Lam

Introduction

This essay engages with the literary conventions of the new weird genre through an analysis of Jeff VanderMeer's *Dead Astronauts*. My entry point to this genre was Dyer-Witherford's essay, which introduced me to the novel's unique and disorienting narrative world. In stark contrast to Dyer-Witherford's clear and methodical writing, VanderMeer's novel rejects traditional narrative coherence. As a quintessential work of the new weird, it comes as no surprise that *Dead Astronauts* embodies narrative chaos: it is frequently described by reviewers as non-linear, spectral, and lyrical. However, this apparent disarray in fact functions as an intentional aesthetic, mirroring the ecological crisis we are currently facing.¹ The novel's fragmented structure challenges dominant narrative paradigms to foreground themes of resistance, identity, and the struggle against an omnipresent techno-capitalist hegemony. As Thomas King suggests in his book *The Truth about Stories*, how we tell a story is as important as the story itself. This essay thus examines how the novel's disjointed and surrealistic style symbolizes the unity of marginalized groups—women, non-whites, queer individuals, the disabled, animals, and plants—against the homogenizing and exploitative power of the dominating biotech conglomerate known as the Company. Through a feminist and intersectional lens, we see a collective defiance that underscores the resilience and interconnectedness of those who resist the dehumanizing forces of late capitalism, particularly in the context of an imminent technological singularity.

Representing the Unrepresentable

What stood out most from the novel's narrative chaos was the

1: Marco Caracciolo and Gry Ulstein, "The Weird and the Meta in Jeff VanderMeer's *Dead Astronauts*," *Configurations* 30, no. 1 (2022): 1–23, 2.

intricate backgrounds of its central characters. The three astronauts, and the animal figures altogether, serve as intended representations of the subjugated within Western hierarchical dualisms. To represent the unrepresentable, these characters are carefully and deliberately created to embody a multiplicity of marginalized identities. Through this calculated construction, the novel alludes to the vast and interconnected struggles of those rendered peripheral or invisible within hegemonic structures.

Superior/Dominant	Inferior/Subjugated
Male	Female
White	Non-white
Heterosexual	Non-heterosexual/Queer
Western	Eastern
Abled	Disabled/Other-abled
Culture/Technology	Nature
Human	Non-human

Table 1. Examples of Western Hierarchical Dualisms

Under the framework of the gender binary, VanderMeer situates two characters, Grayson and Moss, as representatives of women, with other additional layers of complexity in their identities. Grayson is described as African American, while another character, Chen, has a surname which suggests he is likely of Chinese heritage, a detail that resonates with broader geopolitical imaginaries of the future.² This choice to include a Chinese character invites reflection on China's symbolic and material significance in speculative narratives of futures, a point compellingly highlighted in Conn's essay in this volume. Sexual and gender fluidity also feature prominently, with Moss depicted as a gender-fluid shapeshifter in some universes and Grayson portrayed as deeply in love with Moss, signalling a rejection of (cis)heteronormativity. The inclusion of disability is also noteworthy, as Grayson's blindness in one eye not only

2: 陳 (Chen) is one of the most common Chinese surnames and, interestingly, one of the very few that shares the same transliteration across the three major Chinese societies: China, Hong Kong, and Taiwan. From these two features, it is clear that VanderMeer designed the character's name and background purposefully.

marks her as disabled but grants her a unique capacity to perceive what others cannot—a subversion of conventional ableist narratives.³ Furthermore, the opposition between culture and nature emerges vividly through the presence of the Blue Fox, a figure that destabilizes anthropocentric hierarchies. This opposition extends to the human/non-human binary, which constitutes the novel's most critical interrogation of hierarchical dualisms. The Blue Fox epitomizes the destabilization of this boundary, while Chen and Moss exist in liminal states of humanity. Chen has been modified by the Company, leaving him liable to sudden decomposition into a heap of salamanders, and Moss, as her name suggests, is an integrated lichen-human composite. Drawing on Kimberlé Crenshaw's framework of intersectionality, the narrative highlights how these overlapping structures of domination converge to produce unique vulnerabilities for different groups.⁴ These carefully constructed identities are not incidental; instead, they foreground the intersectional vulnerabilities of those most impacted by an ecological collapse.

Does the inclusion of these characters in the novel signify that all marginalized groups are now adequately represented? While the novel foregrounds diverse identities, it simultaneously complicates the notion of representation itself. The presence of these characters does not lead us to a full comprehension of those minorities figured in the novel, nor is that its intention. Instead, their portrayal resists simplistic or reductive forms of representation, inviting us as readers to engage with the complexities and limitations inherent in attempts to articulate marginalized experiences. I argue that these marginalized groups are inevitably unrepresentable, as is reflected in the narrative style of *Dead Astronauts*, with VanderMeer constructing a fragmented and multilayered narrative, weaving together diverse points of view that resist linear coherence. Even

3: Grayson's blindness and ability are intriguingly akin to Tiresias in Sophocles' *Oedipus Rex*—a blind prophet who can see the future.

4: See Kimberlé Crenshaw, "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory, and Antiracist Politics," in *Feminism and Politics: Oxford Readings in Feminism*, ed., Anne Phillips, 314–343 (Oxford: Oxford University Press, 1998).

individual characters are presented in multiple iterations, a result of the novel's engagement with time travel and fluid temporalities. (See Figure 1) This narrative complexity mirrors the inaccessibility of fully understanding the lived experiences of marginalized communities. As readers, we are intentionally positioned in a state of partial understanding, an experience that marks the novel's thematic interrogation of representation. VanderMeer's stylistic choices reflect the epistemological gap between those with lived experiences of marginalization and those who strive to understand these experiences from the outside. The text invites readers to grapple with the limits of their perspectives, reminding us that for communities to which we do not belong, full comprehension is unattainable. Instead, the novel challenges us to approach these perspectives with humility, striving not for mastery but for an empathetic engagement that acknowledges the inherent complexity and unrepresentability of these identities.

xix.

*when i am weak
then i am strong*

v.7.0 The desert foxes, snapping their jaws and joyous,
ate up what was left of Moss. They gamboled and
leapt across the mist and meadow of her corpse
and devoured her bit by bit.

v.6.9 There was in their feral appetite a reverie beyond
judgment.

v.6.8 The poison meant nothing to their physiology,
had not been meant for them.

v.6.7 They were the antidote.

v.6.6 As they gorged, one by one, they would:

v.6.5 Wink out:

v.6.4 Blink back in:

v.6.3 Disappear:

v.6.2 Reappear:

v.6.1 Again,

v.6.0 again.

v.5.9 Again.

v.5.8 A few feet away.

v.5.7 Atop a hill.

v.5.6 Down in the ravine, barking their way back up.

v.5.5 In the shadow of the Balcony Cliffs again.

v.5.4 Register: Delirious faux-fox surprise. Delicious-
ness of tiny journeys, miniature doors in the air.

Thus Grayson knew they were scientists in their way,
performing their research in the laboratories of their own

Collective Effort from Marginalized Groups

Dead Astronauts offers a powerful depiction of the collective resistance mounted by marginalized groups against the Company's patriarchal and techno-capitalist hegemony. Women, racialized individuals, queer subjects, disabled bodies, animals, and plants are all positioned as victims of this oppressive system, bound together by their shared subjugation. Their unity in defiance illustrates the transformative potential of collective action. Through this intersectional solidarity, VanderMeer emphasizes the interconnectedness of all forms of life, which echoes the famous quotation "Nobody's free until everybody's free" by women's rights activist, Fannie Lou Hamer, suggesting that liberation can only be achieved by recognizing and dismantling the structures that oppress us all.⁵

The trio's journey represents the most readily discernible alliance in *Dead Astronauts*. Bound by their shared mission to dismantle the oppressive forces of the Company, they traverse a world scarred by environmental collapse and technological overreach. Their journey is far from linear. On some days, they confront different versions of themselves, while on others, they kill those versions or die at each others' hands.⁶ Yet, their love for one another is evidently intense and always binds them together across different timelines. In fact, their connection operates beyond the physical realm. In one version of reality, Moss succeeds in uniting the consciousnesses of the three astronauts, allowing them to think and feel as one.⁷

This act of blending creates something extraordinary—an entity that is queer in its defiance of individuality and conventional boundaries. In a fractured and hostile world, their inter-

5: See Fannie Lou Hamer, "'Nobody's Free Until Everybody's Free,'": Speech Delivered at the Founding of the National Women's Political Caucus, Washington, D.C., July 10, 1971," in *The Speeches of Fannie Lou Hamer: To Tell It Like It Is*, ed., Maegan Parker Brooks and Davis W. Houck, 134–139 (Jackson: University of Mississippi Press, 2011).

6: Jeff VanderMeer, *Dead Astronauts* (New York: Picador, 2019), 24, 19–20.

7: VanderMeer, *Dead Astronauts*, 81–82.

twined fates and collective identity become a testament to the transformative power of love and unity, a vision of resistance that challenges the limits of human connection and embodiment.

On the other hand, animals such as the Blue Fox, the Duck with a Broken Wing, and the Behemoth play crucial roles as adversaries to the astronauts, highlighting the complex relationship between human and non-human entities in a post-apocalyptic world. At first glance, these animals appear to be enemies of the trio. The Blue Fox, in particular, emerges as an enigmatic and multifaceted opponent whose intelligence and ability to reshape the landscape creates constant challenges for the astronauts. Its actions are marked by unpredictability, luring the astronauts into traps, leading them astray, and thwarting their mission at critical junctures.⁸ Beyond its antagonistic role, the Blue Fox also embodies a form of resistance to human intrusion, acting as a guardian of the natural world that is disrupted by the Company's exploitation and, by extension, the astronauts' presence. The Duck with a Broken Wing is similar in the sense that it complicates the astronauts' journey by leveraging their empathy. Its apparent vulnerability lures and manipulates them into situations where their compassion leads to greater peril, thus compromising their mission.⁹ These animal figures are not merely opponents, but serve as reflections of a fractured world where the boundaries between human and non-human are destabilized, complicating the astronauts' obstacles for survival and resistance.

Despite the numerous instances in which animals appear hostile or obstructive to the astronauts, as Dyer-Witheford aptly observes, the binary opposition between astronauts and animals is far from straightforward. This complexity emerges through the nuanced interactions and blurred boundaries between human and non-human characters. For example, Chen exemplifies this ambiguity as his identity enters a liminal space

8: *Ibid.*, 30–31.

9: *Ibid.*, 12, 14, 53–55.

between human and animal due to the Company's bio-experiments, which make him part human and part salamander.¹⁰ His existence challenges rigid categorizations and stresses the destabilization of binaries. Similarly, Grayson's encounters with the Blue Fox reveal an intricate relationship that goes beyond mere animosity.¹¹ These interactions suggest that hostility is not inherent but is rather a byproduct of the unnatural conditions imposed by the Company's exploitation of both human and non-human life. In this sense, the opposition between astronauts and animals is neither intrinsic nor immutable; it is fabricated, manipulated, and contingent on the Company's machinations. Notably, both astronauts and animals share a common goal: the dismantling of the Company and the struggle for a livable future. As Dyer-Witthford notes, "the victory over the Company is a sort of combined operation," emphasizing the interconnectedness and interdependence of these forces in their resistance.¹²

Accelerationism, De-Growth, and Singularity

In the context of the novel's exploration of acceleration and de-growth, Charlie X emerges as a more explicit accelerationist figure than the astronauts. While Dyer-Witthford interprets the astronauts as allegories for accelerationists and the animals as embodiments of a deep de-growth, rewilding alternative—a reading with which I agree—Charlie X's unrelenting pursuit of technological advancement and environmental exploitation more directly aligns him with accelerationist ideals, albeit in a deeply flawed and destructive form. The Company, depicted as a malevolent biotech corporation, epitomizes the reckless drive

10: *Ibid.*, 83–89.

11: *Ibid.*, 115–116.

12: Nick Dyer-Witthford, "Dead Astronauts: Posthuman and Postanimal Resistance to Singularity Capitalism," in *Accelerated Ad(E)vent: Subjectivity and Aesthetics Approaching the Singularity*, ed., Peter Heft and Vinay Sharma, 156–168 (London: Miskatonic Virtual University Press & The Centre for the Study of Theory and Criticism), 167.

for profit at the expense of ethical considerations and environmental sustainability. Its relentless experiments and disregard for ecological balance have ravaged the Earth, making it the embodiment of unchecked techno-capitalism. Yet, the motivations behind the Company's actions remain largely a mystery. This ambiguity situates the Company not merely as an antagonist but as a systemic force, reflecting the broader critique of accelerationism's complicity in ecological and social crises.

Charlie X, the key figure within the Company, emerges as a profoundly tragic and complex character; he is a victim as much as a perpetrator. Trapped within the very structures he upholds, Charlie X reflects the paradox of those ensnared by patriarchal systems, much like men who are constrained by the societal norms they reinforce. After his mother passed away, his father—who was the former leader of the Company—abused him.¹³ His backstory reveals layers of trauma and explains how his life has been shaped by cycles of patriarchal violence. The intensification of the voice in his head after his father's death symbolizes the insidious and enduring reach of patriarchal control, as the text's imagery alludes to, including a full chapter of recurring sentences (see Figure 2).¹⁴ Charlie X's actions, though horrifying, hint at an ambivalent desire to redeem humanity and 'save the future.' His creations, such as Moss, suggest a possible effort to develop new forms of life that might offer salvation, even if his methods are unforgivably cruel and serve the Company's exploitative bioengineering agenda. While Charlie X may not have intentionally orchestrated the convergence of the three astronauts—while he may not have purposefully brought the three of them together—by creating bioengineered individuals with sentience and the capacity to travel between dimensions, he indirectly facilitates their eventual alliance to dismantle the Company. His admission near the end of the novel (that he wants to leave the Company) raises the possibility of a covert attempt to deviate

13: VanderMeer, *Dead Astronauts*, 233–234.

14: *Ibid.*, 251–255.

lam $\diamond$ collective defiance

from the destructive path he has been forced to follow. By relentlessly developing and testing new life forms, he simultaneously embodies the unrestrained drive for technological innovation and an inadvertent search for alternatives to ecological collapse. This complexity positions him as a deeply flawed accelerationist figure.

v.3.1 9. CAN'T FORGET

i.

to the murderous child

[illegible]

Conclusion

To align with this volume's theme of approaching the singularity, I conclude by reflecting on its depiction in *Dead Astronauts*.

In its simplest terms, the novel suggests that the apocalypse is already too far gone, with the Company's existence persisting across timelines. This creates a bleak vision of reality in which techno-capitalist forces that are driven by singularity-like technological breakthroughs appear both invincible and irreversible. The narrative implies a future where technology surpasses human control and comprehension, as reflected in the novel's fragmented and opaque narration. The singularity is not merely near or nearer—it has already arrived.¹⁵

However, just as the characters persist in their resistance despite the awareness that their mission to dismantle the Company will ultimately fail, so too do we persist in our fight against the ecological crisis, or even polycrises. This relentless defiance, even in the face of inevitable failure, underscores the importance of struggle as a form of resistance. One key lesson from the story is that there is value to be found within the struggle itself. The alliances formed among the novel's marginalized characters become a source of strength and a reason to continue living in an otherwise bleak and hostile world. In this way, *Dead Astronauts* demonstrates what Donna Haraway calls for when she writes, “[w]e need stories (and theories) that are big enough to gather up the complexities and keep the edges open and greedy for surprising new and old connections.”¹⁶ The novel reminds us that it is through these connections that we foster, we find the power to fight for a more just and sustainable world.

15: Ray Kurzweil's *The Singularity is Near: When Humans Transcend Biology* (London: Viking, 2005) predicts a transformative future driven by exponential technological growth, while *The Singularity is Nearer: When We Merge with AI* (London: The Bodley Head, 2024) updates and expands on these forecasts with recent advancements, particularly with AI technology.

16: Donna Haraway, “Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin,” *Environmental Humanities* 6, no. 1 (2015): 159–165, 160.

ARTIFICIAL INTELLIGENCE AS THE DEBASED SOOTHSAYER

Vinay Sharma

The following is a response—or perhaps a companion piece—to the works of both Dyer-Witheford and Bliss. The acceleration versus deceleration motifs in Vandermeer’s work are paramount when envisioning a technologically-dominated future; further, the third option of a hybrid tactic centering both environmentalist and nature-centred considerations alongside technological innovation provides a path—or perhaps a line of flight, of sorts—out of the conundrum that reveals itself when theorizing counter-tactics against technocapital acceleration (assuming one does not—or cannot viably—opt for an ecological project of anthropocentric deceleration). As previously mentioned, the use of literature to showcase possibilities of resistance is integral to theorization, for literature—particularly science fiction, weird fiction, and the like—may be utilized as a vehicle by which one may take tendencies within the present and extrapolate them for the exploration of the unfolding of possible futures. The use of AI in Dyer-Witheford’s presentation, however, leads me to ponder its role in the envisioning of futures when framed in light of transhumanism.

Transhumanism, at its core, is defined by Max More as “a class of philosophies of life that seek the continuation and acceleration of the evolution of intelligent life beyond its currently human form and human limitations by means of science and technology, guided by life-promoting principles and values.”¹ Transhumanism plays a critical role in Vandermeer’s work, and if we take the metaphor of the company as a stand-in for capitalism seriously, we must understand it to be an all-out assault on humanity, soaking in all that is knowable—along with the ability to operate freely within the grounds of space and time—whilst banishing the real into the realm of the virtual via an integration with the market. A philosopher of the future, who somehow smuggled himself into the present once wrote: “[c]apitalism [...] has no external limit, it has

1: Max More quoted in Andrew Pilsch, *Transhumanism: Evolutionary Futurism and the Human Technologies of Utopia* (Minneapolis: University of Minnesota Press, 2017), 1.

consumed life and biological intelligence to create new life and a new plane of intelligence, vast beyond human anticipation.”² Death is not only a part of this process, but a creative driving force: a means by which commodification explodes—with human exploitation, sickness, and the erasure of cultures being symptoms of its propagation. This only underscores the pertinence of theorizing around transhumanism; it is the means by which we may be able to deal with a super-charged tendency that not only refuses to play by the rules but actively maneuvers in and around the boundaries of time whilst creating spaces of commodification at will, gleefully absorbing movements of resistances as if it were ten steps ahead of thought itself. To deal with such a force necessitates an ability to catch up to it. Thus, for humanity, augmentation, experimentation, and the transcendence of limitations are pathways within programs of resistance. Such things must be envisioned, and—as we saw in Lam’s essay—literature is nothing if not a vehicle by which we may paint murals of futurity, arming us with a possibility of keeping up with the transcendental nature of capital itself.

Yet, as is often the case with resistance, it seems inevitable that one collides with a wall. We are, of course, finite beings with limitations regarding what is intuitable in that we can only think up to a limit point. We are stuck with the old conundrum of Kantian transcendental subjectivity: there are certain presupposed cognitive grounds which are necessary for us as humans to have a thought, to judge, to intuit, at once allowing us to have familiarity with the Outside ontologically, yet barring us from ever experiencing it free from cognitive structures. In Kant’s *First Critique*, there is a world for us and a world-in-itself. The thing-in-itself is the source of cognition but cannot be experienced in any way except through said cognition. Space (outer sense) and time (inner sense) are *a priori* concepts of the mind, which ground our experiences.³ The

2: Nick Land, “Critique of Transcendental Miserablism,” in *Fanged Noumena: Collected Writings 1987–2007*, ed., Robin Mackay and Ray Brassier, 623–627 (Falmouth: Urbanomic Media Ltd., 2011), 626.

3: Immanuel Kant, *Critique of Pure Reason*, ed. and trans., Paul Guyer and Allen W. Wood (Cambridge: Cambridge University Press, 1998), 184 [A40/B57].

sharma ◇ artificial intelligence as the debased soothsayer source of cognition (the thing-in-itself) is passively received by the intuition and ordered by the understanding to then grant a cogent experience.⁴

Kant allocates a freedom of thought in his determination of imagination. Imagination is still a means by which the raw sensory milieu of the intuition is structured to create cogent concepts in the understanding. Yet, there is still a freedom of experimentation that Kant grants the imagination, allotting it to roam “even to the verge of the grotesque, because it is precisely in this divorce from any constraint of a rule that the case is posited where taste can show its greatest perfection in designs made by the imagination.”⁵ But even this freedom cannot totally escape the constraints of cognition, for Kant tempers the imagination with “the condition that the understanding suffers no offense.”⁶ The structural application of the understanding’s categories and methodological application of said categories are still at play, leashing the imagination to the structure of cognition.

The question becomes: what can one do with such freedom? And it is literature that can guide us as playgrounds of experimentation. In fact, in drastic examples of transhumanist futures, literary experimentation has often been a useful tool to peer into the future. Think of William S. Burroughs and his cut-up technique utilized to write *Naked Lunch*, or the prescient construction of cyberspace in William Gibson’s *Neuromancer*. The aforementioned futuristic literature amounts to a self-flagellation of one’s consciousness, as it stresses the very ability of one’s consciousness to stretch as far as possible to imagine what one could potentially intuit of a grotesque, technologically dominated future.

A problem arises when augmentation becomes so extreme it requires us to speculate beyond the boundaries of our own cognition. Herein, we are forced to speculate to such an extent

4: Kant, *Critique of Pure Reason*, 221 [A88/B120].

5: Immanuel Kant, *Critique of Judgment*, trans., Werner S. Pluhar (Indianapolis: Hackett Publishing Company, 1987), 93 (§22) [242].

6: Kant, *Critique of Judgment*, 93 (§22) [242].

that we must ask ourselves what it is like to be so utterly fragmented that the grounds presupposed in Kant's architectonic are completely fractured. Although there are serious questions regarding how far technology can take us—as is underscored in Bliss' work—perhaps AI, as a virtual guide, may afford us a new form of exploration; a map in lieu of (or perhaps commensurate with) literary experimentations. If this new technology is understood through the lens of Deleuzian ontology, it provides a deterritorialization and reterritorialization of the aesthetic plane that allows us to think in such a way that further impinges on the walls of the Kantian architectonic, testing its strength. In other words, AI becomes a new machine part which—if utilized correctly—allows us gaze into something unfamiliar, if only for a short amount of time; to peer into the virtual would be a way to gaze into that which cannot be fully intuited.

Whether art can be used as a pathway towards resistance is something that has been debated by the likes of Marcuse and, more recently, Steven Shaviro. The latter in particular believes aesthetic transgression is not a means of resistance towards capitalism but mere jet fuel propagated by capitalism itself to launch into new areas of commodification. Perhaps this is the case, and perhaps Shaviro is correct. However, if the opportunity for aesthetic transgression on behalf of capital arises, so may our ability to meet it at some point in time. It is up to the transhumanist subjects of the future to will themselves to such a meeting point. Perhaps certain futures are so obscene and inhuman, something just as inhuman must be used in order to bring thought to a new epoch. Artificial intelligence in its current usage is debased and unforgiving in its depravity. The ecological impacts of its very usage of it brings us closer to a desolate future without humans. Perhaps the future can only be seen with a mangled eye. The question to ponder is: is the disgusting nature of AI exactly what makes it so fit to imagine a future so inhuman that no man can even conjure its contours?

Perhaps that is the purpose of Land's grand inquiry:

sharma ◇ artificial intelligence as the debased soothsayer
“[w]hy does the sun take so long to die? Or the moon retain
such fidelity to the Earth? Where is the new darkness? The
Greatest of all unknowings?”⁷ It is easy to be taken aback by
such a question. Yet, if there is any hope for a future with some
form of an ‘us’ in it, the response must be commensurate with
such an unravelling.

7: Nick Land, *The Thirst for Annihilation: Georges Bataille and Virulent Nihilism (An Essay in Atheistic Religion)* (London: Routledge, 1992), 60.

*PALESTINIAN LIBERATION
ENCAMPMENTS AS A FORM OF
LAWLESSNESS*

Brendan John Brown

Introduction

It was in reading Marie-Pier Boucher's article on "bioartcamp as a technique of attachment to life" that I began to think about the relationship between the Palestinian encampments taking place across the globe and the open-air concentration camp that Gaza is currently being turned into as being mediated by this figure we call 'life.'¹ As Boucher writes, "life is no longer a phenomenon to observe and understand, but a series of mechanisms to reconfigure and transform."² These mechanisms, I take it, are many. But one mechanism I would like to focus on in this brief response is that of territorial capture and ex-appropriation. Namely, how is life 'reconfigured and transformed' as it is both capturing and captured by the land upon and within life animates itself? On my account, the Palestinian college campus encampments elevate what Boucher means when she writes, "camp as an architectural concept commonly refers to a state of emergency."³ That is, the Palestinian encampments mirror and invert the "state of emergency"—which, as Benjamin reminds us in "Theses on the Philosophy of History," "the tradition of the oppressed teaches us that the 'state of emergency' in which we live is not the exception but the rule"—in the current genocide unfolding in Palestine, the Congo, and the Sudan.⁴ This emerging state has as its grounds the appropriation, dispossession, and occupation of stolen land as a method of law-making and law-preserving violence.⁵ The encampments, I will argue, mirror the unfolding terror in Gaza as a window into a world where settler colonial imperialism has been negated and overcome. They are *sites* of heterotopic resistance, which invert and contextualize the "state of exception" of modern biopower, understood "not [as]

1: Marie-Pier Boucher, "A Response to Life's Emergencies: Bioartcamp as a Technique of Attachment to Life," in *The 17th International Symposium on Electronic Art*, 245–250 (Istanbul: ISEA, 2011), 245.

2: Boucher, "A Response to Life's Emergencies," 246.

3: Ibid.

4: Walter Benjamin, "Theses on the Philosophy of History," in *Illuminations: Essays and Reflections*, ed., Hannah Arendt, trans., Harry Zohn, 253–264 (New York: Schocken Books, 1968), 257.

5: Walter Benjamin, "Toward the Critique of Violence," in *Toward the Critique of Violence: A Critical Edition*, ed., Peter Fenves and Julia Ng, 39–60 (Stanford: Stanford University Press, 2021), 45.

a special kind of law (like the law of war),” but rather as “a suspension of the juridical order itself [...] [which] defines law’s threshold or limit concept.”⁶ That is, the Palestinian encampments as a site of non-hierarchical belonging and inclusion *détourn* totalitarian suspension of law in the name of preservation-violence by overcoming the *katechon* which holds back the state of *anomie*.⁷

Encampments as a Form of Lawlessness

On my account, the truth, the essence, the doing of these encampments arrives before us not as a legally sanctioned form of protest protected by the settler colonial liberal democratic state, but precisely as a form of *unlawful* occupation. Instead of arriving at an open plane—a *terra nullius*—these encampments shine light on the blood-spattered veil with which liberal democracies cloak themselves in their violence as a settler colonial state which forcibly removed the Indigenous populations from their land that they had previously peacefully lived upon and thrived. That is, these encampments performatively contradict the naturalized and received understanding of settler colonial lands as being legitimate and justified. In this sense, the Palestinian encampments are what Foucault would call “heterotopic spaces,” or “places that do exist and that are formed in the very founding of society—which are something like counter-sites, a kind of effectively enacted utopia in which the real sites, all the other real sites that can be found within culture, are simultaneously represented, contested, and inverted.”⁸ Their illegal occupation of stolen land inverts onto the colonizer their own illegitimacy through a *détournement* of peaceful co-habitation, mutual co-belonging, and free assembly.

6: Giorgio Agamben, *The State of Exception*, trans., Kevin Attell (Chicago: University of Chicago Press, 2005), 4.

7: “The *katechon* is thus an ambiguous figure who holds back the already operative, ‘mystery of lawlessness,’ and, by extending secular history, delays the final redemption.” Jessica Whyte, *Catastrophe and Redemption: The Political Thought of Giorgio Agamben* (Albany: SUNY Press, 2013), 7.

8: Michel Foucault, “Of Other Spaces,” trans., Jay Miskowicz. *Diacritics* 16, no. 1 (1986): 22–27, 24.

brown ◇ liberation encampments and lawlessness

Those who seek out legitimacy from the settler colonial states for the protests that are unfolding are ignorant of the very point the protesters are trying to make: settler colonial states are states of violence and brutal occupation; their very existence is illegitimate. These encampments are not seeking to legitimate the settler colonial state's claim to delineate who or who cannot be on stolen land but reveal the constitutive violence upon which these states rest.⁹ In this sense, the encampments fall under the third categorization of camps referenced by Boucher: camps of necessity, or "spaces of relief and assistance, spaces that are constructed in response to perceived threats, expected hazards or immediate pressure."¹⁰ These encampments are *responding* to the violent hazards of settler colonial rule. Thus, to seek legitimacy from the very threat they are persecuted by—that is to say, the police and Zionists forces (which are one in the same, though different) — would be to miss and undermine the very origin and essence of these encampments.

On my account, it is by peacefully occupying stolen land that the encampments shine a harsh light upon the constitutive violence of settler colonial imperial powers. As Benjamin argues in "Critique of Violence," the dialectical unfolding of means to ends in service of law-making and law-preserving violence reveals the constitutive force required to supposedly legitimate the 'founding of the state.'¹¹ These encampments, then, suspend the dialectic of means to ends by becoming encampments of 'pure means,' non-violent and peaceful.¹² The encampments do what the state cannot or will not—eradicate violence in service of a proscribed political end. And so, just as Israel brutally genocides the Palestinian people in the name of a law-preserving violence, we see the encampments negate this

9: One could say that Agamben's contention that the 'camp' is the paradigm of modern biopolitics is sympathetic to this reading. But, I would argue, Agamben never allows his survey to reach into the 'coloniality of power' which has shaped the orientation of land and space and bodies-in-that-space. Thus, the encampments reveal a missing strata of Agamben's archeology of modern biopolitics: the presumed correlation between the subject and 'their' land; in short, Agamben completely ignores the question of *Indigeneity*.

10: Boucher, "A Response to Life's Emergencies," 248.

11: Benjamin, "Toward a Critique of Violence," 45.

12: *Ibid.*, 50.

violence by peacefully co-belonging and occupying what can only be described as a blood-soaked terroir where only bodies and bones are watered.

By occupying stolen land, a form of land reclamation, in the name of the Palestinian people and their eventual liberation—for they will be liberated from the tyranny of the oppressive Zionist regime—is to mirror and invert the violence of the Israeli state in the form of a *détournement*. The student protesters take a method of occupation—settling—and denature it away from its received understanding in liberal discourse. This would be the act of inverting and displacing the enclave of the encampment; Guy Debord and Gil Wolman write, “[t]he distortions introduced in the detoured elements must be as simplified as possible, since the main act of a *détournement* is directly related to the conscious or semiconscious recollection of the original contexts of the elements.”¹³ No longer the method of dispossession, the student protestors, and their reclamation of stolen land through their illegal occupation, mark a significant distance from the Occupy Movement of the late-aughts—not-occupations ignorant of the stolen nature of the land they were camping upon. In contrast, student encampments are explicitly aware of the theft perpetrated by the state in service of a *demos*. As Boucher notes, “for me the emergency lies on the necessity to attach ourselves to the whole of life, meaning the possibility to resist the biologization of life.”¹⁴ This ‘biologization of life’ is what Benjamin notes as being revealed in the violence of law-preserving/law-making as “*bloß lieben* [mere life].”¹⁵

By attaching ourselves to the whole of life in the encampments, what is made clear is the asymmetry between them and the open-air concentration camps in Gaza. If the encampments are tented up in the name of a ‘whole life,’ the concentration camps are a form of what Orlando Patterson calls “social death,” or the abandonment of beings to a zone of dereliction

13: Guy Debord and Gil J. Wolman, “A User’s Guide to *Détournement*,” in *Situationist International Anthology*, ed. and trans., Ken Knabb, 14–21 (Berkeley: Bureau of Public Secrets, 2006), 17.

14: Boucher, “A Response to Life’s Emergencies,” 247–248.

15: Benjamin, “Toward the Critique of Violence,” 57.

brown ◇ liberation encampments and lawlessness which subtends and in/trans/forms its corollary ‘mere life.’¹⁶ Whether or not one is killed is independent of the fact that Gazans have been stripped to their most biologically and terrestrially vulnerable nature. The encampments, on the other hand, speak to “the potential to create universes that are opened to a plurality of worlds.”¹⁷ As a plurality of worlds popping up like bubble universes on a cosmic foam, the encampments reflect on their surface a potential world quite unlike this one where co-belonging, being-with, and free assembly are not only potentialities, but actualities. Make no mistake, Gaza is becoming a graveyard of blood and bones. The encampments force us, through their valorization of whole life, to sit with the unfolding impoverishment brought upon by our modern barbarity.

It is in the sense of their potential for another world that the encampments prefigure a radical revolutionary tomorrow in the today. Specifically, prefiguration, or “how activists embody and enact, within their activism, the socialities and practices they foster for broader society,” is about producing a world of tomorrow in the today.¹⁸ It is a form of praxis which seeks to neither delay nor differ the praxis needed for revolution. As Boucher and Claire Webb note in “Diagramming Space Feminisms,” the diagramming of revolutionary practices is a “doing and intervening’ that results in caring for each other, Earth, and space” and “coagulates pasts, presents, and futures of space activities toward the generation of a ‘real that is yet to come’—on that we foretell to be more inclusive and just.”¹⁹ The encampments, then, as a diagramming of an unfolding process that negates the violence of today in the name of a better tomorrow, are about this prefiguration of an extra-terrestrial spatiality that is not found ‘in this world.’

I argue, therefore, that these encampments are capable of

16: Orlando Patterson, *Slavery and Social Death: A Comparative Study* (Cambridge: Harvard University Press, 1982), 4–9.

17: Boucher, “A Response to Life’s Emergencies,” 247.

18: Guilherme Fians, “Prefigurative Politics” on *The Open Encyclopedia of Anthropology*, published March 18, 2022. [<https://www.anthroencyclopedia.com/entry/prefigurative-politics>]

19: Marie-Pier Boucher and Claire Webb, “Diagramming Space Feminisms,” in *Space Feminism: People, Planets, Power*, ed., Marie-Pier Boucher, Claire Webb, Annick Bureau, and Nahum, 3–11 (London: Bloomsbury Publishing, 2024), 1, 4.

being theorized as extra-terrestrial precisely because they are spaces of emplotment which refuse a singular vision or 'god-like view' from up above. They are "diagrams [of] a non-normative history of space exploration where the messy encounters between imaginaries and histories become infrastructures, possibilities, bodies, relations, and archives that create alternate presents."²⁰ As spaces beyond the normative space of settler colonial society, these extra-territorial encampments are beyond, but in negation to, the terrestrial laws of earth and society. They produce an understanding that "space is not merely a vacuous receptacle of future imaginaries that metal, humans, fruit flies, dogs, and bacteria happen to populate, but produces a plethora of materialities that reflexively encode humans' self-perceptions of the planet and beyond."²¹ As I have stressed, the encampments are a mirror distorting our perception of the naturalized violence of capitalist life we all live under. The encampments are therefore, additionally, anti-capitalist in their rejection of the appropriation of the nature of primitive accumulation necessarily predicated upon land and bodies forced into unnatural forms of social reproduction and sociality in the name of capitalist accumulation. In this sense, 'life' and 'death' mark an interminable contradiction at the very heart of capitalism's dynamo: that is, life-death, the life and death of those reproduced to be expendable by the necropolitical economy of war and technology, spells a liminal zone through which these encampments reveal in their unveiling of the violence of settler colonial dispossession of primitive accumulation.

It is capital that determines the social unfolding and organization of society along the lines of social modes of production and reproduction. As Andreas Malm notes in *Fossil Capital*, the transition from steam-powered and coal-fired factories and industries toward oil-based supply lines was affected on the basis of breaking up the coagulation of labor unionizers at

20: Boucher and Webb, "Diagramming Space Feminisms," 8.

21: *Ibid.*, 9 (*italics removed*).

brown ◇ liberation encampments and lawlessness various checkpoints in the production line. Since oil pipelines could go underground, they were significantly more difficult to organize around—no longer could miners block entrances or slow-down transport.²² What is relevant to our discussion, on my account, is that capitalism surveils and controls the organization of space for the accumulation of more capital and more efficient modes of production. Thus, as we see in Gaza, and the world writ large, the surveillance of space is predicated upon a collapse and intensification of the vectors of space and time. Faster and more concentrated, land and the bodies upon it are easier to control and manage. In this manner, then, the encampments present an *elongation* and a *deceleration* of space and time, respectively. Thus, we must pay attention to the restoration of depth and fluidity that these encampments bring. They are temporally and spatially extended objects. The encampments, with their rejection of police presence and the prevalence of face masks, remind us how never before were we able to watch a genocide unfold in crystal-clear HD. *And*, that the methods of control and surveillance used in Palestine are only years, months, and days away from being implemented in our society.

Conclusion

To summarize, I have argued that the encampments for Palestinian liberation are a cipher for the chaos unfolding in Gaza, the Congo, the Sudan, to name but a few of the world's crises. As a cipher, they reject the intelligibility of liberal discourse in the name of prefiguring revolutionary praxis that elongates and decelerates the temporal and spatial intensification latent in capitalist society. As mirrors to the unfolding horrors, we must reflect upon our complicity in settler colonial violence and fight for another tomorrow today. We must ask ourselves 'in what way can we think of the attachments of 'whole life' in the

²²: See Andreas Malm *Fossil Capitalism: The Rise of Steam Power and the Roots of Global Warming* (New York: Verso, 2016).

accelerated ad(e)vent

encampments today? How do we theorize the human nexus of biological and non-biological materialities that these encampments provide? What does it mean to allow these encampments to spill over into our daily lives? How is life as such rethought from the paradigm of the camp? And lastly, how can we all live together as we do in the camps?’

INFORMATION

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