



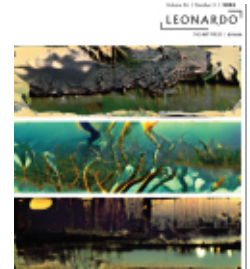
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*The AI Laocoön: Art and the Artificial Imagination, or
Survival Aesthetics in the Anthropocene*

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The AI Laocoön

Art and the Artificial Imagination, or Survival Aesthetics in the Anthropocene

SUK KYOUNG CHOI

ABSTRACT

The art-as-research described in this article—a project named *The Drowned World*, after J.G. Ballard's dystopian novel of the same name—is a reflection on environmental collapse and its technical representation in the Anthropocene. Is imagination being subsumed by the artificial? Are the sociotechnic hyperobjects of artificial intelligence and global warming chimera of the imagination, or are they certainties emergent from a desire for virtuality? In *The Drowned World* project, the author proposes to employ text-driven image synthesis as an aesthetic apparatus obscuring the distinction between imagination (potentiality) and virtuality (artificiality) to offer a computational poetics of a world drowning in data, an imaginative ecology of the virtual sublime.

Wisely he spake: "A deadly fraud is this,"
He said, "devised by the Achaean chiefs!"
And cried to all straightway to burn the Horse,
And know if aught within its timbers lurked.

—SMYRNAEUS QUINTUS, 4TH C. CE [1]

THE APPARATUS OF SELF-FULFILLING PROPHECY

The Trojan priest Laocoön's archetypal warning to the citizens of Troy of the hidden presence of their Grecian enemies inside a large wooden horse is a metaphor for challenging unquestioned acceptance in the face of illusion. Like that historic prophecy, J.G. Ballard's novel *The Drowned World* [2] is a warning myth, a metaphor for the image of mass extinction, a denial of the willful deceit that veils—through adornment—the apparatus of manipulation. The novel proposes that rapid environmental change could turn the global climate back some 250 million years, to the age of reptiles, during a single generation.

As an artist writing from the Anthropocene [3] prelude to that possibility, drowning already in a data flood of prediction, I wish to begin an imaginary exploration of possible worlds (Fig. 1). I seek to map future vistas falling between the

imagined (constrained by potentiality) and the virtual (artificial representation). Recalling Impressionists' *en plein air* approach, I breathe deep the pixelated atmosphere of these times, a painter traveling *en plein virtualité* into the ubiquitous imaginary, if not to reinforce a warning, then to provide an affective wayfinding for future journeys toward—as Ballard suggests—the immanent past.

In *The Drowned World*, I draw from Ballard's text to bring into focus the hypothesis of a virtual sublime through a computational poetics of Anthropocene technics. The Anthropocene era is the historic, and seemingly passing, age during which humans have deposited a discernible trace of our presence in geological strata—carbon, nuclear isotopes, and now, increasingly, the detritus of an environmental senescence we continue to fabricate. The project explores the aesthetic implications of the entanglement of computational intelligence and environmental collapse, proposing that out of such conjoined hyperobjects arises the *virtual sublime*.

The artifactual expression of *The Drowned World* is the creation of a latent narrative-image space in the form of digital images produced through the application of machine-learning algorithms to paintings done with traditional artist's materials, which paintings are in turn modified in response to those digital images. The modified autographic (handmade) paintings, in turn, become algorithmic input initialization data in a potentially endless loop of counter mediation. In this exchange, I intend for the process to map the horizontal boundary of an Anthropocene hyperobject. This hyperobject falls into an ontological category of sublime distribution, enfolding the technological distancing of anthropomorphic presence in the perceived environment at the same time as those enabling technologies withdraw from awareness. Pictures of what was and will be—never what *is*—offering aesthetics of the virtual sublime in the Anthropocene.

So-called artificial intelligence (AI) is a collection of technologies that is inextricable from human actors and their behaviors [4]. It is an apparatus that entangles the lived environment with the algorithmic representation of that envi-

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Fig. 1. *Leicester Square*. An image produced by the virtual apparatus of machine learning text-based image synthesis for *The Drowned World* project.
(© Suk Kyoung Choi)

ronment in a recursive enframing [5], bringing forth through a continual restructuring, in which the “intention is not to change the world but to change the meaning of the world” [6]. The innumerable mass of images generated by digital artisans using machine learning technologies may address the transient urgency of social media (that indulgence in the spectacle of “mass mobilization” [7] gained by posting GAN-ism [8,9] on Twitter and Instagram, which, when picked up by the news media, is then uncritically accepted as “AI art” by the general public), but do these pictures evoke aesthetic affect? Do they raise questions about origins and existence? If by “the aesthetic” we mean an affective response to the deeply embodied sublime, a longing for union with the existentially encountered unfamiliar, then I want to suggest that the appearance of an apparatus of virtuality already envisions calamity: To propose that the self-referentially iterating technical memory-images of our day might reflect forward into the time of the last painting, bookending the ochre-stained cave walls at the beginnings of human expression with the silicon etchings of extinction. *The Drowned World* seeks to deconstruct the technical hyperobject of the Anthropocene, to “burn the Trojan horse” and expose what lurks within its deceptive apparatus.

THE APPARATUS OF VIRTUALITY

Brazilian Czech-born philosopher Vilém Flusser argues that technical images are produced by an ontological category he calls the apparatus [10]. “Information” is produced by “functionaries” or those who “play” with the apparatus. Information is therefore any output of the functionary—apparatus entailment. As Flusser explains, “the functionary controls the apparatus thanks to the control of its exterior (the input and output) and is controlled by it thanks to the impenetrability of its interior” [11]. This activity puts the functionary into a complicit existential relation with the apparatus. The artist becomes a part of the apparatus, a functionary *component* in an interaction responding to mappings established at some level of abstraction between input and output, a computationally mediated expression and reflection.

The imagination is externalized in the virtual, which is held within the impenetrability of the black box (the appara-

tus). Although Flusser was writing about photography—the apparatus being the camera—the implications for the ever deeper black box of artificially intelligent technology are clear. Cognition becomes computational by design, constituting an emergent artificial world-self complicit in the demise of information in the functionary–apparatus entailment of the Anthropocene. AI decentralizes the human artist in favor of coexistent praxes of autographically embodied and algorithmically mediated reflection, a posthuman relation that media theorist and artist Joanna Zylińska argues calls for a much-needed understanding of art “as having been produced by human artists *in an assembly with a plethora of nonhuman agents*” [12].

The ontological constraints of AI art therefore demand an ethical response to the virtualization of the environment, questioning the assumptions behind the intimate entanglement of awareness and apparatus. If the apparatus is an amalgam of computational and natural, where is the division between the two, and how are we to recognize that Duchampian infrathin line?

SUBLIME PROBLEMS ARE ARTISTIC PROBLEMS

Writing at the dawn of the Industrial Revolution—the point in time that some identify as the beginning of the Anthropocene age—economist and philosopher Edmund Burke describes the *sublime* as that which “is productive of the strongest emotion which the mind is capable of feeling” and is therefore “analogous to terror” [13]. This is the time of awakening to an immanent extinction, when we realize that “the dominant risk to our survival is ourselves” [14]. The age of humans is an age of sublime dissociation from nature, encapsulated in the illusion of anthropomorphic privilege.

Beyond the body, mind, and imagination, the sublime is existential fear, an emotional pain leaving us in a state of astonishment, “that state of the soul in which all its motions are suspended with some degree of horror [and] the mind is so entirely filled with its object, that it cannot entertain any other, nor by consequence reason on that object” [15]. I want to suggest that this transcendent astonishment underlies a ubiquitous anxiety so commonly repressed that it has become normalized in the late Anthropocene, and more so

since the computational technologies managing contemporary society have massively proliferated the spread and speed of spectacle—information and misinformation alike.

We arrive at the sublime hyperobject of environmental collapse and the terror of mass extinction. *Hyperobjects* are defined by object-oriented ontology philosopher Timothy Morton as “things that are massively distributed in time and space relative to humans” [16], consequently constituting “entities that operate on scales that are at present too vast or too tiny for humans to do much more right now than report and observe them. *We have to undergo them*” [17].

AI, therefore, with its ubiquitous and embedded distribution, interconnectivity, and ontological entanglement with a network of human functionaries [18], may be considered a hyperobject explicitly engaged in constant (re)mediation and (re)organization of the planetary environment [19], ultimately exceeding the phenomenological horizon of its temporally constrained designers. An AI-augmented co-intelligence, in which human functionaries become replaceable components in the selective categorization of targeted data, already presupposes information is lost in translation, suggesting that organic-technic hyperobjects activate abstract visualizations of otherwise unattainable ontological states, generating a lifeworld of virtual imagination. Hyperobjects take on a life of their own, an extension in space-time exceeding the human imagination, entering the virtual sublime.

As a metaphor for what is fundamental in human aesthetic response to the sublime poetic of environmental collapse, the act of painting is simultaneously a construction and a deconstruction, a putting down and taking away, trying to restore balance to the disrupted surface. Composition in and of the Anthropocene implicates a double-edged existentialist imperative in which “the very climates—cognitive, industrial, economic, affective, technological, epistemological, and meteorological—that render our life possible are also self-destructive (both destructive of the self, and destructive of climate itself)” [20]. It seems the way forward, as in painting, destroys the surface as it tries to restore order to the sublime, bring back to balance, (re)compose life.

THE DROWNED WORLD PROJECT

In the speculative exploration I offer here, the Trojan apparatus of self-destruction can only help us make pictures of these virtual end-times, it cannot change anything. An irresistible separation between the desire of imagination and the fear of possibility emerges. The machine stands in for the displaced imagination, an astonishment engine. An apparatus of signification is offered by the machine, an artificially blank canvas, the genesis space of a becoming that painter and theorist Jeremy Gilbert-Rolfe calls “a surface both continuous and uninterrupted” [21], a surface that has, in the contemporary mind, become “the sign of an invisible and ubiquitous technological presence” [22]. Blankness is now full of unheard noise, the empty sound of virtual trees falling on a thousand barren plateaus.

Hyperobjects entangle virtuality and actuality. *The Drowned World* attempts to expose our complicit embodi-

ment in—and of—the technical image by exploring the phenomenological appearance of the Anthropocene hyperobject as a sublime entanglement of subjectivity, the environment, and the artificial, embedded in the aesthetic apparatus of its manifestation (Fig. 2).

Time and Context

Ballard employs a central narrative theme he calls “neuronic time” [23], a speculative hypothesis that the development of consciousness over eons of historic time might be genetically imprinted, and that this evolutionary imprint encodes the formative conditions of the local environment as embodied deep memory. As the environment transforms, so does the grounding of selfhood. As devastating climate change drives the story world back in neuronic time to the physical and developmental conditions of the Triassic era, human consciousness reverts to an equanimity with the primeval in which “the terrestrial and psychic landscapes [are] indistinguishable” [24]. Dreams are revealed as memories, and memories become experiences, as the embodied primeval transforms from virtuality to actuality.

I appropriate the rhetorical device of neuronic time to conduct a poetic reduction on Ballard’s text, stripping away words, washing away the trace of humanity, to erode subjective presence and let the virtual worlds hidden in the text emerge.

The Image

I explore the image of neuronic time through its horizontal emergence in the Anthropocene hyperobject. Venturing into a discursive exchange with a neural network running a text-based image synthesis algorithm, I explore emergent possible worlds by way of a kind of Laocoönian anticipation, intending a phenomenological exposé of the tool that simultaneously predicts and engineers the way forward.

The AI apparatus (VQGAN+CLIP) [25] in these explorations is an open-source machine learning technology built from the amalgamation of a generative adversarial network (Vector Quantized Generative Adversarial Network, or VQGAN) and a natural language classification engine (Contrastive Language–Image Pre-training, or CLIP). The CLIP component guides the VQGAN to try to produce images that match a text description. The VQGAN architecture produces visual “arrangements and textures [that] are not discrete but continuous—objects need not have distinct boundaries . . . and need not be complete” [26].

What emerges is a kind of language-mediated cybernetic Impressionism. The images are evocative, suggestive, poetic, and unrepeatable, moments forever gone, flashes of neuronic realization in the human/machine embrace. Such technologies are not deterministic, that is, results are not strictly the same every time the same code runs, a consequence of the complex interaction of multiple levels of indeterminacy. Results are more like samples drawn from a latent space of potentiality. Held in cybernetic dreams—by the very technologies used to manufacture the conceit of the real—are visions of a displaced irreality, syntheses that reflect the way

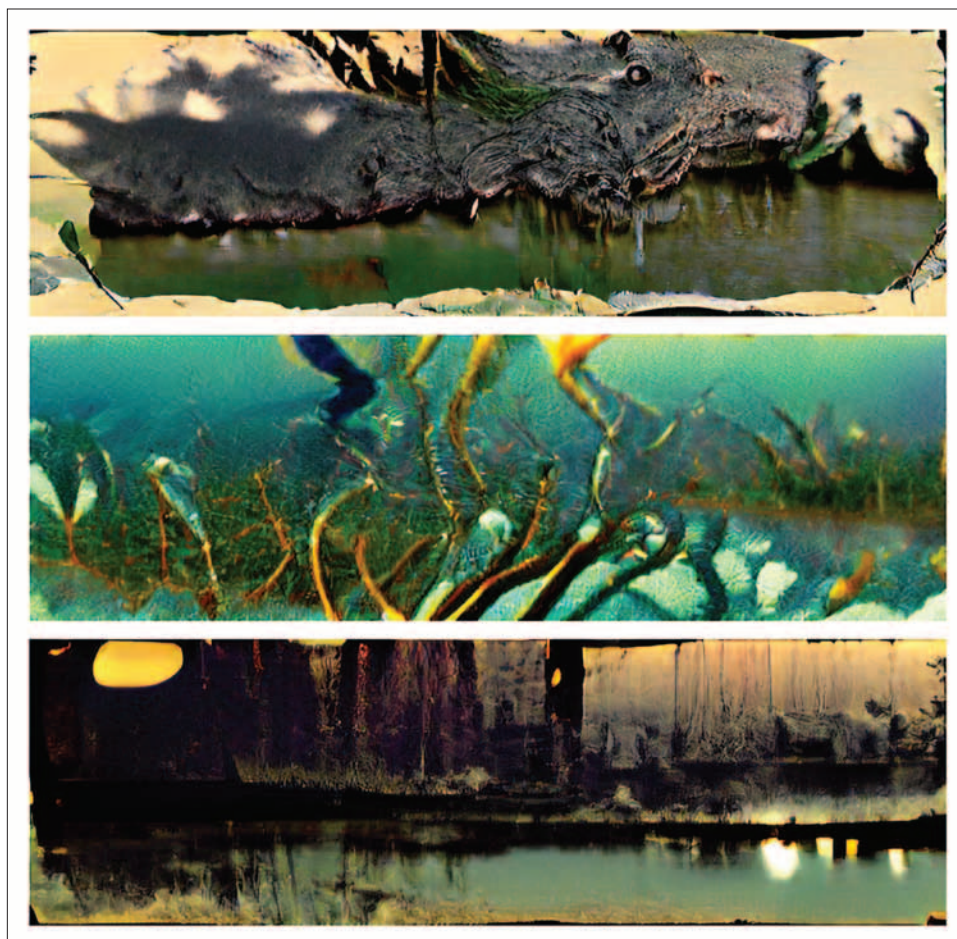


Fig. 2. *The Drowned World* triptych, series 001. One set of mappings from the text-image relations matrix (see Fig. 3).
(© Suk Kyoung Choi)

we model ourselves and anticipate potential futures. This ambiguous apparatus constitutes my Anthropocene camera.

If irreal, are these virtual images any less referential? Nelson Goodman has posited that the synthesis of “reality” in an image relies on a set of social conventions of representation, constituting an “egocentric ellipsis” such “[t]hat [saying] a picture looks like nature often means only that it looks the way nature is usually painted” [27]. These paintings gaze into the way AI represents nature, referential as an associative data flow drawn from human visions of the past toward an unknowable yet unavoidable future in which “the usual” no longer applies.

The Text

I have chosen poetic encapsulations drawn from a neuronc time dream described in Ballard’s text. The words function as sequences of abstract image prompts related to a feeling rather than attempts to model the specifics of the shifting flux of interspersed impressions. The images that result are similarly clustered, seemingly drawing from multiple referents, none of which are prevalent. A dream is seldom describable in a single sentence. Sentences are merged as the AI “tries to ‘mix’ the images, giving the same priority to both texts” [28].

The images are run in sets in which the text is progressively edited by deleting words, eroding meaning in a sequence of poetic investigations of imaginative regression in neuronc time. This process allows for the mining of an affective aesthetic space implicitly encoded into the writing, drawing out

the tacit image Ballard may have held in imagination. I begin to eliminate words from these prompts (Fig. 3), to remove at first with a kind of surgical aesthetic all proper nouns and personalities; they fade away like Ballard’s populations, the gaps between filled with nothing, a substitution by absence, the memory of self now fading, a slow return to primitive forms, simple things, no longer subjective referents, as context is washed away.

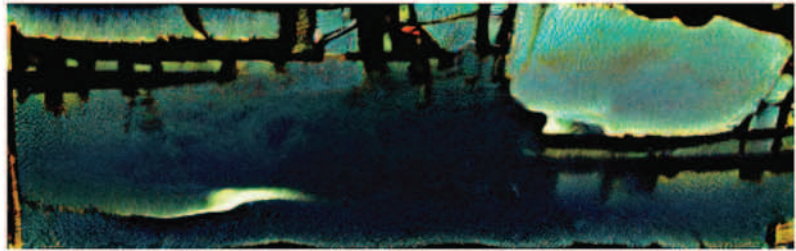
I want to draw on the metaphor of erosion, of decay and destruction of the transient experience of sensibility, of the Anthropocene’s closing light, of extinction, of terror, of the sublime. The images critique the machine we are complicit with, the Trojan horse we haul to our own funeral, which forms and warns in a cycle of invisible analytics, speaking in silicon tongues.

The texts are gradually transformed into deep abstraction and the poet’s eye is stranded in a space of “visual indeterminacy” [29], where the ambiguous relation between the linguistic and the visual becomes the source of imagination in the virtual world of the posthuman.

The Synthesis: Mapping Latent Space

Avery Slater, of the University of Toronto’s Ethics of AI Lab, asks, “Is there a mutual ethics of this encounter between AI and human language, a conceptual creativity that could formulate itself as ‘translating’ between wholly separate and irreducible cognitive frames, even as one language is able to

"Later that night, as Kerans lay asleep in his bunk at the testing station, the dark waters of the lagoon outside drifting through the drowned city, the first of the dreams came to him. | He had left his cabin and walked out on to the deck, looking down over the rail at the black luminous disc of the lagoon. | Dense palls of opaque gas swirled across the sky only a few hundred feet overhead, through which he could just discern the faint glimmering outline of a gigantic sun. | Booming distantly, it sent dull glows pulsing across the lagoon, momentarily lighting the long limestone cliffs which had taken the place of the ring of white-faced buildings."



"Later at night, bunk at the testing station, dark lagoon waters drifting through the drowned city. | Walking on the deck, looking over the rail, black luminous disc lagoon. | Dense opaque gas swirled across the sky overhead, just discernable faint glimmering outline of a gigantic sun. | The sun sent dull glows pulsing across the lagoon, lighting the long limestone cliff, a ring of white-faced buildings."



"Night, bunk, testing station, dark waters, drowned city. | Walking, looking over the rail, black disc lagoon. | Opaque gas swirled across the sky, faint glimmering gigantic sun. | Dull glows pulsing across the lagoon, lighting the limestone cliff, white-faced buildings."



"Night, bunk, testing station, dark waters, drowned city. | Looking over a rail, black lagoon. | Gas across the sky, faint glimmering sun. | Dull glows across the lagoon, limestone cliff, white buildings."



"Night, dark waters, drowned city, black lagoon, faint glimmering sun, dull glow, limestone cliff, buildings."



Fig. 3. A text-image relations matrix showing text erosion in *The Drowned World* project. The images are generated by the prompts to the left. The text is successively edited, promoting visual indeterminacy as the referents combine in increasingly dissociate ways. (© Suk Kyoung Choi)

translate yet never reductively replicate the semantic weight of another?" [30]. It is this ethical synthesis that I seek here in the phenomenological aftereffects of the apparatus of the Anthropocene camera—an apparatus that in its blending of human, AI, and environment opens a latent space of tacit deep time somewhere between discourse and code, between image and the perceived, between imagination and virtuality. An appearance of an *other* as the sublime reflection of the self.

I painted the autographic triptych (Color Plate B)—the triptych that I used as initialization input for the algorithmic

process in this series of images—in response to three themes that trace through Ballard's novel and resonated with my reading of the textural evocation in the imaginary world. These narrative axial dimensions are:

Top panel—survival axis: extinction/genesis

Themes:

Endings, gone away, extinction, "empire of the sun."

Cities destroyed by the environment; the environment nurtured by the dying cities.

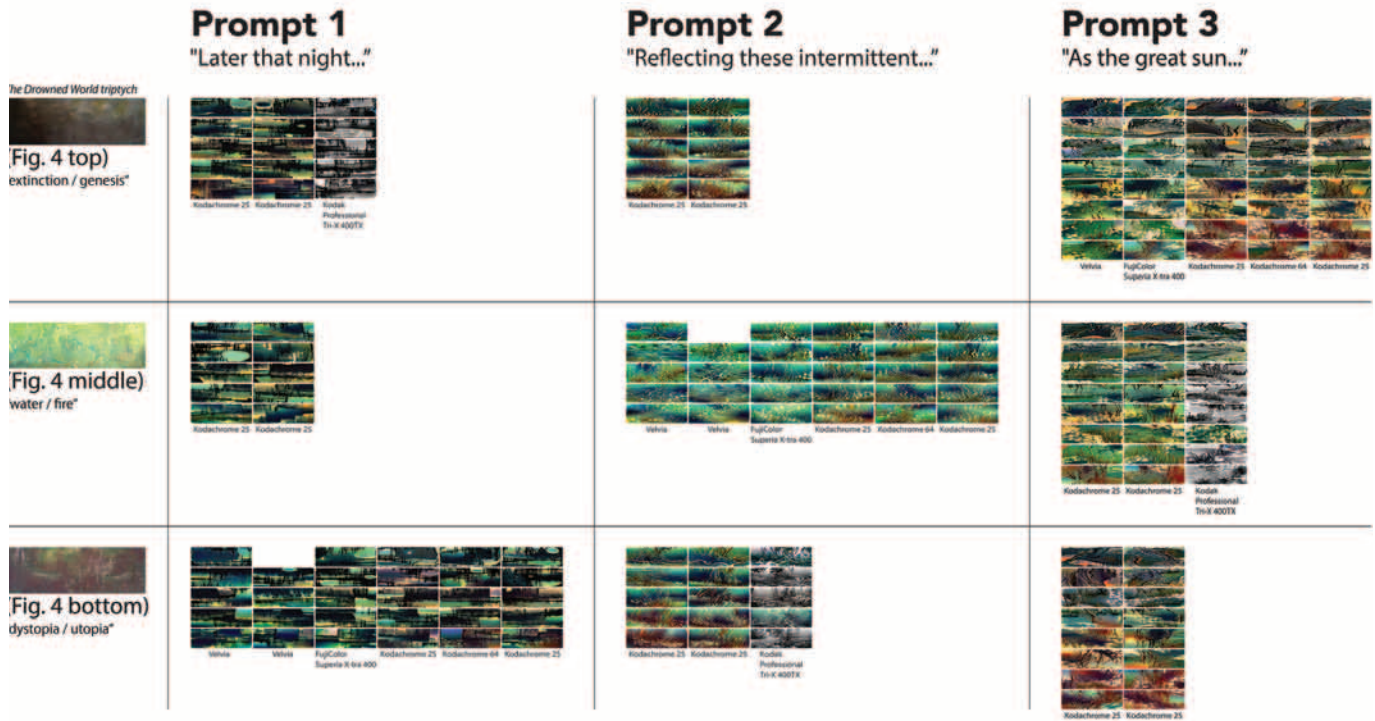


Fig. 4. The latent space of the “neuronic time” dream as mapped onto autographic painting space. For a full-resolution image, see the supplemental materials.
(© Suk Young Choi)

Middle panel—elemental axis: water/fire

Themes:

- Submerged prior world, overgrown emerging world (Triassic).
- The sun melts the ice. The seas drown the cities.
- Constant storms.

Bottom panel—social axis: dystopia/utopia

Themes:

- Some die, others are reborn.
- The past replaces the future.
- As Ballard has commented, “They realize that the uterine sea around them, the dark womb of the ocean mother, is as much the graveyard of their own individuality as it is the source of their lives . . .” [31].

There is no particular reason why the original paintings should sit in the vertical order shown in Color Plate B. In practice, I rearranged the order in a matrix against the possible combinations with the three paragraphs of the dream text (Fig. 4). The grid represents a small selection of the exploratory sampling conducted; left to right are the three prompts used (the dream is composed of three paragraphs, and each is destructively edited from top to bottom of each cluster as shown in Fig. 3). The vertical axis major groupings are the resultant spaces generated by the three paintings in the triptych, progressing along the three axial themes from Ballard’s novel. The horizontal variation in each cluster reflects the text prompt, including film stock cues.

Just as Ballard’s scientists map out the submerged cities, recording (re)emergent life forms, this image series draws from

Ballard’s text to map out the algorithmic textual-textural latent space of an emergent virtual world. Ballard’s theme is particularly relevant now, as physical and virtual environments entwine in the fragile temporal. As one collapses, we revert, in Ballard’s sense, to an earlier cognitive state, a time in which we are still organic beings but are increasingly out of touch with what that implies. We become our own prehistoric, entering the new but deeply embodied self-less territory at the end of time. What slips away unseen is the understanding that civilization relies on maintaining a shared narrative.

(IN (CLOSING) IN)

The premise of *The Drowned World* project is that an imaginary photography of the Anthropocene raises questions about survival at the same time it intimates hope—else what is art for? French philosopher Henri Bergson asks us to consider this: “What is the aim of art if not to show us, in nature and in the mind, outside of us and within us, things which did not explicitly strike our senses and our consciousness?” [32]. The images of *The Drowned World* embody the sense of “gone forever.” As in observation of real-life landscapes, the light changes perpetually, input further complicated by weather and point of view, the breath, navigating the emotions; I’ll never find this place again—all one observes is change. The generative nature of the AI image mimics lived experience, offering an affective indeterminacy, a strange and alluring algorithmic pursuit of the mental image, a world remade in the image of an artificial imagination, proposing finally that the Anthropocene may terminate in the genesis of the artificially sublime.

Acknowledgments

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