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Recursion, Interrupted

Certain conferences operate as gatherings that aim to articulate the problematic, the predicament, and the promise of an inquiry whose urgency might not be immediate or apparent in its immediacy or its appearance. I believe that "Art after Culture: Navigation Beyond Vision" might be one such occasion. My role, accordingly, is to take stock of what has been proposed last night and today so as to offer a first draft of some but by no means all of the concepts, images, and figures of thoughts that populated the presentations at this event.[1] The question of navigation, which forms the raison d'etre for this conference, is popularly understood as a quotidian practice of movement within computational networks. As a gestural economy compelled by digital interfaces, the habitual activity of navigation tends to recede from critical scrutiny. To begin to comprehend navigation's historical ontology, phenomenal interfaciality, political imagination, and psychic life requires an effort of defamiliarization that begins by paying attention to this critical inattention. The peculiar elusiveness that thwarts the ambition to think through the worlds that navigation makes possible is not merely definitional; rather, it indicates the opacity of computational processes characterized by James Bridle under the portentous phrase "the New Dark Age." Bridle's *New Dark Age: Technology and the End of the Future* takes its title from the sentences embedded within the "papers of the late Francis Wayland Thurston, of Boston" that begins H. P. Lovecraft's 1926 weird fiction "The Call of Cthulhu":

> The most merciful thing in the world, I think, is the inability of the human mind to correlate all of its contents. We live on a placid island of ignorance in the midst of black seas of infinity. And it was not meant that we should voyage far. The sciences, each straining in its own direction, have hitherto harmed us little. But some day the piecing together of dissociated knowledge will open up such terrifying vistas of reality and of our frightful position therein that we shall either go mad from the revelation or flee from the deadly light into the peace and safety of a new dark age.[2]

If we adopt, for a moment, the dated terminology of Wilfrid Sellars's "Philosophy and the Scientific Image of Man," Lovecraft's cosmic fable could be said to envision the catastrophic impact of the "scientific image of man" upon man's "manifest image" of himself.[3] Instead of overcoming the dualism between the scientific and the manifest image by incorporating the latter into the former, as Sellars envisioned in 1960, today's scientific

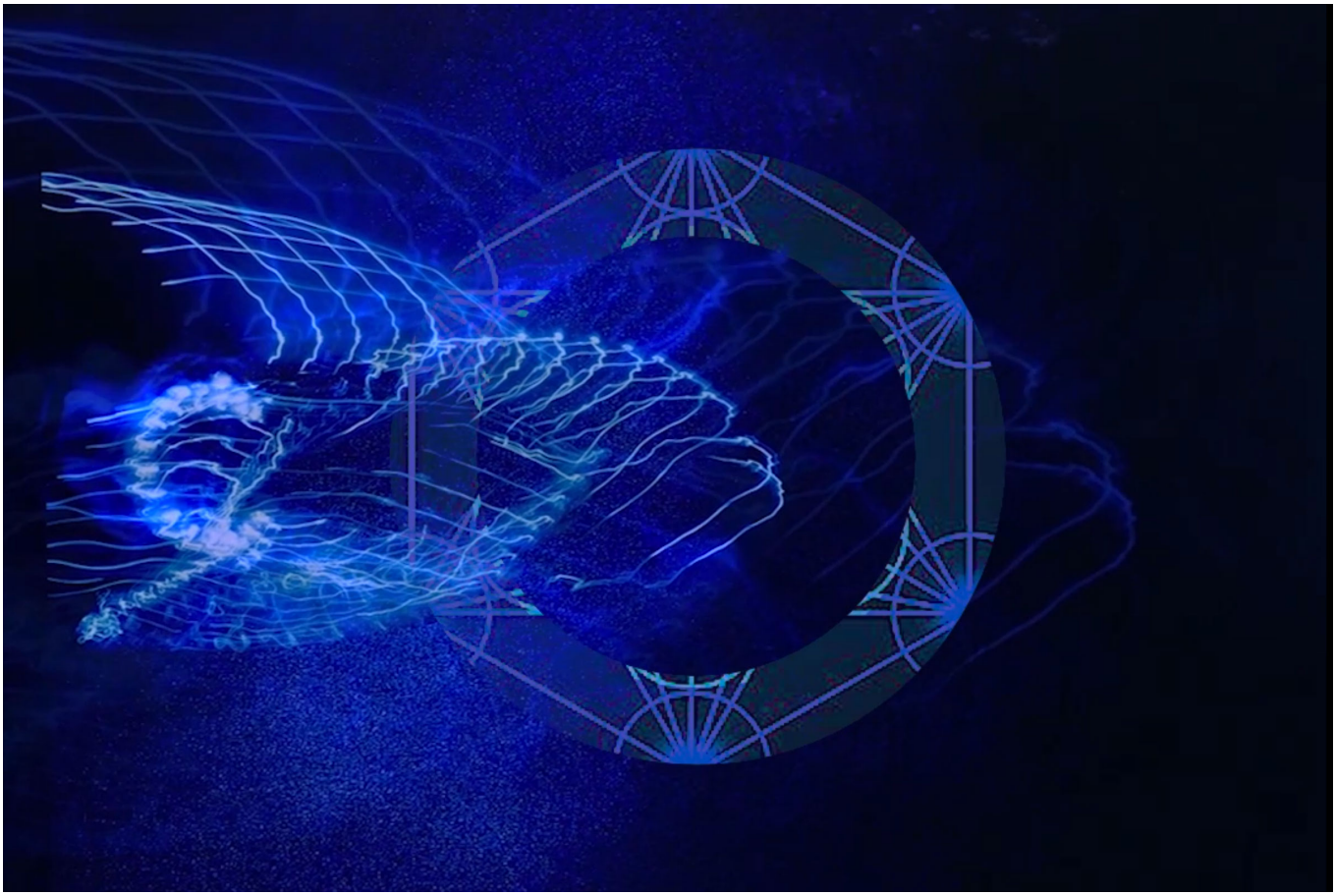

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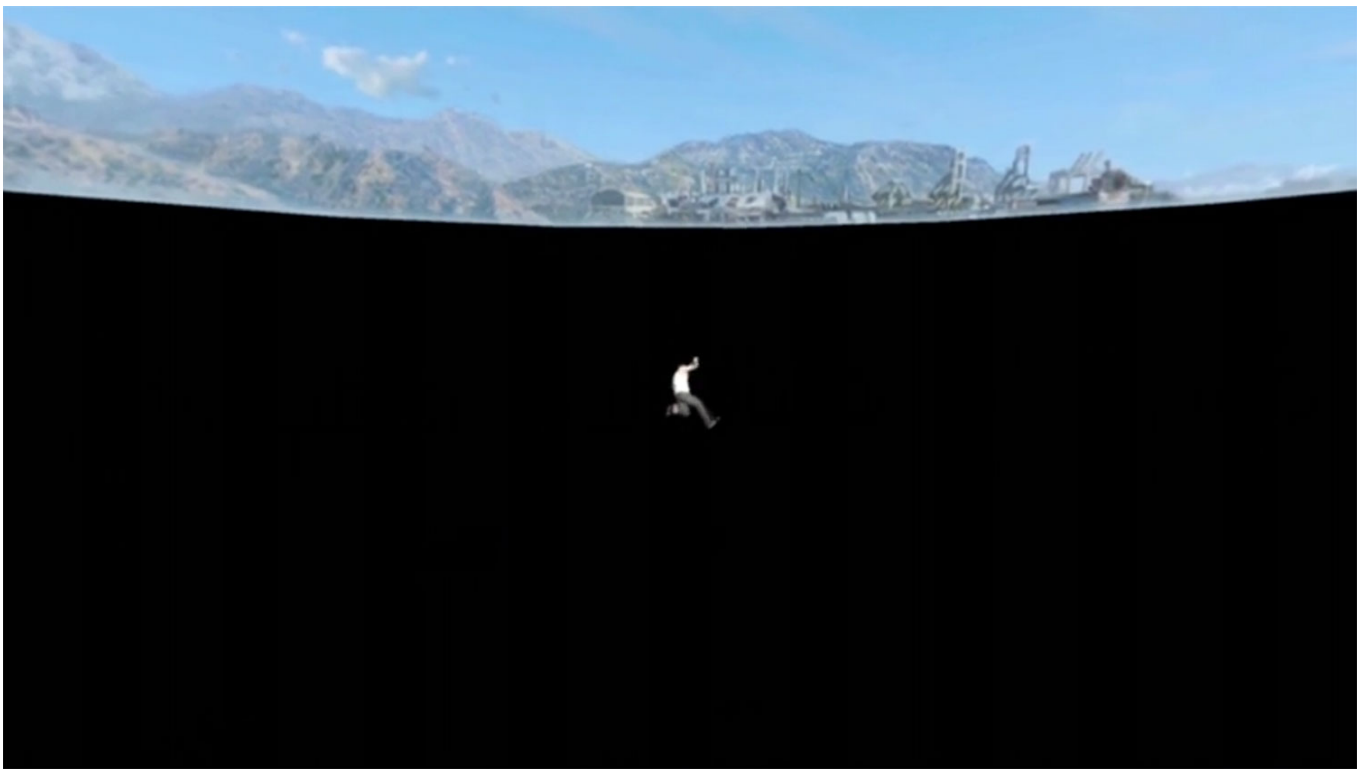
image of code/space "conditions" man's manifest image of his cognitive capacity. Orders of magnitudes of code/space bring man face to face with the limits of his cognition while depriving him of the capacity required to comprehend those limits. Bridle's new New Dark Age transposes the great, white, racist Rhode Islander's fanatical insistence on scientific immoderation, infinite blackness, and anthropic finitude into a synoptic image of planetary computation's conditioning of comprehension:

> Like an air control system mistaking a flock of birds for a fleet of bombers, software is unable to distinguish between its model of the world and reality – and once conditioned neither are we. And this conditioning occurs for two reasons. Because the combination of an opacity and complexity renders much of the computational process illegible. And because computation itself is perceived to be politically and emotionally neutral. Computation is opaque. It takes place inside the machine, behind the screen, in remote buildings, within, as it were, a cloud, even when this capacity is penetrated by direct apprehension of code and data. It remains beyond the comprehension of most. This aggregation of complex systems in contemporary networked applications means that no single person ever sees the whole picture.[4]

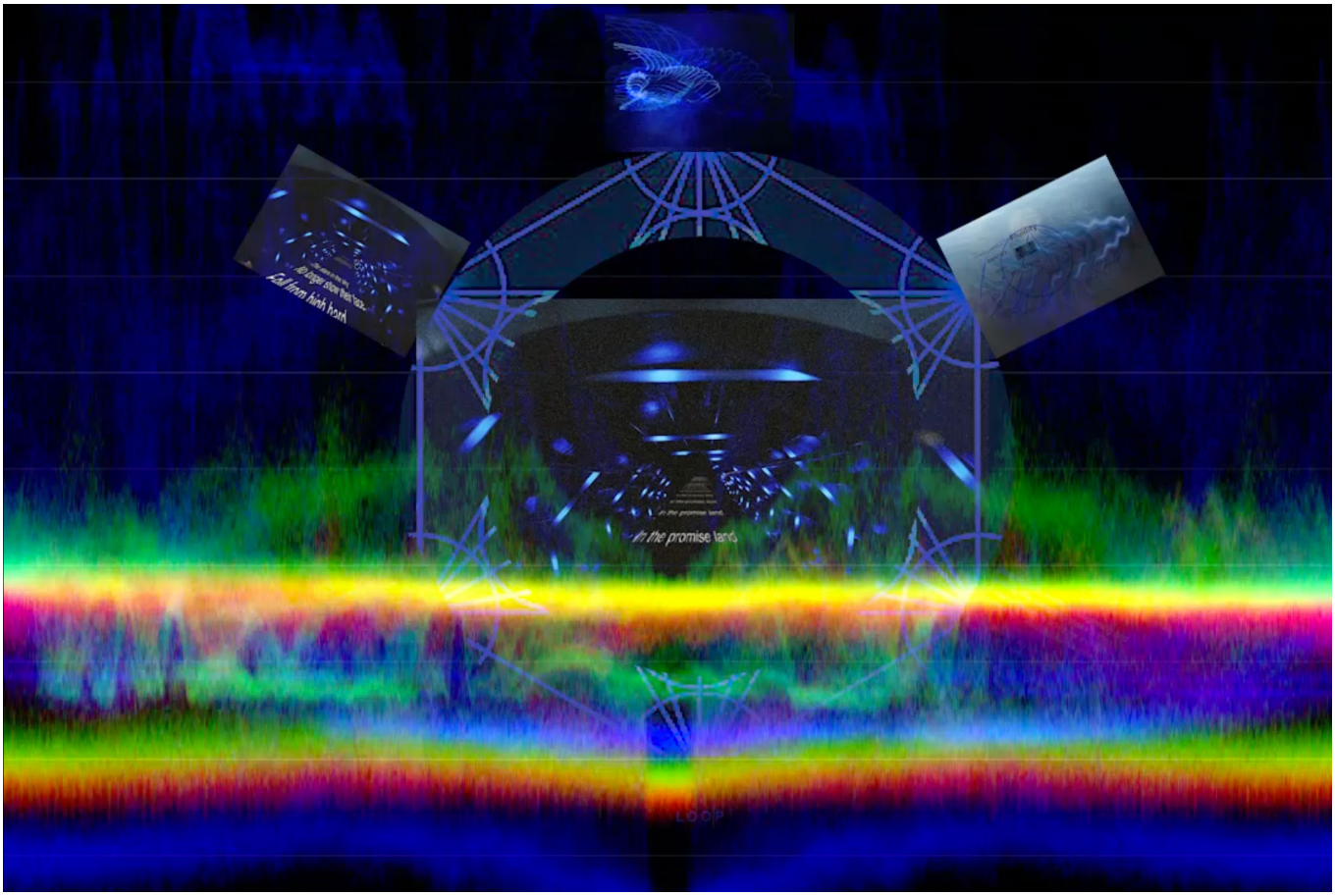
In this picture of a whole in which no one is able to see the whole picture, Lovecraft's everted sublime provides a heightened symbolism for the effects of computational occultation. To live within the terms of the new New Dark Age is to find oneself subjected to Alexander Galloway's argument that the "point of unrepresentability" should be understood as the "point of power" that no longer resides in the image but today resides in networks, computers, algorithms, information, and data.[5] As Mahan Moalemi has recently suggested, the exponential rise in computational processes enlarges unrepresentability and simultaneously proliferates computational symbolism. The latter, however, does not amount to new representations of the world; rather, it introduces new entities that "act on the world" by bringing about processes or realizing functions. What Moalemi draws our attention to is the changing "background," if that is the right word, against which the "enduring presence and ongoing transformation of images and other representational devices require discussions around an ontology of vision and its manifold implications."[6]

This conference could be characterized as an effort to enable such discussions around the manifold implications of the ontology of vision. What animates these discussions is the ambition to augment Harun Farocki's artistic and critical project of visual literacy that dedicated itself to "making the invisible visible or a hidden truth tangible" according to an "epistemology of exposure" with devices for comprehending what Tung Hui Hu calls computation's capacity to mediate "between an abstract totality and the frame of human experience."[7] The concepts formulated during the conference aspire to articulate the scales at which navigation mediates the optical image that frames human experience within the abstract totality of post-optical data. Each presentation sought to outline methods for scaling their object of analysis. For some presenters, navigation is affirmed as an interscalar method for analysis; for others, it is critiqued as an object or event of analysis; others adopt the former as an "interscalar vehicle," to use Gabrielle Hecht's term, for comprehending the latter.[8] These approaches can be understood as efforts to comprehend the gradient upon which computation subjects the "contours of experience" to what Moalemi astutely calls a "certain techno-ontological" status which looms within the "discontinuities and inconsistences" that emerge across the "different scales of being, and of being human." Taking account of these differentiations of being human requires situating the ontological disorientations of computational aesthetics within broader "processes of anthropogenesis" that locate the parameters of the "experiential within a human figure" and, in turn, define the specifications of the "human according to a particular mode of experience."[9] Moalemi's expansive insights into the shifting relationships between computation, experience, and anthropogenesis help to articulate the scale and the scope of this conference.

What is at stake in Maïté Chénière's sonic manipulation of Sun Ra's project of transmolecularization, Oraib Toukan's formulation of the navigable field, Charles Heller's analysis of the architectural image complex, Patricia Reed's elaboration of the extra-local, Matteo Pasquinelli's outline of the three-thousand-year-old genealogy of the algorithm, Ramon Amaro's formulation of everyday duress, Jennifer Gabrys's outline of the becoming environmental of computation, Nikolay Smirnov's elaboration of the metageographical diagrammatics of the mapoid, Mariana Silva's reconfiguration of Elizabeth Povinelli's notion of geontopower, Laura Lo Presti's elaboration of the terraqueous, Anselm Franke's elaboration of magicalization as navigation, Tom Holert's



Harun Farocki (with Matthias Rajmann), *Parallel II,* 2014. HD video, 16:9, color, sound, 8:38 min (loop). Courtesy of Harun Farocki GbR, Berlin.



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account of navigation's differentiation from the visual, Kaye Cain-Nielsen's formulation of the notion of precision, Hito Steyerl's development of the temporal colonization of the night, which reminded me of three-thousand-year-old nightclubs, in caves, James Bridle's notion of automation bias, Doreen Mende's attention to the conceptualization of modelling worlds, and Brian Kuan Wood's account of the stakes entailed by Harun Farocki's notion of animation as the ruling class of images?

Certain moments within these presentations indicate tendential directions and divergent tendencies within the analytic frame of navigation. In the presentation by Charles Heller, navigation becomes a method for assembling images into a complex that makes the distributed scenes of compounded crime legible as a timeline. Against states and corporations that calculate degrees of liquid violence against the migrant praxis of fugitive navigation, Heller draws our attention to the architectural image complex around which counter-claims can be mobilized for political struggles. If Heller focused upon navigation as an investigative practice, the presentation of Patricia Reed, in contrast, sought to think through the theoretical ramifications of the concept of navigation. To grasp navigation as a process that transforms our self-understanding of what a "self" might be or what is entailed by the idea of "understanding," Reed asks what it means to be "grasped" by the concept of navigation. If navigation can be understood to entail the mediation between intention and the unknown, the movement of inclination and the construction of points of orientation, then how can navigation be understood? What happens when navigation is posited at the scale of the planet? For Reed, thinking with and through the concept of navigation requires committing oneself to the recursive implications of thought. How does the abstract or the "extra-local" concept of the planetary, to use Reed's concept, "work back on us"? Under what conditions do the planetary ramifications of navigation transform our self-understanding? How can we narrate the consequences of this commitment in meaningful ways?

To navigate the world in its complexity, argues Reed, presupposes the commitment to the work of making the world navigable. Such a labor not only presupposes the practice of location, as formulated by Homi Bhabha, or the practice of situatedness as elaborated by Donna Haraway.[10] It requires posing the question of the constitution of location at a planetary scale. Reed's enquiry turns on the aspiration to renew the thought of the local, the idea of locality, and the theorization of location by posing the question of the spatial ramifications of the extra-local. How the extra-local is to be understood, in its details and in its implications, is part of what Reed calls "making claims upon navigation as a political act."

If I focus on Reed's presentation, it is because Reed usefully shifts discussion away from preoccupation with visual literacy or visual ontology towards an understanding of navigation as recursion. Yuk Hui defines recursion as an act that "constantly refers to itself and evaluates itself."[11] Unfolding the reciprocal implications of navigation as it "works back upon us" requires an approach towards human experience in which the project of the "human" and the process of "experience" are continually revised by the recursivity of navigation. Reed implies but does not articulate the extent to which the theoretical potential of recursion operates at a different level to, and must be distinguished from, the algorithms of platform capitalist monopolies that recursively map and record navigation as data. Reed's perspective sets in motion a process that Eugene Thacker describes as "anthropic inversion," which is developed to its fullest extent in Reza Negarestani's elaboration of an "outside view" of the human species.[12] In his account of Reza Negarestani's *Intelligence and Spirit*, Robin Mackay characterizes Negarestani's theorization of philosophy as "a program of constructing an outside view of ourselves" that entails understanding how "changes in our self-conception" would "necessarily lead to the transformation of our collective modes of acting." From this perspective, Mackay suggests, philosophy and by extension aesthetics, indeed "all kinds of practices" could be understood as "already a program for artificialization, as a program for artificializing ourselves."[13]

In Reed's presentation, navigation participates in and contributes to Negarestani's reconfiguration of the project of artificial generalized intelligence, or AGI. Negarestani encourages an understanding of artificial general intelligence that exceeds the restricted definition of artificial intelligence as it is currently understood so as to envision AI beyond its capture by surveillance capitalism's ubiquitous platforms. Reed's philosophical program for navigation invites listeners to situate its meaning in the wider temporal frame implied by the planetary scale of the extra-local. This understanding of the time, space, past, and future of navigation extends beyond its digital present towards its proleptic potential and its historical archaeology. Matteo Pasquinelli's presentation responds to this effort by locating the practice of navigation within an overlooked genealogy of mathematical rule that decenters

algorithmic governance's illusion of presentism by provincializing its capitalocentric perspective. In his compelling account of the ancient Vedic ritual of Agnicayana, Pasquinelli situates navigation within a three-thousand-year history of algorithmic rituals that organize time, space, labor, and social relations into practices of "self-computing space" that produce their own maps of their own navigation. This is not a matter of decolonizing navigation; rather, Pasquinelli is concerned to demonstrate that power's aspiration to control the time and space of populations and territory through ceremonies of computational space predates capitalism's dreams of machine learning, automating perception, and industrializing vision.

Nikolay Smirnov's presentation functioned as a window into the under-researched geopolitics of navigation. Smirnov's lecture returned to a forgotten episode from within the history of Communist navigation. In his focus on the so-called "cartoids" diagrammed by the Soviet "metageographer" Boris Rodoman throughout the 1970s and '80s, Smirnov demonstrates the ways in which a Communist aesthetic of sociography displaces Americocentric capitalism's habitual recourse to autobiography. As Smirnov explicated the chromatic blocks that diagrammed Rodoman's life in its "seasons" of existence, his exegeses were greeted with scattered moments of audience laughter. Whatever contingent reasons there might be for this response, those stifled snickers suggest that what might have been unease was quickly suppressed and converted into the acceptable expression of laughter. In those fleeting moments, Smirnov's presentation, precisely because it spoke of the past life of an unknown Soviet geographer, confronted audiences with the capacity of the diagram to work back upon "us." Rodoman's diagrams of his own life subjected his everyday existence to algorithmic principles of depersonalization and desubjectivation. Those cartoids offered an outside view onto himself as a series of self-quantified chromatic patterns. Rodoman's experiment in artificialization brought the audience face to face with the prophetic presence of intermediated recursion. In that moment, protected by anonymity, a handful of disconcerted people interrupted, checked, converted, and conducted recursion's ramifications throughout the auditorium in the ambiguous shape and form of laughter.

Rodoman portrayed his life as a series of patterns generated by routines that organized his existence; these routines can be understood as instructions or algorithms that emerged from and contributed to the shape of his daily life. What they depict is life externalized from the perspective of its own algorithms. Everyday life, understood in this way, generates the algorithms that organize it; the practice of daily life can, in this sense, be said to be computational. To understand the implications of this perspective, however, requires an encounter with the presentation of Ramon Amaro. Amaro situated the work of algorithms within his childhood amidst the informally structured segregation of the United States. In doing so, Amaro initiated a profound expansion of what counts as computation. Amaro's question "What are the mechanisms of machine learning already at work within everyday life?" introduced the thought of what might be called the "computational quotidian." His question challenged the conference to understand the domestic economy of everyday life as an aggregate of instructions for machine learning.

The difference between machine and human learning, argues Yuk Hui, is "the feedback system that inscribes the former with a predefined telos" that is inconceivable for the latter.[14] Amaro's question, however, speaks of human learning as inseparable from Hui's definition of machine learning. Life, in this formulation, operates as machine leaning. It is "judged to be good since it can arrive at the telos in the most effective way, that is, measured by execution time."[15] By locating the predefined telos of machine learning within everyday life, Amaro alludes to the ways in which execution time sets the measure of everyday life by creating the moral economy of an effective telos or end. Amaro's question conjures the duress engendered when the judgement of the good is measured by the predefined teleology of effectivity. By rendering the idea of machine learning indivisible from the labor of everyday life, Amaro's question indicates the extent to which the unmarked whiteness of critiques that restrict themselves to media archaeology or visual ontology foreclose a reckoning with racially differentiated forms of duress generated in and by the gendered practices of everyday life once it is understood as a compounded, computational process.

Reflecting upon his life spent in his mother's household, Amaro states that "everything is preempted, and this preemption is based on duress." Life is inseparable from the temporality of preemption defined by Brian Massumi as the "futurity of unspecified threat" that is "affectively held in the present so that a movement of actualization may be triggered that is not only self-propelling but also effectively, indefinitely, ontologically productive."[16] Everything that is life, understood from this perspective, anticipates this unspecified threat in the present. In this account of living with and

under the indefinite threat of an indeterminate future, Amaro shifted the primacy of preemption from Massumi's account of the Bush regime's foreign policy in which the "most effective way to fight an unspecified threat is to actively contribute to producing it,"[17] towards an account of maternally imbricated forms of daily life that sustained themselves within the compounded duress from which they emerge and in which they participated.

What emerges from Amaro's presentation is an intervention into the understanding of navigation's ongoing preconditions. Amaro's question "What are the mechanisms of machine learning already at work within everyday life?" redirects our attention to the question posed by Hito Steyerl in the conference's opening presentation – "How does one navigate time?" – by reconfiguring what counts as navigation and what amounts to time. Rethinking the ongoing duress of the mechanisms of machine learning at work within everyday life allows us to return, finally, to the questions addressed to the conference's participants by its organizers in their opening statement.

Doreen Mende and Tom Holert asked us to consider that "if navigation puts ontological pressure on the static frame of a photographic or cinematic image, then how are concepts of political action, visual literacy, and collective intervention also pressured to surpass or perform model worlds?" What this question alludes to is the ontological trouble that navigation makes for the frame of photography, the image of cinema, the conceptualization of the political, the action of the political, the visuality of literacy, the collectivity of intervention, the pressure to surpass, the capacity to perform, and the modelling of a world. With Amaro's question in mind, what I hear, now, is the compounded instability at work in each of these terms; how each term is an unstable compound. Mende and Holert transport these frail entities into their next question: "Has navigation ever been a visual technology at all, or has it always compounded cosmological, mathematical, and sensorial orders of magnitude into aggregate spatial orders that surpass the visual entirely?"

What this question invokes is a scene in which the pressurized predicates initially assembled in the preceding question have subsequently combined forces to undermine the assumption that navigation was ever exclusively visual or a question of technology. Without these presuppositions, navigation appears instead as a kind of Leviathan composed of cosmological, mathematical, and sensorial forces that amass themselves to the power of ten so as to occupy an inordinate space. Between the ontological insecurities assembled in Mende and Holert's initial question, the forces stabilized in their second question, the call for a politics of temporalization in Steyerl's question, and the understanding of the unspecified threat of machine learning formulated in Amaro's question stand navigation's avatars of unrepresentablity, code/space, symbolization, recursion, ramification, revision, and ritual ordered in magnitudes of compounded, aggravated duress.

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"Recursion, Interrupted" is a reworked version of the closing presentation delivered at the conference "Art after Culture: Navigation Beyond Vision" at Haus der Kulturen der Welt on Saturday, April 6, 2019. As such, it is marked by the effort to do justice to that occasion from the present moment of life lived under lockdown in the third month of coronacapitalism. If pandemicapitalism appeared, in its first weeks, to simultaneously exaggerate all preexisting fascist, anti-capitalist, nationalist, anarchist and, post-capitalist tendencies, thereby generating a political ambiguity to be opportunistically exploited by the entrepreneurs of the alt-right, today, however, its exponential death count disambiguates any such categorical confusion. What the mortality count makes clear is the extent to which the political regimes operative within the UK, the US, and Germany, to name the three polities with which I am familiar, sentence racially differentiated working classes to risk, condemn them to death, and consign them to immiseration at the same time as networked media assuages, alleviates, emolliates, and lubricates the passage of fascist, anti-statist values, wishes, fantasies, norms, rules, and laws.

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15
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16
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17
Massumi, "Potential Politics and the Primacy of Preemption."