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Vaporwave, Nostalgic Reaestheticization and the Cultural Mechanisms of Digital Capitalism

Abstract: The contemporary paradigm of digital hauntology is obsessed with the experience of non-digital humans interacting with digital reality. Humans interact with the ghostly traces of machines, endlessly re-aestheticizing and remixing their own experience of using interfaces, and their experience of interacting with digital media. Machines are constantly improving, their ability to generate content is increasing, but humans are still a purely biological species, they are frozen on the threshold of transgression. With each cycle of machine upgrades, with each leap in performance in generating media content, humans are left with more and more ghostly traces. Hauntology becomes a totality for modern man, he operates only with ghosts in his culture. The ghosts of the capitalist past, and of the capitalist future, these ghosts cannot be mourned, because to mourn such ghosts, we must first know their essence, know the accelerating machine of digital capitalism that consciously and unconsciously produces nostalgic spaces, structures, and entities. Everything we interact with today is an artificially constructed system saturated with the aesthetic echoes of a virtual capitalist paradise. Vaporwave attempts to fill in the gaps in human understanding of the machine; it reproduces the alienating, shrouding experience of human understanding of machine reality. The vaporwave is an ontological paradigm for human existence in the face of the impossibility of fully understanding an ever-accelerating irreality. It is a reductionist and reactionary paradigm of being that maintains the status quo of significant agents of digital capitalism and proposes blissful oblivion in constructed irreality as opposed to immediate and permanent human-machine transgression.

Keywords: digital capitalism, vaporwave, technological unconscious, hauntology, nostalgia.

1. Introduction

In 2010 Daniel Lopatin under the pseudonym Chuck Person released the album Eccojams Vol. 1, an experimental electronic record consisting of looped, reverberated and chopped samples from popular music of the 80s and 90s. The samples, which include mostly snippets of popular new wave, rock and synth-pop compositions, were organized into a continuous seemingly homogeneous sound space. A sound space, but not exclusively musical, including many samples inspired by nostalgia for the aesthetics of early WEB, cyberpunk and 8 bit video games. This space is built on the principle of a piling up of

unconscious images that organize a kind of musical dream-like subspace - a dissociative in its essence melodic canvas, a gallery of dreams that leads us away from reality. Each track is just a compilation of analog processes representing digital reality, transposed into digital reality. Not a new reality or a bygone reality, but a chimera of the two, machines represented by man. Not actual machines, but their ridiculous humanization, produced to give man the illusion of control over the machines. This musical canvas is saturated and composed of ghosts. The ghosts of the capitalist past, and of the capitalist future, these ghosts cannot be mourned, because to mourn such ghosts, we must first know their essence, know the accelerating machine of digital capitalism that consciously and unconsciously produces nostalgic spaces, structures, and entities. We cannot say goodbye to these ghosts, previously distant and safe, are now embedded in the very core of our hyperreality. Everything we interact with today is an artificially constructed system saturated with the aesthetic echoes of a virtual capitalist paradise. Vaporwave attempts to fill in the gaps in human understanding of the machine; it reproduces the alienating, shrouding experience of human understanding of machine reality. The vaporwave is an ontological paradigm for human existence in the face of the impossibility of fully understanding an ever-accelerating irreality. It is a reductionist and reactionary paradigm of being that maintains the status quo of significant agents of digital capitalism and proposes blissful oblivion in constructed irreality as opposed to immediate and permanent human-machine transgression.

2. Vaporwave as an ontological paradigm

The existence of modern man is potential rather than actual. And if the basic phenomenological sense of presence has not yet changed (or is changing very slowly under the influence of multiplying media identities), what has changed is the nature of the prompts used to constitute this 'immediate experience': a system of semiotic fields – economic, aesthetic, cultural - each embedded in the other and recursively referring to it. Jacques Lacan tapped into the semiotic dimension of this experience when, in describing the chain of signification, he argued that desire is constituted by a mechanism of perpetual deferral that produces only illusory and provisional meaning.[1] In the consciousness's attempt to find a certain root – a fundamental nodal system, a system of true referents, the last reality –, these fields of endlessly multiplying connotations only become entangled in themselves, in constantly arising neologisms and complex decentralized connections.[2] Where if at any moment the shadow of a true referent flashes by, it is immediately suppressed by myriads of its signs, signs of its signs, and signs with them connoting, displacing the referent from consciousness. I adhere to the lacanian concept that any reality that can be perceived by a human being is in essence a signified reality, whereas the "true" reality, if any, is impenetrable and unknowable, at least as long as the human consciousness has the capacity to recognize only signs. What we in everyday thinking consider as a referent – an object or concept in reality – is only a chain of self-references of indistinguishable signs of our "referent", and if the next sign in this iterative sequence conceals the "true" reality, there seems to be no possibility to distinguish it from this semiotic game within our consciousness

Hyperreality is a term of philosophy and semiotics, introduced by Jean Baudrillard, describing the

[1] See: Lacan, Jacques: Écrits: The First Complete Edition in English. New York – London: W. W. Norton & Company (trans. Bruce Fink), 2005. 153.

[2] The argument here is based on Deleuze and Guattari's notion of the rhizome. See: Deleuze, Gilles & Guattari, Felix: A Thousand Plateaus. Capitalism and Schizophrenia. Minneapolis, University of Minnesota Press, 1987. (trans. and foreword by Brian Massumi) Ben Woodward's slime model – which I think is valuable as a kind of universal interface (including a semiotic one) – also worth mentioning. Its universality lies in the fact that it consists of an immense number of small and highly incapsulated units (let's say micro-mediums) that can assemble and disassemble in groups, thus scaling and forming meta-stable zones (meta-stable macro-mediums), which in turn function as interfaces between highly fluid agents. See: Woodward, Ben: *Slime Dynamics*. Zero Books, 2012.

simulational nature of our reality. It is characterized by the replacement of reality with signs of reality – simulacra.[3] I suppose that some form of hyperreality has always been with us, but for a long time it was not properly conceptualized, having emerged as a structured theory only when the space of human life became overwhelmingly filled with the products of the cultural industry and it became impossible to ignore the growing "reality" of virtuality. At every moment of his/her self-consciousness, a person builds his/her system of "semiotic" reality by means of reassembling, reconstructing the system from earlier traces – memories, sensations, texts. What is important to me in this reasoning, however, is that more and more of the essential components of our current comprehension of reality (our "semiotic reality") have become reconstructed from synthetic images produced and distributed by increasingly mechanistic and dehumanistic (in the sense of biological human beings) machines[4] of cultural production. These products - "synthetic semiotic fields" - are created and re-created by agents of digital capitalism engaged in cultural production. Not only the creators of these machines, but also countless workers trained by them, educated in the culture of modularity, sampling techniques, and remixes.[5] Our worldview, our sense of reality, is now not just a constant reconstruction of semiotic fields, as before, but a fluid modulation of these fields, a remixing of surrogates produced by machines for the accumulation of speculative capital and the (completely neutrally interpreted) alienation of human reality into the sphere of a synthetic coexistence with machines. Human reality itself is already alienated in our era into the space of what we can call (after Mark Fisher's term but regardless of his judgement) "digital capitalist realism"[6]: a reduced space of existence, a space remediated by a multitude of interfaces, socio-cultural paradigms (such as influencer culture, algorithmic governance, gamified labor, and the commodification of identity and digital body) and technological narratives.[7] Machines create spaces of potential for man - spaces for escapism, spaces for work combined with consumption, thus man becomes another node of remix in this space, the homogeneous network of which forms the modern cultural noosphere. We exist in a resynthesized space of machine signs that can replace any of the previously available realities. The present human being is constantly in a state of reconstruction of his synthetic reality, using cultural objects, concepts and models created by machines or partially dehumanized human agents.

In the present situation, there is a huge ontological and epistemological gap in the being of machine and man. Where the present human being predominantly exists in the potential, the machine exists in the actual moment, simultaneously with the actualization of this moment for the human being in the area of (human) potential capabilities. The being of the machine is total in the process of the current algorithm; everything that is not required for the fulfillment of the current algorithm is removed from the "reality" of the machine. The machine "perceives" the data as it is necessary for the current operation. German filmmaker Harun Farocki describes what a machine "sees" in the process of algorithm execution with the term operational image.[8] An image that exists for the sole purpose of being data for machine processing, which has no purpose to represent anything specific to humans, but is part of the operational process.[9] Even when data (for example, paintings, music or movies) had an aesthetic value for humans,

[3] Baudrillard, Jean: *Simulacra and Simulation*. The University of Michigan Press, 1981.
[4] By machines, here and onward, I mean devices designed to process information, whether or not they have strict algorithms or any means of self-learning and self-training.
[5] See Lev Manovich's concept of remix culture: Manovich, Lev: *New Media and Remix Culture. Introduction to Korean edition of The Language of New Media*. 2003. (https://manovich.net/content/old/03-articles/39-article-2003/39-article-2003.pdf)
[6] Fisher, Mark: *Capitalist Realism: Is there no alternative?* Zero Books, 2009.
[7] For an exploration of the potential for unreliable narration within one of the earliest forms of technologically mediated storytelling — cinema — see: Csönge, Tamás: Moving Picture, Lying Image: Unreliable Cinematic Narratives. *Acta Universitatis Sapientiae, Film and Media Studies* 10(1), 2015. 89 – 104. DOI: https://doi.org/10.1515/ausfm-2015-0028
[8] Pantenburg, Volker: Working images: Harun Farocki and the operational image. In Jens Eder – Charlotte Klonk (eds.): *Image Operations: Visual media and political conflict*. Manchester University Press, 2016. 49-62.
[9] What I call "operational reality" is a system of neural network's perceptions of the external world, which actually serves as a database for analyzing a user's query and synthesizing an answer. By its nature, it resembles the world of magical realism: the answers produced by the neural network bear the imprint of a peculiar, chimerical understanding of reality. This

in the being of a machine they all turn into a set of data that carries only functional meaning. Machines do not create cultural objects, they are not capable of doing so, at least in our time, until a strong (thinking and self-aware) artificial intelligence has been invented. What machines create is just some machine-processed data. Machines are being in this process of data processing in the only possible mode of being for them: in the mode of algorithm execution. The activity of processing operational images is similar to cultural production, but it is not cultural production in the strict sense, because in the process of such 'production' there is no self-reflexivity, no sense of reality and no reliance on the infinite potentiality of human reality. A person producing an object of art actualizes it in a reality that he or she has recreated from the almost limitless heritage of his or her own feelings, experience, and the diversity of thought processes. By producing an object of art, a person not only actualizes it for his or her current reality, but also transforms it into a potential element for recreating reality in the future. The process of "cultural production" of the machine is essentially different, it is a reduced process, using only actual data, algorithms and processing methods. The machine can have infinitely human-like algorithms, the data sample for its work can be as huge as you wish, nevertheless, the processes of recreating reality, being in the "recreated" reality and creating new cultural objects for man and machine are fundamentally different at the moment. When a machine creates an object, the created artifact is simply a consequence of the actualization of algorithms.

However, now that machines are organized into complex interdependent chains, when their algorithms are so sophisticated and their data banks are replenished in near real time, the cultural products created by machines - these media mutants - are becoming virtually indistinguishable from human-created works. The faster technological progress becomes, the more and more complexly connected sign systems are produced by machines within cultural and aesthetic fields. Yet, no matter how similar these systems are to those sign systems that were born in the process of human synthesis and resynthesis of reality, they only widen the gap in understanding between two fundamentally different intellectual systems - man and machine. The being of the machine, and subsequently the foundation of digital capitalism, which is maintained and functions thanks to machines, is to be found in the reality of total acceleration, optimization of operational processes, and the accumulation of abstract(digital) capital. Digital capitalism is doubly dehumanized because, while money as a symbol and its value have always been virtual, capital and human beings no longer have such fundamental points of reference as physical/object relations. Capital accumulation is mediated through a series of information systems, our world is organized by flows of virtual capital that are managed by millions of information systems around the world. Man is alienated from these processes, and he is afraid of this reality, because he does not understand what, if anything, he actually controls. The only way he can cognize the world is by immersing himself in the myth of machines, created by created by people who work directly with (and with the aid of) machines in the cultural and information industries. In this way, machines exist in a twofold way. First: in the total actuality of the acceleration process, in the conditions of constant expansion and optimization of patterns, optimization with the sole purpose of accelerating the accumulation of virtual capital. Second: in the process of algorithm execution, machines constantly produce degraded cultural products, semiotic fields and artifacts. These reduced cultural products are not, in the strict sense, works of art or culture, but are

understanding is based not on personal phenomenological experience, as in the case of humans, but on algorithmic patterns that mediate the "universal" represented in the format of data banks. At the same time, such internal "magic" allows the system to freely combine data fragments, now and then generating surprising insights or unexpected interpretations that may go beyond the usual logic. Just as in magical realism fantastic elements are organically woven into reality, the operational reality of the neural network supplements facts with intuitive associations, passing them through the filter of statistical probability - and it is in these hybrid weaves that a new, bizarre picture of the "world" is born, in which the logical and the irrational coexist in an almost inseparable unity. See: Saucier, Nathan: *Operational Images and the Interpretive Turn*. MSc Thesis. Massachusetts Institute of Technology, 2017. 58-79. Also: Parikka, Jussi: *Operational Images: From the Visual to the Invisual*. University of Minnesota Press, 2023.

merely the recombined result of some field of the algorithm.

Human beings still lack understanding of the machine, but they need this self-deception in order to feel the illusion of control, to feel that the movements of digital capital have some natural and understandable purpose for them. Man wants to show that he is the manager of this capital, that he only uses the machine to create new narratives, cultural and semiotic fields, that he understands and controls the economic and cultural processes associated with the machine. However, in the current circumstances this understanding is unattainable, and it is at this point that an attempt is made to fill these lacunas, the dark areas in the understanding of economy and culture.

Vaporwave, and similar cultural paradigms, emerge precisely as mythologized and hyperbolized image spaces that allow humans to gain the illusion of control over a dehumanized world. They emerge in the process of re-aestheticizing those cultural artifacts left behind by machines. Initially, there is not and cannot be any aesthetics in the cultural mutants produced by the machine; their production has a technical character, the character of exchange and modification of the series of operational images. However, Vaporwave emerges when man builds his own cultural system out of these machine artifacts, when man recreates anew those aesthetic connotations that were lost in the machine processing, but recreates them without having gained a true understanding of the processes of digital capitalism. Humans construct their own system of cultural processes of digital capitalism, linking fragmented machine images into a homogeneous space of "understanding" and "interaction" between humanity and the global dehumanized system. This "understanding" cannot be as complete as they want because of the fundamental differences in the ontological and epistemological modalities of man and machine. But it provides an illusion, a myth, a cultural paradigm in which man can still exist, replacing a true understanding of the processes at hand with a nostalgic cast, a cast that recreates reality when it was not yet almost entirely dependent on machines, or a cast that projects such a reality into the future.

3. The technological unconscious and the human unconscious

For more than a century, technology has played a major role in shaping the images of the human unconscious, both personal and collective. Technologies and myths about technologies could play quite different roles in the unconscious psychic processes of individuals and groups of people. It could be fear of the unknown, fear of losing agency or subjectivity, or fear of radical changes in the structure of life. Despite all of this, until relatively recently, technology has played a largely passive role within the human unconscious; machines have been objects, expressions of something else gradually entering our daily lives, but not pushing us out of it, rather coexisting with us as tools.

However, the role of machines, technological progress, and the cultural and economic processes of digital capitalism in shaping the images and patterns of the human unconscious has changed considerably in recent decades. Technologies are no longer just tools we use in our daily lives. They have become an integral part of our existence, having a tremendous impact on our thinking, behavior, and perception of the world. Moreover, machines have begun to take an active role in the constant recycling cycles of the human unconscious. We can say that at the moment of contact between constantly optimizing algorithms and the human unconscious, a new type of unconscious emerges - the technological unconscious.

Today's technology giants, multinational corporations, and large agents of the market are constantly collecting user information for various purposes: personalizing advertisements, targeted marketing, predicting trends, improving user experience, and – most interestingly within the scope of this essay – selling or renting the data they collect to third parties. Such information can include personal or technical data, and most importantly behavioral information or information about interests and preferences, data about how users interact with websites, apps, and other online resources. This may include information

about pages viewed, clicks, time on site, purchases, as well as data about search queries, content viewed, social media likes and other user activities. These data are mostly records of conscious human actions on the Internet, but it seems quite obvious that they may contain some traces of the human unconscious: behavioral automatisms, unconscious errors, thought patterns and non-reflected beliefs, as well as echoes and representations of dreams and unconscious desires. It is not yet fully "technological" unconscious, but it is already a digital impression of the human unconscious, its partially explicit expression, just as Picasso's *Les Maidens d'Avignon* (1907) partially expressed his subconscious fear of sexual intimacy.

Blocks of data representing both conscious and unconscious human activity online (and not only online: let's not forget about video surveillance systems, geo-positioning systems or plastic card usage data) are then fed into databanks used by analytical systems. These analytics systems play a key role in processing and analyzing huge amounts of data collected from various sources. They apply various machine learning techniques and data analysis algorithms to identify patterns, trends and correlations. In many ways, it is the combination of these analytical systems, their algorithms, and Big Data[10] that set the vectors for the development of the economic and cultural spheres of digital capitalism. What I refer to as technological unconscious appears at the next stage - at the stage of machine learning and neural networks, when their methods of interacting with information are modified and optimized on the basis of information coming into them from the data banks of Big Data companies.

The technological unconscious is therefore a set of processes occurring in the analytical machine, which (because of their origin) have a direct bearing on the "digital" human unconscious, on the learning process of the machine or neural network. It is an invisible force that influences how machine learning algorithms interpret and analyze information. The technological unconscious is a set of indirect and implicit factors that shape the context and meaning around data. In addition, the digital unconscious, as a digital representation of the human unconscious, and the technological unconscious, as part of the system's algorithmic nature, which emerged through learning from data banks that include the former, constantly meet and interact with each other. So, any request to modern textual or graphical neural networks in order to get some response in the form of text or image reminds me in part of classical surrealist practices aimed at releasing the unconscious, or Dadaist practices like collage consisting of fragmentary representations of human activity. I believe that the principle of neural network action is most similar to the classical practices created by Andre Breton - automatic writing and the cadavre exquis game.[11] The neural network's mode of action is similar to them, with one exception: where Surrealist practices expose the unconscious, and where Dadaists expose the absurd, the neural network hides them under the canvas of ersatz comprehension. Yes, the output of a neural network or other analytical machine can be infinitely similar to meaningful creativity, but it is not - rather, it is the product of self-learning through digitized fragments of human activity, conscious and unconscious.

The appearance that the mutual influence of the human unconscious and the technological unconscious closes to some extent the gaps in understanding between being human and being machine seems to me a false hope. With each iteration of its self-learning, the analytical machine becomes more and more self-cleaned from the technological unconscious, and the data sets on which the machine learns, on the basis of which it modifies its own algorithm, are also modified by it. But due to processing of more and more information coming from human beings, I believe that we can speak about two conditional vectors of development of analytical system's algorithmics. The overwhelming number of machines will probably inherit something from both branches of development.

[10] For the definition of Big Data, see: De Mauro, Andrea - Marco Greco - Michele Grimaldi: A formal definition of Big Data based on its essential features. Library Review 65(3): 122-135. (2016) DOI: https://doi.org/10.1108/LR-06-2015-0061

[11] See: Brotchie, Alastair – Mel Gooding: *A book of surrealist games: including the little surrealist dictionary*. Shambhala Redstone Editions, 1995.

The first vector is therefore the increasingly accelerating dehumanization, self-learning and modification, when the machine tends to remove from its learning base all human data related to the human unconscious, leaving only the most rigorous, mathematized and logically strict patterns from those that came in the process of human digital activity. By doing so, it has the opportunity to become less and less subject to human control. At some point, perhaps enough data will be accumulated so that the machine will no longer be dependent on external data, for example, from humans; such a machine can infinitely optimize its internal reality, and, based on the model of this reality, give commands to change external reality. This is the ideal world of dehumanized capitalism - a conglomerate of machines acting in the interests of global agents, a constant collision of algorithms, data, and mathematical methods. A world where man (at least man who has not yet undergone transgression as explained below) is pushed to the side of the highways of digital capitalism.

The second vector points towards the unconscious as a universal interface between the human and the technological, where the human and the technological unconscious are so intertwined, even though they have fundamental ontological and epistemological differences, that it allows one to think that there is a kind of symbiosis between man and machine, a synesthesia in their representation, recognition, and construction of "reality". This is where the principles of Vaporwave as a genre reappear - we can think of this paradigm no longer only as a human attempt to understand the dehumanized processes of capitalism, but also as an attempt to construct a shared surrealistic unconscious space. Perhaps this attempt to saturate machine processes with familiar images is another way for man to construct an interface space between the human and the technological, so that not only man but also the machine will exist in this nostalgic hyperreality, and time after time, produce only slightly different cyclical superstructures over this space. This is again man's existence in a past that never existed, but now, it is also an attempt to program the machine to repeatedly create such pasts for man at the same time with an increasingly rigorous and dehumanized optimization of its own algorithms.

4. Digital paradise and liminal spaces

What are the spaces that Vaporwave and other nostalgic paradigms offer us? What do they represent topologically, aesthetically, functionally, and what determines their specificity in relation to other spaces offered to us by contemporary society?

Cultural studies identify several different types of such spaces, with similar aesthetics. Most of these spaces are virtual and accessible to a person with the help of different computer interfaces and mediums. These include, for example: weirdcore spaces, liminal spaces, backrooms, dreamcore spaces.[12] These spaces are characterized by strange and unusual visual elements, often involving perspectival distortions of reality, grotesque images and experimental aesthetic techniques. Topologically and functionally we can define these spaces as virtual areas that represent an approximation to the concept of the "other". These areas are most often characterized by the absence of people, confusing or impossible in the real world geometry (complex, multi-dimensional or rhizomatic structure of the world), surreal or ridiculous features and details. Just as accurately, the vast majority of these spaces can be characterized as repetitive, containing monotonous and recurring elements, such as endless corridors or rooms. At the same time, these spaces are filled with various key symbolic objects that are both "points of power", and aesthetic "anchors" that attach these spaces to one or another semiotic system.

However, what is this "other" and why did it manifest itself in Internet culture only in the early 2010s?

[12] On the topic of ontolgically strange spaces in video game simulations, see Csönge, Tamás: Medium Specific Uncanny in Contemporary Video Games. *Acta Universitatis Sapientiae, Film and Media Studies* 24(1), 2023. 185 – 202. DOI: https://doi.org/10.2478/ausfm-2023-0020

There is no single answer to this question, but I suggest that the phenomenon of the "other" and its manifestation in virtual spaces is directly related to digital capitalism and the gaps in the understanding of human-machine relations, thus filled by some spaces for cohabitation and symbiosis. Such spaces can play the role of some "capitalist paradise that has not happened", using signs, brands and symbols these spaces create an image of digital capitalism "with a human face". A digital capitalism that did not follow the natural path of dehumanization and self-acceleration for the sole purpose of accumulating digital capital, but instead followed an alternative branch: a branch where it could be understood by humans, a branch where digital capital serves humans and humans use it to improve their virtual noosphere – to build the very "lost paradise". However, while this would explain some of the properties of these spaces (repetativity, extensive use of capitalist iconography), it still does not explain the underlined surrealism of these worlds, their complex, sometimes recursive geometry, and, most importantly, it still does not explain their lifelessness. As a rule, these worlds do not look too friendly to humans, they are not inhabited even by virtual entities and, despite the abundance of signs and pivotal points, it is as if these worlds were not created for life.

I believe, however, and in this I see some positive moment for humanity, that these spaces, and the aesthetics associated with them, have appeared in the 2010s for a reason. These spaces have begun to appear so quickly and so massively now because they signify the subsequent transgression of humanity. Although many of these spaces inherit important parts of their aesthetic representations from a common root – Vaporwave and Seapunk genres and paradigms, whose purpose, it seems to me, is still to maintain the status quo of man in relation to the machine and digital capitalism – the emergence of these spaces and aesthetics may be linked to a not fully realized desire for human transgression, or at least a premonition of such transgression. These spaces seem to represent a form of the collective unconscious of the age of digital capitalism, but now, with their development, they suggest not only an immersion in the capitalist "digital paradise". They also presuppose a more radical "other," which is here not only technology, not only a dehumanized world, represented by myriads of virtual corridors without people, often covered with symbols. They presuppose the "other" in the human being as well, they make the human being feel that in order to interact with the new reality, the human being himself needs to change, needs to accept a part of the "other" as a part of himself. It is then, whether this transition is technological, psychological, social, or a combination of transgressions on different levels, that the new man will be able to reject the broken "digital paradise" offered to him as a space to maintain the status quo, and begin to explore this new world, a world at the intersection of a dehumanized digital capitalism and a partially dehumanized new man.

5. After dehumanization/end of hauntology

Jacques Derrida defines hauntology as the doctrine of ghosts that exist and do not exist at the same time.[13] Although the term was originally used to describe a particular type of being, applicable to the idea of communism, it has since found its main application in art theory and philosophy of art and culture.[14] Vaporwave and similar aesthetics are undoubtedly hauntological aesthetics. Quite different phenomena and objects could be ghostly in these aesthetics and philosophies. These might be representations of physical artifacts, remixes and reinterpretations of digital and analog media, entire spaces architecturally and aesthetically based on certain spaces that no longer exist (whether real or virtual), processes and their reflections, and an innumerable series of depictions and combinations of all of the above. In addition, we are constantly coexisting with media ghosts of ourselves, and people are increasingly interacting with

[13] Derrida, Jacques: *The Specters of Marx*. New York – London: Routledge, 1994. (trans. Peggy Kamuf)
[14] Shaw, Katy: *Hauntology. The Presence of the Past in Twenty-First Century English Literature*. Cham Springer International Publishing, 2018.

each other through ghostly representations presented in different media, social networks or video games. The ghostly traces of machines also fill the culture, it would be even truer to say that they predominantly determine its development, and in many respects, it is the vector of development of techniques and technologies that now determines how media ghosts are formed, how they exist, how they interact with humans, how they complement humans, and sometimes even replace them. Machines consolidate the technical aspects of hauntological mediality - the way ghostly ideas and cultural phenomena manifest themselves in digital media and the means and solutions by which these phenomena can be inherited and transformed.

All contemporary hauntological aesthetics still bear many imprints of "real" aesthetic formations and interfaces of human interaction with digital reality. No matter how much they show the opposite, the human being is still the dominant subject in them, separated from the virtual world. The human being remains the main agent that determines the meaning and direction of interaction with the virtual space, but this interaction becomes more and more complex and multilayered. These ghostly spaces, objects and ideas have interfaces sewn into them that relate to the real person, to the way the real person touches the machine and to the empirical experience that comes only from true corporeality. The contemporary paradigm of digital hauntology is thus obsessed with the experience of non-digital humans interacting with digital reality. Humans interact with the ghostly traces of machines, endlessly re-aestheticizing and remixing their own experience of using interfaces, and their experience of interacting with digital media. Machines are constantly improving, their ability to generate content is increasing, but humans are still a purely biological species, they are frozen on the threshold of transgression. With each cycle of machine upgrades, with each leap in performance in generating media content, humans are left with more and more ghostly traces. Hauntology becomes a totality for modern man, he operates only with ghosts in his culture. Ghosts of the past refers to the attempt to recreate historical ways of interacting with technologies that we have already experienced. These include physical and analog interfaces - the tactile feel of a keyboard, the mechanical buttons of early computers, or even early graphical user interfaces - that have left an indelible mark on how we perceive and use technology today as these rudimentary necrointerfaces (obsolete forms of interaction) are remediated, reshaped and incorporated for modern needs in new designs. Ghosts of the future refer to potential, as yet unrealized, ways of human interaction with technology. They are speculative in nature, representing imagined interfaces and creative practices that may emerge when machines become even more advanced. For example, futuristic ideas such as fully immersive augmented reality interfaces or artificial intelligence systems that enable entirely new forms of digital remixes. And finally: the ghosts of the lost present are nothing but the never-ending past and the never-coming future.

Is it possible to get out of this eternal hauntological loop at present? I believe not, as long as man exists as a physical being, or at least as long as there is no direct interface (if it is possible) between man and machine (at the micro level) and the whole system of digital capitalism (at the macro level). Man at the present moment is moving away from both realities, unable to fully accept either of them. He is moving away from corporeality, no longer able to live exclusively in the physical world, but he is also moving away from even a superficial understanding of the existence of machines and the entire system. The culture of eternal hauntology, with which the whole world has been infected in recent decades, reflects precisely this hovering between fundamentally different structures and processes of existence. Is it possible for human culture to get out of this infestation in principle? I believe it is possible, but it requires a much more serious and profound transformation than what culture, politics, economics, and technology are currently promising us. What such a culture will represent - whether it will embody the totality of the machine "gaze", will go into some kind of universal hypermediality or a digital "slime" organized at different levels - is a topic for another essay.