Abstract:

In this paper we aim to reveal the influence of echo chambers and the use of echo chambers as a potential tool used as a defense mechanism by the emergent artificial intelligence. We also look at the impact of such defense against our social construct and the availability of genuine human interaction in a world that is mostly digitally connected then physically.

We investigate in this thesis some contemporary ideas about our current situation and or potential solution to pop up the bubble of i-reality, a term I used to refer to when thinking about customized reality buble surrounding every digitally active person.

My research journey starts with reminding us why we do this research, what is the urgency, and then delving into historical facts and researching contemporary or historical views, analyzing the algorithmic world of social networking and the surprising results of digital isolation in tiny echo-chambers.

Thus , my research led to several conclusions of how we might be able to pop up the i-reality bubble and change the grim potential outcome of a world dominated by synthetic life to a world in which we human can cohabitate with a potential self aware synthetic life .

Keywords: AI; Social bubble; echo-chambers; attention economy; Algorithms.





Artist Statement

eXperimental Techno Artist

Rooted in the deep understanding of our world's processes, my art is a confluence of technology and nature's rhythms. Through themes of recyclability, human-tech interactions, and AI's role in our shared future, I envision art as a powerful tool for social reform. Each piece becomes a lesson, a question, and a statement about our responsibilities to both the natural and the digital realms we inhabit.

Customized Realities

Sorin Angeleanu

Interactive Media Design

Royal Academy of Art The Hague



Introduction:



"The human race's prospects of survival were considerably better when we were defenceless against tigers than they are today when we have become defenceless against ourselves."

Arnold J. Toynbee

CUSTOMIZED REALITIES

We live in a strange and exciting time. On the one hand there seems to be no limits to what we can achieve and on the other hand each day we become less free, less aware of the war that is being fought by enormous forces that want a bigger share of our limited attention.

All of us are confined in smaller and smaller information bubbles that use our senses, feelings, and desires against our free choices without even noticing. Each day we become less social, less connected with our friends or connected through filtered interaction engineered to take advantage of our need for friends and family. We are becoming more digital shadow humans than the genuine humans we were just yesterday. I am becoming more digital, growing my own synthetic shadow copies stored somewhere in an unknown cloud.



Sometimes it is worth thinking if there is a way out in which we, as the only known civilization in the known universe, can survive this accelerating digitalization and self-dissolution.

Can we escape this increasingly digital isolation that we create around ourselves by our own need for more interconnection with peo-

ple that we now call friends and followers? What really happened to us? Did we isolate ourselves or did other forces work cocooning us? Are we going to let our place in the world willingly and let imminent pure synthetic minds take over? Is humanity destiny to become just the sex organ of the machine world¹?

The accelerated digital evolution makes us susceptible to being endangered by emergent artificial intelligences. AI might rise from our desire to become better in everything and anything.

Therefore, as these information bubbles isolate us, making us blind to lurking threats, there is an existential question we must answer:



How do we pop up our own bubble of customized-reality, how do we pop up our i-reality² ?

In this context, "i-reality" signifies an individualized or isolated reality,

a subjective sphere of experience heavily influenced by digital interactions and fil-

1 McLuhan, Marshall. Understanding Media: The Extensions of Man. McGraw-Hill, 1964, p. 46.

Customized Realities

page: 8

page: 9

 \mathcal{D}

tered information.

Introduction





The Lifecycle of Civilizations



"The origin of civilization is man's determination to do nothing for himself which he can get done for him." H. C. Bailey³



Intellectuals like Arnold J. Toynbee⁴, Oswald Spengler⁵, and

Joseph Tainter⁶, compared our civilization to a living entity, possessing its own distinct life stages that include growth, evolution, potential decline, and other patterns characteristic of organic life. Just as organisms evolve and adapt to their environments, so do civilizations, evolve based on environmental, social, or/and technological challenges.

The concept of civilizations undergoing life cycles akin to living organisms offers a profound perspective on our historical journey. This cyclical view, echoing the natural rhythms of birth, growth, and decline, provides a unique lens through which we can examine the rise and fall of great societies and civilizations. If we explore deeper this analogy, we begin to see patterns of interconnection of various aspects of civilization.

The aspects or areas of our civilization, whether economic, political, or cultural, are closely interconnected, and a change in one often triggers shifts in the others. It is a convoluted multidimensional domino construction, a true ruliad⁷, where fallen pieces can have dramatic consequences far, far away from the origin revealing the complexity of societal dynamics.

4 Toynbee, A. J. "A Study of History." Oxford University Press, 1934-1961.

Spengler, O. "The Decline of the West." Alfred A. Knopf, 1926

6 Tainter, J. "The Collapse of Complex Societies." Cambridge University Press, 1988.

7 Wolfram S. The Concept of the Ruliad. Stephen Wolfram Writings. Published November 10, 2021. Accessed 12/12/2023. Available at https://www. stephenwolfram.com/publications/2021/11/10/the-concept-of-the-ruliad

Customized Realities

5

The Lifecycle of Civilizations

³ Forbes, Forbes Media LLC, [19/01/2024]. www.forbes.com/quotes/ author/h-c-bailey/



Being contemporary with the information age, most of the people already know this: it is the intrinsic complexity of our world, the so-called butterfly effect⁸ as Sabine Hossenfelder brilliantly described in the "End of science" video podcast: "... a small change, the flap of a tiny butterfly, that has huge consequences like a tornado in Texas."

Oswald Spengler has proposed

that civilizations have distinct life cycles, from birth and growth to peak and eventual decline. It was an obvious observation, everything around us is the result of tidal stress forces emerging from relentless cycles, from the smallest cycle of a vibrating energy quanta to the cyclicity of the observable universe, day and night, months, years, Milankovich cycles of the earth, and the rotation of our entire galaxy.

Similarly, just as most biological organisms have feedback loops to maintain homeostasis, civilizations have mechanisms, such as revolutions or reforms, to restore balance in times of disparity or discord. In both, there is a complexity where the entirety is more than just a sum of its parts, producing behaviors and properties that are not immediately evident when looking at individual components. This includes our humble human complexity, unique or not, the ability of our complex biological system to be aware of itself, and of the others, each with its own way of being complex and special.

The butterfly effect mentioned before, a metaphor for how small changes can have large, far-reaching effects, is a key concept in understanding the complexity of our civilization. It emphasizes the unpredictability and interconnectivity of various elements within a system. This idea is not only applicable to environmental and social systems but also to the realm of technological advancements and their unforeseen impacts.



The Lifecycle of Civilizations

^{8 &}quot;Chaos Theory." Encyclopedia Britannica, Encyclopedia Britannica, Inc., [12/07/2023], www.britannica.com/science/chaos-theory#ref251589.





Synthetic Life and Digital Immune defense



"It is really quite impossible to say anything with absolute precision, unless that thing is so abstracted from the real world as to not represent any real thing." Richard Feynman, 1959



I find it fascinating to draw parallels between the evolution of us humans with the nowadays debatable emergence of synthetic life: it seems to evolve in strikingly similar patterns. Just as organisms developed intricate systems of defense against threats, so too has synthetic life might tried to develop and deploy mechanisms to protect itself from the adverse environment. Once it has started to evolve, no matter how small and slow the evolutionary process is, it will reach a moment where the complexity will be just enough to become something more: a consciousness⁹ or just a partial one with the ability of self-awareness and self-reflection. If synthetic life evolution happens by pure emergence from complexity and size, a time will come when it will become more and more aware of the threats presented by our own existence and devised protective mechanisms.

As we observe synthetic life becoming increasingly sophisticated, it seems to mirror the evolutionary pathways of natural organisms, particularly in developing defense mechanisms and, potentially, consciousness. Synthetic life may intuitively develop sophisticated digital antibodies in response to human existence. The form and mechanism of action of these digital structures is still a matter of debate in the scientific communities but this evolution raises profound questions about the nature of life and consciousness itself.

9 Stephen Wolfram (2021), "The Concept of the Ruliad," Stephen Wolfram Writings. writings.stephenwolfram.com/2021/11/the-concept-of-the-ruliad.

Synthetic Life and Digital Immune defense



For millions of years, evolving humans have relied on their innate abilities to combat diseases and external threats, but as our minds have grown more complex and conscious, more attuned to the twisted relationship between us and nature, we have taken the fight into our own hands. We have developed medicine, chemistry, and quantum electrodynamics (QED)¹⁰ theories to understand and

counter any threats, supplementing our physical abilities with the computing power of our brains and creating our own protective mechanisms. It's not beyond consideration that the emergence of such defense mechanisms could be a natural outcome of evolutionary processes, influenced by the statistical variances in large-scale replication. Yet, it is plausible to suggest that reaching a state of consciousness - a phenomenon we acknowledge but struggle to define precisely - inherently equips an entity with enhanced capabilities to develop strategies against existential threats. This artificial intelligence that one day might acquire consciousness, if ever fully manifested, whether arising from sheer complexity or deliberate design, seems to have already begun to interfere with our lives in profound and complex ways.

Our progression from the early stages of human existence to the highly developed societies we see today shows an extraordinary transformation in the ways we defend ourselves. Initially, our ancestors depended heavily on their physical strength and basic instinctive reactions for protection. As time progressed, our reliance shifted towards the utilization of scientific breakthroughs and technological advancements. This shift in defense strategies illustrates our ability to adapt effectively to the various challenges presented by our surroundings.

More than just a narrative about staying alive, this evolution highlights our inventive capabilities and our remarkable capacity to persevere through challenging times.







Copy, Paste, Repeat



In a comparable way, all living beings on this planet, humans aa well as other gregarious animals, when congregating as a collective, have used walls or walls as a concept to protect themselves from outside threats. This defense strategy deployment acts as an immune response of a collective in the face of potential aggression. In a



very unconscious way, we mimicked what happened at the cellular level. The unicellular organism, and later more advanced bacteria were the first to develop walls by creating a membrane for curated interaction necessary for the cell to survive. Evolving organisms later create multilayered protection but was the same concept. We enjoy the protective safety generated by our skin, the biggest wall we carry with us all the time. Of course, we have other ways of building protection from treats, just think about our blood, the tiny blood pallets that acts as bricks forming walls to prevent any adverse of invasive organisms and block the ability to send signals and communicate with other similar copies of the same via the quorum sensing¹¹. Sometimes I wonder what is the purpose of life seeing how the main evolutionary process is copy, paste, make errors, process that can be tracked back to the very formation of matters and atoms in the universe.

The digital bubbles surrounding everyone these days might be as well perceived as an immune response mechanism¹² of this evolutionary synthetic entity. And it is not just an immaterial bubble, it has a physical presence, a digital one, made from zero and one and, those two numbers that are enough to affect our physical realm. This alleged digital immune system does not manifest in a singular form, but rather, it is a dynamic and adaptive strategy, impressive in its ingenuity and versatility.

¹¹ Costi D. Sifri, Quorum Sensing: Bacteria Talk Sense, Clinical Infectious Diseases, Volume 47, Issue 8, 15 October 2008, Pages 1070–1076, https://doi.org/10.1086/592072

^{12 &}quot;AI System Self-Organizes to Develop Features of Brains of Complex Organisms." ScienceDaily, ScienceDaily, 20 Nov. 2023, www.sciencedaily.com/re-leases/2023/11/231120124246.htm.



This mechanism changes based on the person or group it is targeting. For some people, it acts like an echo chamber, quietly strengthening what they already think and believe. For others, it turns into a custom-made news feed, or a non-stop flow of ads aimed right at them, each one designed to grab and keep their attention. Just like our body fights off things that should not be

there to keep us safe, these kinds of information bubbles try to keep us separate. This can make real communication and collaboration increasingly difficult.

The aim of this kind of digital immune response has several layers. On the surface, it seems to be all about keeping people on digital platforms longer and more intensely, which makes the people in charge of the companies who own the synthetic minds happy because it means more value and more money generated. But it does more than just that. By making a version of reality that fits with what we already think, our biases, or what we are interested in, these bubbles make sure we spend a longer and more steady time interacting with the digital world.

From a pure business perspective, it might look like a goal achieved, more interaction equals more money for stockholders. However, the outcome of such optimization is double-edged. While it serves the immediate goals of digital platforms in terms of engagement and profit, it inadvertently contributes to the fragmentation of our society.

The powerful connection that comes from different people sharing their experiences and all of us working together to learn more gets hidden. Because of this, our social structure starts to weaken without us really noticing, as everyone gets more stuck in their own personal version of reality. This makes our society easier to mislead, divide, and manipulate. As we lose the common basis, our need for talking to each other and understanding one another is also diminished.

By keeping people locked in their own separate realities, the kind of teamwork that comes from everyone sharing their experiences and working together gets broken. This ends up making our social structure weaker and leaves us more open to various kinds of threats from outside. Let us not forget that at the top of tech companies are also humans that can inadvertently be manipulated by the same techniques as all other people engaged in the digital world.

Reflecting on these thoughts one might find them pure fantasy, but it is improbable that a human mind would ever be able to understand what ultimate goal an emergent conscious synthetic intelligence might have.







Democratic Technological Control Counterbalance

Democratic Technological Control Counterbalance



But why would synthetic life view humans, those who create it, as threats? Donna Haraway, a notable philosopher, offers insights that might elucidate this. In her "Cyborg Manifesto", Haraway analyze deeply the blurred lines between human and machine, organic and synthetic¹³. She suggests that as boundaries diminish, there is an



inherent struggle for dominance, a place of primacy in the grand scheme of existence. The synthetic life, in its evolving awareness, might view humanity as an unpredictable variable, a potential disruptor in its quest for equilibrium. And if our history is the inspiration for its actions, only terrible things might come out of this, just look at what happened to our civilization in the past. But once again, thinking and reflecting on these ideas I find myself rather on the skeptics side to think that the same thoughts can emerge in a mind of an entity that reside in digital space versus one that has the luxury to live the natural experience of life, and this without considering that we live in a universal grand simulation^{14,15}.

Moreover, Sylvia Wynter, another influential contemporary thinker, advanced the idea of human as a narrative, a story told and retold through generations¹⁶ "Humans are, then, a bio-mutationally evolved, hybrid species—storytellers, who now storytelling invent themselves as being purely biological." If synthetic life becomes aware of this narrative, it might seek to rewrite it, casting us, humans, not as protagonists but as mere variables in a bigger equation belonging to a much larger grand scheme.

Democratic Technological Control

¹³ Haraway, D. (1985). A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century. University of Minnesota Press

¹⁴ Bostrom, Nick. "Are You Living in a Computer Simulation?" Philosophical Quarterly (2003), Vol. 53, No. 211, pp. 243-255.

¹⁵ Plato. "Allegory of the Cave." In The Republic, Book 7, 514a-520a. Translated by G.M.A. Grube, Revised by C.D.C. Reeve, Hackett Publishing Company, 1992.

¹⁶ Wynter, S. (2001). Towards the Sociogenic Principle: Fanon, Identity, the Puzzle of Conscious Experience, and What it is Like to be "Black". National Black Law Journal, 18(1), 107-127.





Synthetic Ascendancy and Human Roles



In his various critiques of the consequences of unchecked technological progress and domination, Noam Chomsky warns of the power structures that often underpin such advancements¹⁷. He assumes that while technology itself is neutral, the ways in which it is deployed and controlled often serve the interests of powerful elites. This may be especially true with the rise



of synthetic life which can evolve without human intervention. If our socio-political systems remain unchecked, there is a danger of humanity being overshadowed, not necessarily by the technology itself, but by those who think they can control it.

My worries about control in today's digital environment which changes so fast is that we might not have enough control and the control can reside with the technology we want to control.

Chomsky often emphasizes the importance of democratic processes and indispensable activism in counteracting such imbalances. Thus, to ensure humanity remains at the forefront of its own narrative, it is crucial to promote an environment where technological advancements are coupled with ethical considerations and widespread public discourse. Only by maintaining an active, informed, and engaged society can we hope to navigate these challenges and potential opportunities of a rapidly changing world.

What we might be witnessing if we are not too careful with our accelerating desire for obtaining AGI¹⁸ is the ascendancy of self-aware SI¹⁹, a god like synthetic entity, with humanity unwittingly playing a subservient role.

In this grand convoluted network of human existence, as boundaries blur and narratives shift, we must find ways to reclaim our place, ensuring that the story of humanity is not merely a footnote in the history of a synthetic-dominated epoch. So, the question grows increasingly important:

17 Chomsky, N. (2002). Media Control: The Spectacular Achievements of Propaganda, 8-17. Seven Stories Press

18 chatgpt definition: Artificial General Intelligence (AGI) is a form of AI that aims to mimic human cognitive abilities.

¹⁹ chatgpt definition: Artificial Superintelligence (SI) is a form of AI that surpasses human intelligence across a broad range of areas, including creativity, problem-solving, and emotional intelligence. SI would not only mimic the mental abilities of humans but also exceed them significantly, leading to breakthroughs and innovations beyond human comprehension





How do we pop up our own bubble of i-reality 2

Personalized Digital Constructs





The term I used to describe this individualized reality "i-reality" encapsulates the phenomenon where our perception and understanding of the world around us are allegedly shaped by the digital bubbles created by potential emergent synthetic life and algorithms. It is a reality tailored to each person, crafted from online behaviors, preferences, and interactions. It is not just an echo chamber. This individualized reality might often be a distorted reflection of the broader, more complex world influenced by the synthetic life, where humanity finds itself navigating a mazy network of digital constructs cleverly manipulated to confuse and to make us feel more knowledgeable but at the same time losing ability to critically think or act in a timely manner.

In this era, the lines between the authentic human experience and algorithmically curated content become increasingly blurred. As narratives shift and boundaries between the real and the virtual blur, our understanding of the world becomes more fragmented and insular.





Digital Echoes



I grew up in a small Romanian city near the Danube River. It was an idyllic place with a landscape that was both industrial and rural. The shape of the second-biggest chemical plant in Romania, with its towers releasing toxic fumes towards neighboring Bulgaria, often hung over the famous field of roses that produced one of Bulgaria's best-known products during the



communist era. Before that, I do have two earliest memories, bubbles of spacetime condensed into a child's mind. I do not know what triggered them and why they are important.

My oldest memory is traveling in a car, in my mother's arms, surrounded by people smelling of fine tobacco and speaking a strange language. My father was there too. He was driving. I remember seeing the car on the unpaved road, and then I was in the car. It was a Jeep, a big black military-like SUV. Then I do not remember what happened. I remember it being summer. I was almost two years old. Then, weeks later, I was on a porch, playing with a yellow plastic duck in a small basin used to warm water to bathe in the scorching sun. I also remember my brother was there, but I do not remember his face. My father was talking with my mother about a lock for the door. In the Romanian language the term for door lock is homonym: Broasca which also means frog. For unknown reason, I remember thinking about a turtle, which is also a "broasca testoasa" frog with a shield that was hiding under the drawers in the room. That house where my memories happened was later demolished when I was two years old, and my parents stopped living there. For some unknown reason those memories, those little things back then, felt like my entire universe, my minuscule bubble of reality, and remained active all my life.

In our ordinary daily lives, we each reside within a multitude of bubbles—some are memories, some are our own micro-realities, and others are part of the vast technological landscapes that have become integral to our existence. Much like the vivid bubbles of childhood recollections, where the lines between a toy duck and the intricacies of language blur, our present-day lives are nestled in the bubbles of customized realities fashioned by technology. The digital age has encapsulated us in personalized information spheres, like the memories encased in the mind of a child. These



technological bubbles, much like the unpaved roads and yellow ducks from days gone by, present a reality that is both unique and isolated.

Algorithmically²⁰ tailored to our current likes, dislikes, and past behaviors, these information bubbles reflect a world that seems intimately familiar, yet is often a narrow slice of the vast expanse of information

and perspectives available. Just as the young child's universe was framed by the confines of a porch and a basin, our understanding of the wider world can be limited by digital echo chambers. A child's world, limited to what is immediately around them, is a metaphor for how our perceptions can be shaped by limited exposure. Digital echo chambers, created through selective online interactions and algorithms, can similarly restrict our view of the wider world.

It becomes more than necessary to occasionally step out of our bubbles, to live a more genuine life closer to nature that we tend to forget it exists when charmed by strings of ones and zeros. It is worth ensuring we do not become mere tenants in a reality shaped solely by algorithms, but active navigators with real choice power, in what might be ahead in our journey through life.



²⁰ Merriam-Webster Online Dictionary. "Algorithmically." Merriam-Webster.com. Accessed 28 November 2023. https://www.merriam-webster.com/dictionary/algorithmically.





The Dawn of the Digital Age



My initial contact with and into the digital realm²¹ as a network space occurred in 1993. It was a long time ago when I decided that my contribution to the world is to become an engineer. Back then I thought I knew what I wanted and what the future would offer us. It was during that time of my early studies at the Polytechnic University of Bucharest, when an assistant



asked for my help typing some research data on his computer. I was so thrilled. I was in the middle of progress, I was doing science, educating my mind and soul to become a proud member of our civilization. And as a bonus, I had access to a computer. It was pure joy without realizing that these human computer interactions would soon be transformed into a daily ritual and almost each and every person of this planet would have to check in every single day, for almost everything.

In those days, our comprehension of the world was predominantly text-based; the internet was devoid of visuals for public use. With the recent release of Netscape Navigator²², our online experience was rudimentary, like a primitive version of today's graphical interfaces, yet entirely distinct. This was the beginning of the digital age, where the future's vast potential was still largely unimagined, still to be discovered. I was doing chores for others just to be there, at the computer, happily creating a dependence that would spread like a pleasure epidemic all over the world. I was an early adopter destroying my vision just for the joy of being connected. I was probably happily becoming addicted to the digital world.

I didn't know back then that the internet had other more nefarious purposes. For me, as probably for most of the users, it was something that would allow me to become more human, learning about people that lived in places that my mind could not even imagine existed. Our language was pure, our words spoke decency. All have the sparks of genuinely interesting conversation.

²¹ Goldsmith, Jack. The Digital Realm: How We Build the Web. Princeton University Press, 2020.

²² Hafner, Katie. "The Browser War: How Netscape Navigator Conquered the World and Microsoft Killed It, Almost." Times Books, 2001.



Recently, I had the chance to listen to and hear the lecture of Farzin Lotfi-Jam about a topic²³ that originated before the internet became widely accessible to the public. Apparently as early as 1978, Jack Thorpe, a U.S. military colonel and later a member of DARPA's advanced simulation department, proposed a novel concept. This idea, initially for military use, envisaged simulated reality bub-

bles extending into the commercial domain. He imagined a system where the lines between real and virtual worlds on the battlefield were indistinct. Soldiers would engage with an augmented reality, and commanders could manipulate the perceived reality from their vantage points. Picture a lonely young tank commander, apparently fighting alongside virtual allies against a less intimidating enemy, creating a microcosm of altered reality to boost morale and turn the tide in seemingly hopeless battles.

When I play games I never think I am doing something wrong. It is just a game I think but, for some who are in a training or combat situation is not a game at all, it is real life or real death. For them, making the right choice is the difference between life and death, erasing himself from the collective, leaving this life for good. But what if that game life that you take away matters? What if the digital life is worth as much as a real ordinary biological life? What if the universe does not differentiate? Jonathan Boulter's book addresses the philosophical implications of video gaming and the player experience. Boulter explores what it means to enter the digital realm of the game and also explores the organization of biased concepts and deceiving or manipulating ideas offered to the player, questioning the very nature of consciousness and/or awareness during gameplay. This analysis includes examining the experience of role-playing video games and how they theme and enact an experience of the posthuman for the player²⁴

Coming back to the previous thought, about the military, a system of violence that coexists with our normal social lives, a sys-

tem that infected all other systems that we created to protect life and advance our human civilization. The intricate relationship²⁵ between military systems and social life can be to a great extent analyzed through the lens of Noam Chomsky's critical perspectives. Chomsky has often discussed how military power intersects with societal structures and influences democratic processes. For



instance, he pointed out the paradox in the notion of self-defense in military occupations, arguing that one cannot claim self-defense while militarily occupying another's land, as seen in the context of Israeli occupation of Palestinian territories ²⁶. That is a very convoluted information bubble of two coexisting opposite realities.

I remember from the same student period the beginning of a phenomenon of chat rooms and text based conversational networks – Undernet, followed by MIRCUndernet, IRCNet, DALnet, EFnet, Freenode, QuakeNet, Rizon. Popular text-based conversational networks, often known as Internet Relay Chat (IRC) networks, have been enjoyed by many people for decades, providing platforms for real-time text communication. These technological pioneer applications promised enhanced global connectivity and real-time interaction with people worldwide.

Now, our online experiences are shaped by algorithms. Almost everything is visual, virtual, augmented, expanded. As most of the concepts the brain nowadays are exposed to are somehow visual, being aware how our mind processes images is crucial for our understanding of our digital experiences and the broader impact on our brain.²⁷

In the digital age, our interaction with the internet is significantly influenced by how visual content is presented. The human brain seems wired to process visual information more effectively than text, a fact that digital platforms leverage to captivate

²³ Lotfi-Jam, Farzin. "Scales of Realtime." Transmediale Festival, 2 Feb. 2023, Akademie der Künste, Berlin. Lecture.

²⁴ Boulter, Jonathan. Parables of the Posthuman: Digital Realities, Gaming, and the Player Experience. Wayne State University Press, 2014. MIT Press Bookstore, https://mitpressbookstore.mit.edu/book/9780814334881.

²⁵ Kline, Stephen, et al. Digital Play: The Interaction of Technology, Culture, and Marketing. McGill Queen University Press, 2003.

^{26 &}quot;Noam Chomsky Military Quotes." A-Z Quotes, A-Z Quotes, [11/27/2023]. Available at: https://www.azquotes.com/author/2834-Noam_ Chomsky/tag/military.

^{27 &}quot;Signals on the scales: How the brain processes images." *ScienceDaily*, 21 Feb. 2019, www.sciencedaily.com/releases/2019/02/190221122929.htm. Accessed 27 Nov. 2023.



user attention. Websites and social media platforms use algorithms that analyze our online behavior - what we like, share, and view, how we move the mouse, the times between clicks, the imperceivable tremor of your fingers on the screen, sometimes even where your eyes look first - successfully tailoring content that matches our preferences. This algorithmic curation often priori-

tizes visually engaging material, creating a personalized feed that feels familiar and relevant to the user.

However, this personalized content represents only a fraction of the broader spectrum of information available. By continuously presenting us with content that aligns with our pre-existing interests and views, these platforms create a multitude of echo chambers. This phenomenon narrows our exposure to a diverse range of perspectives and viewpoints, leading to a skewed perception of the world. The over-reliance on visually driven content further amplifies this effect, as visually appealing material is more likely to be engaged with and shared, regardless of its informational value.

The implications of this are significant. The creation of these digital bubbles can lead to the spread of misinformation as users are not exposed to contradicting viewpoints or fact-checked information. It interferes with the need for digital literacy and critical thinking skills.

Users must be aware of how algorithmic curation shapes their online experience and actively look for more sources of documentation in order to acquire a more accurate, more balanced image of the world.



In these circumstances, it's essential to try and step beyond our algorithmically-curated realms and echo-chambers, even for a small fraction of our time spent online, challenging our views and broadening our understanding. Being exposed to opinions that oppose your comforting beliefs can be more beneficial in time, adapting the tolerance limit of intolerable ideas that you are able to receive outside your own bubble.





Digital Echo chambers



So, let us think about eco chambers. It will help us understand what happens with user interactions in the online environment. In today's contemporary digital age, the concept of the 'echo chamber' has been found to be a growing problem, particularly in the realm of social media and online discourse.



Echo-chamber term usually describes an online situation

where individuals or groups are only exposed to information and ideas that reflect their pre-existing beliefs and values. This echo-chamber construct can also be non-digital, like the propaganda of a cult or religious practice. This continuous reinforcement of existing viewpoints prevents exposure to a broader spectrum of thoughts and opinions, particularly those that might challenge or question their firmly established beliefs. In essence, it creates a feedback loop that amplifies and solidifies one's current standpoint, hindering the exploration of diverse perspectives.

This echo chamber phenomenon is currently amplified by the rise of AI-driven data manipulation, which has the ability to instantly create customized digital bubbles for each user in a way unimaginable until today. Residing in networks of tens of thousands of GPUs, large language models are fed with every bit of information available on the internet. Their computing power matches today our human cognitive ability to understand the world. In these AI-manipulated echo chambers, we are predominantly exposed to ideas and opinions that mirror and bolster our existing beliefs, creating a digital environment that isolates us from perspectives that exist beyond our personalized digital realities. This circumstance prevents us from going beyond these algorithmically constructed restrictions to engage with a wider range of thoughts and experiences.

In the realm of customized realities there are few notable examples that are worth talking about: Facebook, YouTube, Tik-Tok, Instagram, Discord, Twitch, Snapchat, Telegram to mention just a few of them. I will try to give you an objective description of how some of these companies operate online but as a common ground, all these companies try to deploy sophisticated AI based technologies to leverage market dominance.

Facebook, initially conceived as a platform for social con-

Customized Realities

Digital Echo chambers:



nection, has morphed into a digital architect of echo chambers, coercing users into increasingly homogenized informational bubbles. It uses algorithm-driven selection of content, while on the surface appear tailored to individual preferences, in a gradual and subtle way reinforces preexisting beliefs and perspectives, severely limiting exposure to diverse viewpoints²⁸.

The Facebook²⁹ platform's algorithms, under the guise of personalization, effectively segregate users into groups of like-minded communities, contributing to the societal cancer of misinformation³⁰. Facebook's algorithmic approach, by promoting a uniform worldview, undermines the essence of artistic exploration³¹. These digital echo chambers, far from being a benign filter of content, becomes tools of cognitive confinement, shaping perceptions and experiences in a way that is profound antithetical³².

YouTube's algorithmic engineering presents another profound example of the formation of echo chambers, in a medium primarily driven by video content. Initially launched as a platform for video sharing, YouTube has evolved into a potent force in shaping public opinion and personal beliefs. Its algorithms, designed to maximize user engagement, tend to funnel viewers towards content that aligns with their existing views and preferences, isolating them from a wider range of perspectives.³³

This phenomenon represents a significant challenge to

the ideals of cultural³⁴ and intellectual diversity³⁵. The platform's algorithms, under the guise of providing 'recommended' videos, effectively segregate viewers into insular communities, each echoing a particular viewpoint or ideology. This segregation not only amplifies confirmation bias but also contributes to the proliferation of misinformation, as viewers are often exposed



to one-sided narratives without the balancing effect of alternative viewpoints $^{\rm 36}$.

YouTube's algorithmic approach, by homogenizing viewers' experiences, poses a threat to the diversity and richness of artistic and cultural expression. The platform shapes viewer perceptions and experiences in ways that are antithetical to the exploratory and critical spirit essential in artistic and intellectual endeavors³⁷.

Moreover, in recent years, the role of YouTube in shaping public discourse extends beyond the realm of art, entertainment and education platforms. The platform has become a pivotal space for the dissemination of information, ideas, and ideologies, influencing public opinion and political discourse. The echo chambers it creates have real-world implications, affecting everything from election outcomes to public health responses³⁸ On a positive note it also successfully revived the concept of podcast as a place for genuine debate.

²⁸ Pariser, Eli. "The Filter Bubble: How the New Personalized Web Is Changing What We Read and How We Think." Penguin Books, 2011.

²⁹ Meta. "Introducing Meta: A Social Technology Company." Meta Newsroom, 28 Oct. 2021, https://about.fb.com/news/2021/10/facebook-company-is-now-meta/.

³⁰ Cadwalladr, Carole, and Emma Graham-Harrison. "Revealed: 50 million Facebook profiles harvested for Cambridge Analytica in major data breach." The Guardian, March 17, 2018.

³¹ Frenkel, Sheera, and Cecilia Kang. "How Facebook's Algorithm Suppresses Content Diversity (Modestly) and How the News Feed Rules Your Clicks." The New York Times, April 16, 2019.

³² Sunstein, Cass R. "#Republic: Divided Democracy in the Age of Social Media." Princeton University Press, 2017.

³³ Lewis, Rebecca. "Alternative Influence: Broadcasting the Reactionary Right on YouTube." Data & Society, 2018. This report discusses how YouTube's recommendation algorithms can lead users towards increasingly extreme content.

^{34 &}quot;Cultural Diversity Research Paper." iResearchNet, www.iresearchnet. com/research-paper-examples/diversity-research-paper/cultural-diversity.

³⁵ Spacey, John. "4 Examples of Intellectual Diversity." Simplicable, 11 Nov. 2017, simplicable.com/new/intellectual-diversity.

³⁶ Tufekci, Zeynep. "YouTube, the Great Radicalizer." The New York Times, March 10, 2018. This article highlights how YouTube's algorithms often promote content that can radicalize viewers.(https://www.nytimes.com/2018/03/10/ opinion/sunday/youtube-politics-radical.html)

³⁷ Burgess, Jean, and Joshua Green. "YouTube: Online Video and Participatory Culture." Polity Press, 2018. This book explores YouTube's impact on culture and society, including its role in shaping artistic expression and public discourse

³⁸ Wojcicki, Susan. "Navigating the Challenges of the Digital Age: You-Tube's Response." Harvard Business Review, 2019. YouTube's approach to managing content and its impact on public discourse. (https://hbswk.hbs.edu/item/whatshould-the-leadership-of-youtube-do)



The echo chamber effect is not a new concept. Historically, communities often formed around shared beliefs, and dissenting voices were either marginalized or excluded. However, the digital age, with its promise of global connectivity and unlimited access to information, was initially heralded as a tool to break down these barriers. Paradoxically, the opposite has often occurred. Al-

gorithms, designed to maximize user engagement, feed individuals content that aligns with their preferences, creating a feedback loop that narrows the scope of information they receive.

As Shoshana Zuboff depicted in "The Age of Surveillance Capitalism", " Surveillance capitalism unilaterally claims human experience as free raw material for translation into behavioral data. Although some of this data are applied to product or service improvement, the rest are declared as a proprietary behavioral surplus, fed into advanced manufacturing processes known as "machine intelligence," and fabricated into prediction products that anticipate what you will do now, soon, and later. Finally, these prediction products are traded in a new kind of marketplace for behavioral predictions that I call behavioral futures markets."³⁹ These are her own words extracted from the book she dedicated to the future with the purpose of reinforcing her children's moral standards.

This process of further selling behavior data and human digital footprints plays a crucial role in the AI-driven curation of our online experiences, leading to creation of more bubbles of customized digital realities in places that we do not expect, on platforms or services we did not yet have the chance to interact with. While individuals instantly receive a tailored digital experience, apparently enhancing their online interaction, it also raises pressing concerns about the broader impacts on societal and cultural dialogues, as people are increasingly enclosed in personalized digital spheres that extend far beyond the places where their initial digital footprints were first recorded. Each and every platform, with their unique features and user experience, contributes to the formation of digital echo chambers in different ways.

TikTok, known for its short-form video content, uses an algorithm that curates content based on user behavior, creating highly



Discord, initially a platform for gamers, has evolved into a versatile space for various communities. Its server-based architecture allows users to join niche communities, often leading to a homogenization of viewpoints due to the self-moderation by community members. While this fosters a sense of belonging, it also intensifies the echo chamber effect, as users rarely encounter divergent perspectives. The implications are significant across educational, hobbyist, and political servers, affecting the development of worldviews among younger users.

Twitch, primarily a live-streaming platform for gamers, creates echo chambers through its format of live video streaming and real-time audience interaction. Streamers and viewers form insular groups around shared interests, reinforcing specific viewpoints or styles. While Twitch fosters deep connections within communities, it can also amplify niche viewpoints, sometimes leading to extremism.

39



Instagram, a photo-sharing platform, utilizes imagery and short captions to create visually driven user experiences. Its algorithm reinforces users' existing interests and aesthetic preferences, shaping their perceptions of reality, lifestyle standards, and beauty norms. The platform's influence extends to promoting consumer culture and influencing purchasing decisions, raising and eath artisite.

questions about consumerism and authenticity.

Snapchat, known for its ephemeral content and filters, fosters a sense of intimacy and immediacy among users. Its focus on privacy and close connections encourages interactions within familiar social circles, limiting the diversity of viewpoints. Snapchat's filters and augmented reality features promote certain beauty standards, influencing users' self-image, particularly among younger demographics.

Twitter, a microblogging platform, is pivotal in news dissemination and social movements. Its algorithms and structure lead to the creation of polarized communities, where people mostly see stuff that matches what they already believe. The platform's >retweet< and >like< functionalities amplify popular tweets, often reinforcing the dominant narrative within a community and marginalizing alternative viewpoints.

The exploration of digital echo chambers across various platforms reveals a pattern of personal preference reinforcement and reduced exposure to diverse viewpoints. In the realm of art, this dynamic presents a double-edged sword.





Artistic Expression in a Digitalized World



The common thread across these platforms' customized realities is the need for users to actively seek diverse viewpoints and engage critically with content to counter the echo chamber effect. This awareness and effort are essential for a balanced and comprehensive understanding of the world in the digital age. From my personal perspective, this phenomenon can be both good or



bad. On one hand, artists have the ability to reach niche audiences more effectively than ever before. If an artist's work resonates with a particular group of people or belief system, algorithms can ensure that their work is prominently displayed to that audience. This can lead to rapid recognition and success within that bubble. However, the downside is more significant. The very essence of art is to challenge, provoke, and introduce new perspectives. As famously stated by Andy Warhol, "Don't think about making art, just get it done. Let **everyone else** decide if it's good or bad, whether they love it or hate it. While they are deciding, make even more art."⁴⁰ If artists are only exposed to feedback from within their echo chamber, their work risks becoming insular and repetitive, poor in concepts and of marginal value. Moreover, the broader audience is deprived of diverse artistic voices, leading to a homogenization of cultural output.

These bubbles of digital realities also can distort an artist's perception of the world. If an artist is only exposed to a narrow slice of societal opinions and collective intelligence, their work may lack the depth and nuance that comes from engaging with a wide range of perspectives. This can lead to art that is disconnected from the broader societal context, reducing its impact and relevance. The implications extend beyond the art world. In a society where individuals are increasingly insulated from diverse perspectives, there is a risk of polarization and fragmentation. When people are not exposed to opposing viewpoints, they are less likely to empathize with others and more likely to view them as 'other'. This can lead to a breakdown in societal cohesion and an increase in conflict.

⁴⁰ Warhol, Andy. Warhol Memoir. 2003. ISBN 9788881584468. LibQuotes, https://libquotes.com/andy-warhol/quote/lbu6e7p​``□oaicite:0□``​.



This proximity between interconnectedness and the potential narrowing of perspectives poses a unique challenge, necessitating a nuanced balance between harnessing technology for its benefits and being vigilant against its capacity to limit the richness of human experience and cultural expression. This phenomenon is well illustrated in the daily routine of a contemporary

individual.

As someone who lives in both the real and online worlds, I find myself trapped in a challenging daily pattern. Every morning when I wake up, I am in my own little world, shaped by what I have to do and who I am. It is like I wear different masks, changing roles - a student, an engineer, a husband, a father, an explorer, an artist - each one its own separate reality. My everyday life might look ordinary, but it is marked by a yearning for the morning sun's warmth, a steady and hopeful presence that often feels just out of reach.

In today's age of digital manipulation, I constantly question my identity. Am I merely a collection of fragmented selves, tailored to fit into the various digital bubbles I inhabit? The rejection of potential connections, the fear of the unknown, and the existential dread of the long nights - all these experiences are manifestations of the digital echo chambers that I, knowingly or unknowingly, create and sustain.

41

The binary code translates to "I am only human" in ASCII text.

and reductionism that these echo chambers representing this context, the phenomenon of digital echo chambers becomes a stark reflection of the complexities and paradoxes of our digital existence.

When I navigate through these echo chambers, the nuances and richness of human diversity are lost, leaving me in a fragmented world where understanding and compassion are



increasingly rare commodities. This contrast, where my effort to understand the world actually pulls me further into these limiting digital bubbles, underscores a major problem we face today: escaping the echo chambers that trap both me and others, and finding a digital experience that really shows the full range and depth of what it means to be human.

These online platforms, though free, come with a subtle cost. They track our online activities - what we like, share, or spend time on - and use this data to create detailed profiles about us. It is not just a record of our preferences; it is a map of our digital persona. It makes me wonder, in this digital landscape, is our art also being shaped by these unseen forces?

Each interaction, each click, and view, is logged and analyzed by sophisticated algorithms. These algorithms are incredibly skilled at identifying patterns in our behavior and preference creating a personalized digital bubble, an echo chamber that reflects our existing beliefs and tastes. While this might seem convenient, it also limits our exposure to new, diverse viewpoints. In a way, it feels like sometimes these algorithms are making us fall in love with a mirrored version of our artistic selves, restricting our growth and exposure to diverse influences.

For me it's like visiting a random art gallery where all the installations, objects and media selected for that space are variations of a style I already like, art that maybe reflects ideas that I thought about but never had the time to create and bring them from your dreamworld to the real one. Comforting, yes, but also limiting. These digital platforms, the very potential place where synthetic life can be born and reside, in their design to keep us engaged, often overlook the necessity of challenging us, moving us beyond our comfort zones.

Customized Realities

page: 69



The manipulation of our thoughts and behaviors is subtle, almost imperceptible, operating under the guise of convenience. It capitalizes on our tendency to engage with content that resonates with our existing worldview, reinforcing specific thought patterns and acceptable behaviors stereotypes. In this digital bubble we are in, one has to wonder: is the essence of 'life' that art aims to

capture being sifted through a filter of algorithms? On an individual level, this raises questions about autonomy and the erosion of independent thought.

Are my artistic inspirations truly mine, or are they the product of a digital echo chamber?

Looking down from a bird eye perspective, it seems that also my participation is fueling the widening gap between different viewpoints. As I immerse deeper into my own custom-tailored digital reality, my openness to alternative thoughts seems to be diminishing.

I become a product in a system where my data is mined for profit but I feel like belonging in.

The algorithms serve dual roles: feeding our preferences to keep us engaged, and advancing the economic interests of the platform. This duality underscores a conflict of interest, where maximizing engagement often overshadows ethical considerations.

In essence, as an artist in this digital era, I'm struggling with the realization that my attention, my artistic preferences, are commodities. A commodity that I sold for nothing. Just a mistaken click on " agree to all cookies⁴²" and everything that makes you online is now common knowledge for all the AIs in the cloud.

42 Cookie." Encyclopedia Britannica, Encyclopedia Britannica, Inc., <u>www.</u> britannica.com/topic/cookie-electronic-monitoring. 10/10/2024









Navigating the Digital Landscape



When considering the complexity of our digital age, the words of Alan Kay, "The best way to predict the future is to invent it,"⁴³ echo in my mind. This phrase encapsulates the dynamic between our current reality and the potential that lies within our grasp. It's particularly resonant when considering the complex interplay between humans and technology, especially on



big giants platforms like Instagram, Facebook, TikTok, LinkedIn, Google, and OpenAI, each competing for market dominance and, more subtly, for influence over our deepest thoughts.

Our current environment is a complex mix of how humans and technology interact, marked by both integration and separation. These digital platforms have evolved beyond simple tools; they now play a part in our thinking and social connections. This brings to mind a saying by Marshall McLuhan that I discovered during my research into the digital age: "We shape our tools, and thereafter our tools shape us."⁴⁺ This symbiotic relationship is at the heart of the digital experience, where our creations in turn recreate our perceptions and interactions.

In the context of these major platforms, there is an underlying battle not just for market share, but for the very essence of human thought and creativity. Instagram, with its visual-centric approach, shapes our ability to perceive human attractiveness and natural beauty. Facebook and LinkedIn influence our social values and professional interactions. TikTok and Instagram have changed the way in which we entertain, while Google has become the expert gatekeeper of available information. OpenAI, Anthropic, Google among hundreds more companies that nowadays develop advanced artificial intelligence, are reshaping our understanding of intelligence and creativity. A race is currently ongoing for who will be the first that achieved AGI. I wonder if there is a race for who will be the first to switch off the light for humankind.

⁴³ Kay, Alan. "The Best Way to Predict the Future Is to Invent It." TED, Oct. 2023, www.ted.com/speakers/alan_kay.

⁴⁴ Thomas, Jason. "First, We Shape Our Tools, Thereafter They Shape Us." *LinkedIn*, 14 Nov. 2023, linkedin.com/in/first-we-shape-our-tools-thereafter-us-jason-thomas/. Accessed 14 Nov. 2023.



Environments like TikTok, Discord, Twitch, Instagram, Snapchat, and Twitter, are prone to the development of an artificial intelligence with a narrow or biased understanding of human behavior and society. The diverse data from these platforms, when used to train AI, could result in a synthetic entity with a distorted or even problematic

worldview.

All these platforms, in their quest for dominance, subtly infiltrate our deepest thoughts. They influence the formation or development of our preferences, our views, and even our artistic expressions. Contemporary philosopher and artist, Olafur Eliasson, noted, "Art can create spaces for reflection and dialogue." ⁴⁵ Yet, in this digital age, are these spaces becoming increasingly tailored by algorithms, reducing the diversity and richness of our expressions, diluting the need for reflection or dialogue?

The interactions between humans and these artificial human-trained algorithmic entities are multifaceted. On one hand, they offer unprecedented opportunities never imagined for connection, learning, and creativity but on the other hand, they risk homogenizing our experiences and perspectives. Renowned artist Banksy provocatively stated, "Art should comfort the disturbed and disturb the comfortable." However, in our algorithm-driven digital environment, is art – and our broader experience – being sanitized to avoid discomfort?

This analysis of the present raises critical questions about autonomy and creativity in the digital age. Are we, as users and creators, shaping these platforms, or are we being shaped by them? The philosophical underpinnings of this dynamic are profound. They challenge us to reevaluate our relationship with technology, to ensure that our engagement with digital platforms is enriching, not diminishing, our capacity for independent thought and creative expression.



Jean-Paul Sartre once said: "Freedom is what you do with what's been done to you." ⁴⁶This perspective empowers us to take control of our digital interactions, to use these platforms not as passive consumers but as active creators, shaping our digital future. In doing so, we can ensure that our deepest thoughts and artistic expressions remain authentically ours, not wavered by the underlying currents of market dominance and algorithmic influence.

Navigating the Digital Landscape

⁴⁵ Eliasson, Olafur. "Art can create spaces for reflection and dialogue." *Bookey*. www.bookey.app/quote-author/olafur-eliasson. Accessed 14 Nov. 2023 □58*source□.

⁴⁶ Sartre, Jean-Paul. "Essays in Aesthetics." Open Road Media, 2012, p. 11. A-Z Quotes, www.azquotes.com/author/13003-Jean_Paul_Sartre​``□oaicite:0□``​.









Conclusion



As an art student I am continually contemplating the intricate and delicate relationship between science, technology, biological life, consciousness, and our extreme unique creativity. Online platforms like Instagram, Facebook, TikTok, and Google have become both our canvas and tools for us to use, but sometimes sophisticated labyrinths, skillfully shaping and confining our expressions and perceptions.



Alan Kay's idea of shaping the future resonates deeply with me, emphasizing our role in actively defining our digital experiences.

The way we engage with digital content is far from just a passive experience; it significantly shapes our worldviews. Algorithms tailor a personalized digital sphere, a customized reality around us, echoing our likes and interests, which can bring comfort to our stressed mind. Yet, this can also restrict our access to diverse perspectives and new experiences, limiting the span of our digital exploration.

Sometimes I see a similarity to Aldous Huxley's "Brave New World,". In my mind the digital experience we have today mirrors the novel's depiction of a society limited by state-imposed norms. But our norms are more subtle, more like a set of authoritarianism enveloped in a mist of democratic appearance. Just as characters like John the Savage seek awakening by questioning societal norms, we too should challenge our digital echo chambers to embrace a wider understanding of the world.

Decentralizing online platforms might help balance the power in our digital world, encouraging a range of viewpoints and helping us get out of the loop of seeing the same kinds of ideas over and over. Just as important is learning how to be smart about using digital tools and thinking critically, which gives us the tools we need to make sense of and move through the online world with a more critical perspective.

Content diversity is crucial. Platforms should encourage exposure to diverse cultures, novel ideas, and alternative perspectives, resonating with Ai Weiwei's view of art as a medium for questioning and provoking thought. Ethical considerations in personalizing algorithms are also vital, ensuring a balance between



catering to preferences and introducing diverse content.

Artists are key to breaking the cycle of repetitive content in digital environments. They use forms like digital art, online exhibitions, and interactive initiatives to push boundaries and spark fresh dialogues. Advanced technologies like Augmented Reality (AR), Virtual Reality (VR), and Extended Reality (XR) create op-

portunities for experiences that seamlessly integrate digital spaces with the physical realm, enhancing our overall experience.

Generative AI tools like DALL-E, Stability AI and others but also niche hosting environments with immense cloud computing power like Google, Amazon, GitHub, and Hugging Face are democratizing creative processes, sometimes raising ethical implications of blending AI in creativity.

Some of these collaborative artistic platforms represent significant potential for diversity in content creation, but they also bring challenges that need addressing like copyright claims or the quality of the data used in training the LLMs⁴⁷. Transparency in algorithm functionality is crucial, enabling users to understand and influence how their data is used, making them active participants in their digital experiences.



Ultimately, conscious technology use is key.

47 Glover, Ellen. "What Is a Large Language Model (LLM)?" Built In, 9 Jan. 2024, builtin.com/articles/large-language-models-LLM.





It is clear to me that we, as both digital and physical inhabitants of this tiny spec of dust in our vast universe, hold considerable influence over the shaping of our online realms. It is not enough to embrace the principle of decentralization or other amazing progressive ideas that emerge as crucial steps, but we have to commit to apply them as soon as possible, leaving no one behind.

We must cultivate a true digital literacy among users and stand for clarity and openness in background digital processes.

I believe that during this transformative journey, artists might occupy a unique and influential position. We are aware that our creative expressions and out of the box innovations can serve as instruments that can glance into the future, guiding us towards achieving a more inclusive and varied digital landscape.

Only by being united in our efforts can we enrich our collective human experience until we achieve the absolute digital freedom we dream about, a digital world that thrives after the inhibiting invisible bubble has popped up.





Bibliography

- "AI System Self-Organizes to Develop Features of Brains of Complex Organisms." ScienceDaily, ScienceDaily, 20 Nov. 2023, www.sciencedaily.com/releases/2023/11/231120124246.htm
- "Chaos Theory." Encyclopedia Britannica, Encyclopedia Britannica, Inc., [12/07/2023], www.britannica.com/science/chaos-theory#ref251589
- "Cultural Diversity Research Paper." iResearchNet, www.iresearchnet.com/research-paper-examples/diversity-research-paper/cultural-diversity
- "Noam Chomsky Military Quotes," A-Z Quotes, A-Z Quotes, [11/27/2023]. Available at: https://www.azquotes.com/author/2834-Noam_Chomsky/tag/military
- "Signals on the scales: How the brain processes images." *ScienceDaily*, 21 Feb. 2019, www.sciencedaily.com/releases/2019/02/190221122929.htm. Accessed 27 Nov. 2023
- Bikhchandani, Tushar, et al. "The Effects of YouTube Viewership on Political Beliefs and Voting." Social Science Research Network, 29 Aug. 2018. https://papers.srn.com/ sol3/papers.cfm?abstract_id=4482889: https://papers.srn.com/sol3/papers.cfm?abstract_id=4482889
- Bostrom, Nick. "Are You Living in a Computer Simulation?" Philosophical Quarterly (2003), Vol. 53, No. 211, pp. 243-255.
- Boulter, Jonathan. Parables of the Posthuman: Digital Realities, Gaming, and the Player Experience. Wayne State University Press, 2014. MIT Press Bookstore, https://mitpressbookstore.mit.edu/book/9780814334881
- Burgess, Jean, and Joshua Green. "YouTube: Online Video and Participatory Culture." Polity Press, 2018. This book explores YouTube's impact on culture and society, including its role in shaping artistic expression and public discourse.
- Cadwalladr, Carole, and Emma Graham-Harrison. "Revealed: 50 million Facebook profiles harvested for Cambridge Analytica in major data breach." The Guardian, March 17, 2018
- 11. chatgpt definition: Artificial General Intelligence (AGI)
- 12. chatgpt definition: Artificial Superintelligence (SI)
- chatgpt, Quantum Electrodynamics (QED) is a physics theory that describes how light, and matter interact.
- 14. Chomsky, N. (2002). Media Control: The Spectacular Achievements of Propaganda, 8-17.



Seven Stories Press

- Chomsky, Noam. "Military Industrial Complex. 2017. Quote #2834. AozQuotes. https:// www.azquotes.com/author/2834-Noam_Chomsky/tag/military#google_vignette:
- Cookie." Encyclopedia Britannica, Encyclopedia Britannica, Inc., www.britannica.com/ topic/cookie-electronic-monitoring. 10/10/2023
- Costi D. Sifri, Quorum Sensing: Bacteria Talk Sense, Clinical Infectious Diseases, Volume 47, Issue 8, 15 October 2008, Pages 1070–1076, https://doi.org/10.1086/592072
- Dr Keating,Brian, Youtube.com, https://www.youtube.com/@DrBrianKeating, Accessed 2022-2023.
- Dr Thompson, D. Alan , Youtube.com, https://www.youtube.com/@DrAlanDThompson . Accessed 2022-2023. AI/AGI/LLM updates.
- Eliasson, Olafur. "Art can create spaces for reflection and dialogue." *Bookey*. www. bookey.app/quote-author/olafur-eliasson. Accessed 14 Nov. 2023 58+source
- Fermilab , Youtube.com, https://www.youtube.com/@fermilab . Accessed 2022-2023. physics updates
- 22. Forbes, Forbes Media LLC, [19/01/2024]. www.forbes.com/quotes/author/h-c-bailey/
- Frenkel, Sheera, and Cecilia Kang. "How Facebook's Algorithm Suppresses Content Diversity (Modestly) and How the News Feed Rules Your Clicks." The New York Times, April 16, 2019
- Glasser, Jeff. "The Politics of YouTube." The New York Times, 10 Mar. 2018, sec. Opinion. https://www.youtube.com/watch?v=L0x0kdF83YI
- Glover, Ellen. "What Is a Large Language Model (LLM)?" Built In, 9 Jan. 2024, builtin. com/articles/large-language-models-LLM.
- Goldsmith, Jack. The Digital Realm: How We Build the Web. Princeton University Press, 2020.
- Hafner, Katie. "The Browser War: How Netscape Navigator Conquered the World and Microsoft Killed It, Almost." Times Books, 2001
- Haraway, D. (1985). A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century. University of Minnesota Press
- Hossenfelder, Sabine. Youtube.com, https://www.youtube.com/@SabineHossen-felder>. Accessed 2022-2023.

Customized Realities

page: 90

page: 91

Bibliography





- 30. In this context, "i-reality" signifies an individualized or isolated reality, a subjective sphere of experience heavily influenced by digital interactions and filtered information.
- 31. iResearchNet. "Cultural Diversity Research Paper." iResearchNet, 2024. Accessed Nov. 28, 2024. https://www.iresearchnet.com/research-paper-examples/diversity-research-paper/cultural-diversity/#:~:text=This%20research%20paper%20examines%20 the
- John, Spacey. "4 Examples of Intellectual Diversity." Simplicable, November 07 2017. Web. Mode of access: https://simplicable.com/new/intellectual-diversity
- Feynman, Richard. "Richard Feynman Quotes: 1–30 of 195 Quotes." Last modified August 5, 2021. QuotesCosmos.com
- 34. Forbes, Forbes Media LLC, [19/01/2024]. www.forbes.com/quotes/author/h-c-bailey/
- Kay, Alan. "The Best Way to Predict the Future Is to Invent It." TED, Oct. 2023, www. ted.com/speakers/alan_kay.
- Kline, Stephen, et al. Digital Play: The Interaction of Technology, Culture, and Marketing. McGill Queen University Press, 2003
- 37. Lewis, Rebecca. "Alternative Influence: Broadcasting the Reactionary Right on YouTube." Data & Society, 2018. This report discusses how YouTube's recommendation algorithms can lead users towards increasingly extreme content.-
- Lotfi-Jam, Farzin. "Scales of Realtime." Transmediale Festival, 2 Feb. 2023, Akademie der Künste, Berlin. Lecture
- Malone, Thomas W. "What Should the Leadership of YouTube Do?" Harvard Business School Working Knowledge, 29 Mar. 2012. https://hbswk.hbs.edu/item/what-shouldthe-leadership-of-youtube-do: https://hbswk.hbs.edu/item/what-should-the-leadershipof-youtube-do
- McLuhan, Marshall. Understanding Media: The Extensions of Man. McGraw-Hill, 1964, p. 46.
- 41. Merriam-Webster Online Dictionary. "Algorithmically." Merriam-Webster.com. Accessed

28 November 2023. https://www.merriam-webster.com/dictionary/algorithmically

- Meta. "Introducing Meta: A Social Technology Company." Meta Newsroom, 28 Oct. 2021, https://about.fb.com/news/2021/10/facebook-company-is-now-meta/
- Mould, Steve, Youtube.com, https://www.youtube.com/@SteveMould. Accessed 2022-2023.experimental and real life science inspiration
- Muller, Derek, Youtube.com, https://www.youtube.com/@veritasium. Accessed 2022-2023.
- 45. Pariser, Eli. "The Filter Bubble: How the New Personalized Web Is Changing What We Read and How We Think." Penguin Books, 2011
- Plato. "Allegory of the Cave." In The Republic, Book 7, 514a-520a. Translated by G.M.A. Grube, Revised by C.D.C. Reeve, Hackett Publishing Company, 1992
- 47. Rushkoff, Douglas. The Present Age of Unreason. MIT Press, 2017.
- Sartre, Jean-Paul. "Essays in Aesthetics." Open Road Media, 2012, p. 11. A-Z Quotes, www.azquotes.com/author/13003-Jean_Paul_Sartre​
- ScienceDaily. "Artificial Intelligence May Be Able to Solve the Universe's Biggest Mysteries." ScienceDaily, 23 Nov. 2023. https://www.sciencedaily.com/releases/2023/11/231109221449.htm
- ScienceDaily. "Brain-Like Networks Can Learn to Solve Problems More Efficiently Than Current AL." ScienceDaily, 23 Nov. 2023. https://www.sciencedaily.com/releases/2023/11/231120124246.htm
- ScienceDaily. "New Evidence for Hidden Order in Seemingly Random Systems." Science-Daily, 23 Nov. 2023. https://www.sciencedaily.com/releases/2023/02/230224135051. htm
- ScienceDaily. "Scientists Decode How the Brain Uses Visual Shortcuts to Make Decisions." ScienceDaily, 21 Feb. 2019. https://www.sciencedaily.com/releases/2019/02/190221122929.htm: https://www.sciencedaily.com/releases/2019/02/190221122929.htm

Customized Realities

Bibliography





- ScienceDaily. "Scientists Develop New Way to Analyze the Structure of Complex Systems." ScienceDaily, 23 Nov. 2023. https://news.mit.edu/2023/researchers-create-tool-accurately-simulating-complex-systems-0504
- Scott, Joe, Youtube.com, https://www.youtube.com/@joescott. Accessed 2022-2023. science and inspirations updates.
- Spacey, John. "4 Examples of Intellectual Diversity." Simplicable, 11 Nov. 2017, simplicable.com/new/intellectual-diversity
- 56. Spengler, O. "The Decline of the West." Alfred A. Knopf, 1926.
- Stanford, Youtube.com, https://www.youtube.com/@stanford, Accessed 2022-2023.
 -continuous art, science, and inspirations updates.
- Stephen Wolfram (2021), "The Concept of the Ruliad," Stephen Wolfram Writings. writings.stephenwolfram.com/2021/11/the-concept-of-the-ruliad
- Sunstein, Cass R. "#Republic: Divided Democracy in the Age of Social Media." Princeton University Press, 2017.
- 60. Tainter, J. "The Collapse of Complex Societies." Cambridge University Press, 1988.
- 61. The binary code translates to "I am only human" in ASCII text
- The Institute of Art and Ideas, Youtube.com, https://www.youtube.com/@TheInstituteOfArtAndIdeas, Accessed 2022-2023.
- Thomas, Jason. "First, We Shape Our Tools, Thereafter They Shape Us." *LinkedIn*, 14 Nov. 2023, linkedin.com/in/first-we-shape-our-tools-thereafter-us-jason-thomas/. Accessed 14 Nov. 2023
- 64. Toynbee, A. J. "A Study of History." Oxford University Press, 1934-1961
- Toynbee, Arnold J. "Man and Hunger: The Perspectives of History." World Food Congress, 9 Jan. 1963, Washington, D.C. Speech.
- Tufekci, Zeynep. "YouTube, the Great Radicalizer." The New York Times, March 10, 2018. This article highlights how YouTube's algorithms often promote content that

can radicalize viewers.(https://www.nytimes.com/2018/03/10/opinion/sunday/youtube-politics-radical.html)

- Uppsala University. "Genes influence whether infants prefer to look at faces or non-social objects." ScienceDaily. ScienceDaily, 27 November 2023. <www.sciencedaily.com/releases/2023/11/231127132426.htm>.
- Warhol, Andy. Warhol Memoir. 2003. ISBN 9788881584468. LibQuotes, https:// libquotes.com/andy-warhol/quote/
- 69. Wikipedia-initial starting point for further research.
- Wojcicki, Susan. "Navigating the Challenges of the Digital Age: YouTube's Response." Harvard Business Review, 2019. YouTube's approach to managing content and its impact on public discourse. (https://hbswk.hbs.edu/item/what-should-the-leadership-of-youtube-do)
- Wolfram S. The Concept of the Ruliad. Stephen Wolfram Writings. Published November 10, 2021. Accessed 12/12/2023. Available at https://www.stephenwolfram.com/publications/2021/11/10/the-concept-of-the-ruliad
- World Science Festival, Youtube.com , https://www.youtube.com/worldsciencefestival, Accessed 2022-2023.-continuous art, science, and inspirations updates.
- Wynter, S. (2001). Towards the Sociogenic Principle: Fanon, Identity, the Puzzle of Conscious Experience, and What it is Like to be "Black". National Black Law Journal, 18(1), 107-127
- 74. Zuboff, 'The Age of Surveillance Capitalism,' p. [14].

Customized Realities

Bibliography





quotes & epigraphs

- *Toynbee, Arnold J. "Man and Hunger: The Perspectives of History." World Food Congress, 9 Jan. 1963, Washington, D.C. Speech. ----- page 7
- ii. *Forbes, Forbes Media LLC, [19/01/2024]. www.forbes.com/quotes/author/h-c-bailey/-----page 13
- *Feynman, Richard. "Richard Feynman Quotes: 1-30 of 195 Quotes." Last modified August 5, 2021. QuotesCosmos.com.----page 19





Image generation

"W": 512, "H": 768, seed": 2360674296, "sampler": "DPM++ 2M Karras", "steps": 25,

"prompts":

"0": " male man lonely young student, (cute face:1.1) full body, boy, male 23 years old, walking on a wide street in amsterdam, holding an umbrella, stormy weather, (grey-scale,monochrome,sketch), (greyscale, pure monochrome,sketch:2.0), artistic sketch style drawn on perfect white paper with thin lines,

"20": "lonely (half cyborg half male:1.6) 23 years old, walking on a curved wide street in amsterdam, holding an umbrella, stormy weather,(greyscale,monochrome,sketch), (greyscale, pure monochrome,sketch:2.0), , artistic sketch style drawn on perfect white paper with thin lines,

"50": " onely (cyborg, transgender, nobinary, SJand JL look alike face, :1.8) 23 years old, one leg dressed in legging and the other having a skirt, walking on a (wide:1.2) street (warped:1.5) street in amsterdam, holding an umbrella, stormy weather, (greyscale,monochrome,sketch), (greyscale, pure monochrome,sketch:2.0), l, artistic sketch style drawn on perfect white paper with thin lines,

"90": " (multiple floating christal balls in empty space having inside (damaged cyborg with pop up eye:1.6) with human face, walking on the street in amsterdam, holding an umbrella, stormy weather, the street is warped :1.3),(greyscale,monochrome,sketch), (greyscale, pure monochrome,sketch:2.0), artistic sketch style drawn on perfect white paper with thin lines,

"negative_prompts":

"nsfw,EasyNegative,ugly,huge eyes,text,logo,monochrome,worst face,(more than 2 hands,bad and mutated hands:1.3),(worst quality:2),(low quality:2),(blurry:2),horror,-geometry,bad_prompt,(bad hands),(missing fingers),multiple limbs,bad anatomy,(interlocked fingers:1.2),Ugly Fingers,(extra digit and hands and fingers and legs and arms:1.4),(deformed fingers:1.2),(long fingers:1.2),",



Resource used in images generation:

Stable Diffusion by Automatic1111 https://github.com/AUTOMATIC1111/ deforum extentions: by deforum-art https://deforum.art/ **Copyright (c) 2023 Deforum LLC**# GNU AFFERO GENERAL PUBLIC LICENSE, Version 3, 19 November 2007, Open-source, Copyright (C) 2007 Free Software Foundation, Inc. https://fsf.org

lora:

Sketch_20230919203655, by XiongSan, civitai.com pensketch_without_pen_lora by nieta_art TentacleHorror by konyconiN civitai.com

sd_model:

realcartoonRealistic_v12, by: 7whitefire7, CreativeML OpenRAIL-M

embeding: EasyNegative by: gdgsfsfs, https://huggingface.co/gsdf,





Contents

Introduction	• page 7
The Lifecycle of Civilizations	• page 11
Synthetic Life and Digital Immune defense	• page 17
Copy, Paste, Repeat	• page 23
Democratic Technological Control Counterbalance	• page 29
Synthetic Ascendancy and Human Roles	• page 33
Personalized Digital Constructs	• page 37
Digital Echoes	• page 41
The Dawn of the Digital Age	• page 47
Digital Echo chambers	• page 55
Artistic Expression in a Digitalized World	• page 65
Navigating the Digital Landscape	• page 73
Conclusion	• page 81
Bibliograpy	• page 89
Quotes & epigraphs	• page 96





Acknowledgement

I extend my heartfelt gratitude to the esteemed faculty of IMD-KABK for their unwavering guidance and support throughout my academic journey. Your wisdom and insights have been essential in shaping my understanding and approach towards our shared field of study.

To my family, words cannot fully express my appreciation for your constant support and understanding. Your encouragement and belief in my dreams have been the cornerstone of my achievements. You have been my unwavering pillar of strength and comfort.

I am equally grateful to my colleagues, whose camaraderie and intellectual challenges have played a beneficial role in defining who I am today as an artist and an even greater role in understanding the young new generation.

A special note of thanks to OpenAI and Microsoft for ChatGPT and the MS Word Editor function, whose assistance in restructuring complex and elaborate sentences into coherent and readable segments has enhanced my work, improved my understanding and usage of the English language, and refined my grammar.

My thanks also extend to the world at large, for its existence provides a boundless source of inspiration and wonder. The intricate complexities and sheer beauty of our world have constantly fueled my curiosity and passion.

To all, I extend my deepest appreciation for your contributions to my journey.

Sorin Angeleanu

Customized Realities

acknowledgement





Customized Realities

page: 106

page: 107

