

ALL ART MUST GO UNDERGROUND

War and fascist regimes in the digital age,
complicated politics of information, and what role
can digital art play in the new landscape of the
Internet



Introduction

Originally this thesis was supposed to be an exploration of how we structure knowledge in digital archives. About fitting patchy unstructured lived experiences in databases and sacrifices it demands. But my own lived experience has interfered when I woke up to my country bombing Kyiv.

And as I was watching the war unfold through the screen, I realised how simultaneously surreal and seamless the role of Internet culture and Internet technologies is in our daily lives, warfare, and politics. I saw pictures of Ukrainian technicians climbing inside bomb funnels to reconnect the Internet cables, read Reddit threads about soldiers posting selfies and uncovering important military objects, and swiped through open-source satellite images proving whole governments wrong.

And as my feeds were flooded with horror and Twitter suggested 'I might like' pictures of dead bodies, I couldn't stop thinking about the knowledge I have of these digital landscapes, of algorithms and data-collection, hidden policies and dark-patterns. I imagined people who are stumbling through these landscapes blind and it terrified me how much power hides where we cannot tell if we are guided or walk freely.

As an aspiring digital artists and a Russian activist I saw these two identities merge together and found myself asking: what emancipatory potential can digital art have within the closed, controlled, politicised world of Internet technologies in an age where we can no longer ignore their immense affect on our lives?

Changes as choices

“War is elective. It is not an inevitable state of affairs. War is not the weather.”

Susan Sontag

If you are living in times of peace and places of relative safety it is very easy to overlook how much warfare and patterns of systemic violence leak into the foundations of modern technologies. As these technologies keep shaping our reality and our discourse, I think, it is vital to understand how they form and change, and what histories they tell and withhold. Could I still see the traces of the past as I am typing out this essay on my laptop?

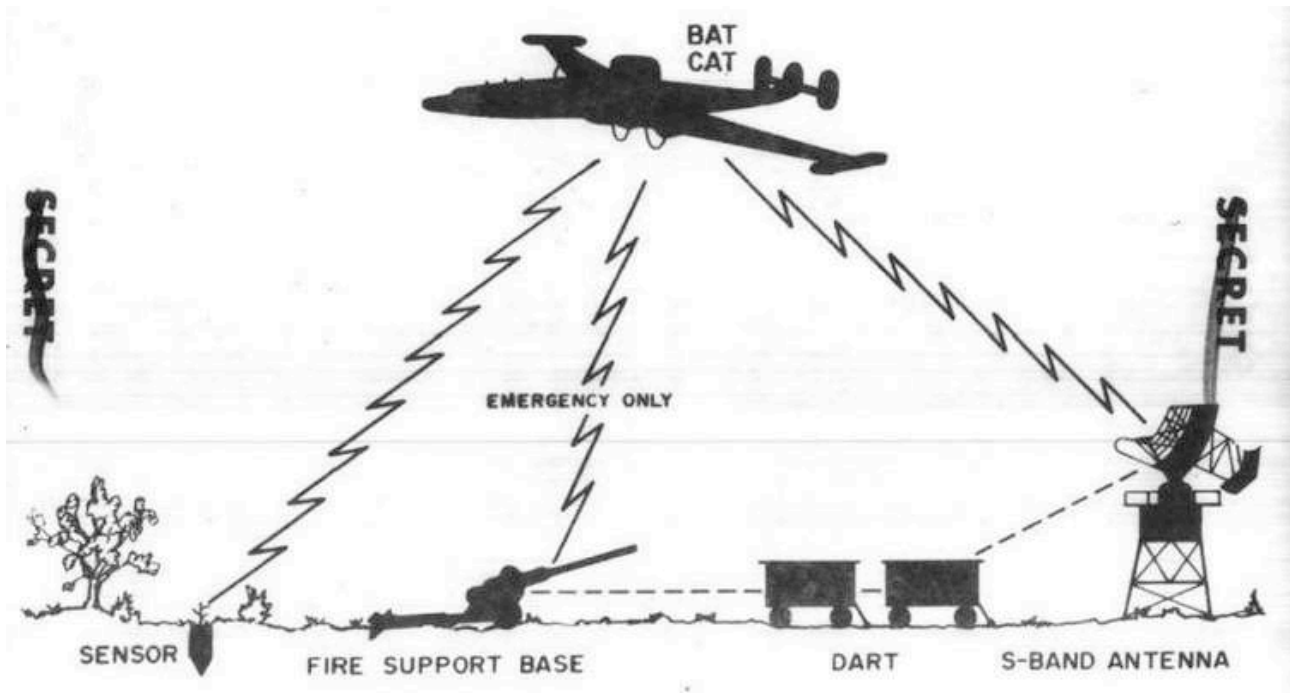
I want to start with addressing two mainstream narratives surrounding technology and progress, one of software — history of ideas and formal logic, stream of new discoveries perfecting the methods of cognition. Another of hardware — history of economic and engineering wonders, inventors driven by inevitable market forces towards the bright tomorrow.¹ To me both represent the remnants of ideas sparked by the enlightenment era. While I realise that it includes a range of thinkers and is not homogeneous, I want to focus on how the ideal of advancement and progress was formed by empiricism and evolutionism. It is the idea that every piece of knowledge should be subjected to testing and rational analysis, which in turn will bring us to the truth. And that human reason by discovering more and more truths will improve the future of humankind.

What I see as destructive in such a line of thinking is the idea that technological changes are improvements justified by rational factors and motivated by the strive to better the world. So, the fastest, smartest, and cheapest in production will always prevail. While this notion is not fully untrue, it creates huge blind spots where political ideologies and power structures insert and replicate themselves. If histories of technological advancements are simply histories of smartest solutions, a lot of choices and contexts get lost, and the fact that every technology is utilised to achieve certain goals becomes lost too. Discussing two very different fates of American and Soviet cybernetics flourishing and fading during the Cold War era I want to highlight the third narrative, hidden in the seams —the one where technology is inevitably formed by politics and forms politics.

In 1968 — one year before the first ARPANET computers were connected — stood a large building in Thailand. Dark and well-conditioned inside, filled with IBM computers — it was the Infiltration Surveillance Center (ISC). It was the command centre of Operation Igloo White meant to destroy Vietnamese machinery and supplies going across the Ho Chi Minh Trail in southern Laos. People inside this centre have never seen the trail, instead it was packed with sensors that allowed a machine to see. For this operation humans were defined as entities that moved, sweated, used trucks and occasionally peed. A digital ‘worm’ on a digital grid that is jungle. As soon as this worm appeared on the screens, jets that patrolled the night sky, could immediately be guided towards it and then automatised target-systems destroyed whatever was peeing, moving or making noise.²

1 — Paul N. Edwards, *The Closed world: Computers and the Politics of Discourse in Cold War America*, (Cambridge: The MIT Press, 1996), x-xvi

2 — Paul N. Edwards, *The Closed world: Computers and the Politics of Discourse in Cold War America*, (Cambridge: The MIT Press, 1996), Chapter 1-9



The design of Igloo White operation

Even though it might sound like an example of progress and high-tech, efficient warfare, Vietnamese later testified that American sensors were flawed and they could easily trick them. And the official number of destroyed trucks was weirdly bigger than the number of all existent trucks in North Vietnam. Yet it was not an obstacle for official astounding success and more budget money.

In his book 'The Closed world' Paul Edwards writes "Operation Igloo White's centralised, computerised, automated method of 'interdiction' resembled a microcosmic version of the whole United States approach to the Vietnam War" and, evidently, to warfare as a whole. He argues that the unprecedented centralisation of American military forces during these time happened due to new electronic communication machines and automated data processing equipment. Which, in return, made effective 'We Defend Every Place' worldview of command and control from Washington a practical technological proposition. Central management was possible because of the market of the data processing hardware needed to make it possible, that was invested in due to desire for centralisation. For every question of why global military control was proposed as an optimal technological solution, there was an automated system, which used highly quantitative analysis, to generate a perfect reason.

As a result, total oversight allowed for standardisation and improvement of communication technologies. While such countries as UK were busy with other demands of post war existence, USA started dominating commercial markets for computer development and by 1965 more than half of computers operating in Britain were U.S.-made. Moreover, free exchange of knowledge in scientific community was impeded by secrecy, instead of conferences – closed rooms with boxes of classified papers. Consequently, such fusion of technological development and ideology of centralised warfare made the computer and all its networks into political entities themselves, rendering and enforcing new realities, which we now might perceive as the norm.

After the example of Igloo White – novel implementation of new technologies that failed in some regards, but definitely succeed in assisting the idea of centralised automated warfare – let's enter the technological discourse of USSR, where mathematicians are hiding geneticists in their apartments to save them from house raids, signing petitions to save their colleagues from

GULAG and sharing an underground copy of Norbert Wiener's book "Cybernetics: Or Control and Communication in the Animal and the Machine" where he first defines Cybernetics as a science of self-regulating machines. ³

In USSR the ideological factor of science and technological progress is immediately on the surface. In his critical article «Кибернетика — “наука” мракобесов» ⁴ Michail Yaroshevski — Soviet psychologist — writes that cybernetics is an attempt of American imperialism to infiltrate the truth of marxist science. Every scientist whose research was public and approved by the party was supposed to tie it together with the ideas of 'marxist science', which at times had turned the communication into a code in itself. Researcher Yanina Prudenko writes in her foreword to "Cybernetics in Humanities and Arts in the USSR": **“Легкое, но устойчивое чувство шизофренической усталости ощущалось мной при прочтении текстов, в которых часто озвучивались парадоксальные утверждения, казавшиеся противоречивыми.”** ⁵

As the Cold War was a strong motive on both sides of the Iron curtain Soviet scientists often used Military–industrial complex in their suggestions to get approval for their projects as a sort of trigger word for institutional support. In 1962 Viktor Gluskov and Anatoly Kitov were using the same tactics to develop and implement a project of Soviet Internet — ОГАС (National Automated System for Accounting and Processing Information). Yet even after endless planning and overcoming technological challenges, the project was blacklisted with a General's question: “And where is the party's leading role in your machine?” There was no algorithm establishing the leading role of the party. As governmental apparatus of the country was not interested in a technology that can objectively analyse political and economic models of Soviet governance and saw a huge decentralising potential of ОГАС, the project got blacklisted.



The layout of National Automated System for Accounting and Processing Information centres by 1990

3 — Yanina Prudenko, *Cybernetics in Humanities and Arts in the USSR. Big Data Analysis and Computer Art*, (Moscow:Garage.txt, 2018)

4 — (my translation) “Cybernetics is the “science” of obscurantists”

5 — (my translation) “A slight but persistent feeling of schizophrenic fatigue was felt by me when reading texts in which paradoxical statements were often voiced.”

Such examples of relationships between different political actors and similar technology shows that progress is not constituted solely by closing in on the singular rationally deduced truth and most efficient methodology. What is fascinating to me in comparing Soviet and American discourses is that where USSR saw threat of decentralisation, killing Soviet cybernetics at its roots, United States saw a powerful tool for centralisation. Both wanted to gain control and both were true in their judgments — the Internet can decentralise and simultaneously globalise the world.

So, while talking about new technology and technological changes, we can never omit the discourse surrounding it, desired outcomes that determined choices throughout development and people it will benefit. And while we can still find traces of Worldwide Military Command and Control System on our keyboards, it is important to remember the world as we know it is not an inevitable result of the most logical and rational solutions of linear improvement of our lives, but a messy battlefield of multitudes of reasonings, with no one rational reason behind it.

En(c)han(ce/t)ments of the world

“Humanity have abandoned itself to the algorithmic management of an endless crisis.” ⁶

Hito Steyerl

After briefly discussing the histories of ARPANET and OIGAC and establishing that technological potential is heavily linked to political agents, we might ask how do these histories apply to the times seemingly removed from the realities of Cold War? And, inevitably, how do they negate the democratising and decentralising power of Internet and processing technologies?

To tackle these questions, I want to explore the ideas of German sociologist Max Weber. Similar to ideas of enlightenment he believed in evolutionary nature of science and technology. That they change society by making it more ‘civilised’ in a linear manner, replacing value-oriented action with instrumental rationality. Yet contrary to them he saw technological progress as a two-sided spear, more grim and complex: “specialists without spirit, sensualists without heart; this nullity imagines that it has attained a level of civilisation never before achieved.” ⁷ He strongly felt that technology and progress bring us closer to ‘rational’ reality, devoid of spiritual meanings.

That, for example, when we are riding a bus, even if we don’t really know how the engine works in detail and we could never recreate it, we don’t assume that spirits assist The Department of Transportation. We simply note that we are yet to learn how the engine works. Reality is there to be known if you just make an effort. Hence one of his most famous statements: “The fate of our times is characterised by rationalisation and intellectualisation and, above all, by the disenchantment of the world.” ⁷

However current reality inverts and supports his ideas. While buses are fairly mundane indeed, there is plenty of spell work in other places lurking behind our screens. For instance, here is a picture of a girl in front of a soldier that started circulating online when the Russian Invasion of Ukraine has escalated. People were praising how brave this Ukrainian girl is — standing up to the militarised violence of Russian occupation.



⁶ — Hito Steyerl, “SocialSim”, 2020

⁷ — Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, (Germany, 1905)

In fact, this picture is a decade old, and the girl is Palestinian.⁸ But in this digital landscape, this does not change the message. People who will repost this image are still supporting Ukrainian girls, however Palestinian they are. We could put many girls instead of this one and no one would notice.

So, what we see is a photo of real people taken in a real situation, but we don't see the modification of meaning that an image went through by circulating the web. And in this process akin to constant compression so much data is lost that the girl stops being real with her own urgencies and becomes a symbol that can be applied. In her essay 'On Photography' Susan Sontag discusses how inevitably political the medium of photography is, as we are only allowed one angle, one moment, one focal point already picked for us. All these choices — outside of the frame.

The flow of interaction with information online adds new moving parts into this equation. If a picture is printed and spread in a paper that you choose to buy, even if it twists all meanings, it is quite clear that the paper is responsible for all those twisted narratives. But if certain posts, tweets, and pictures appear in an endless scroll — liked by your friends — the line becomes more blurry taking us into a new, mystical realm.

And, of course, this opportunity for sorcery cannot be ignored for long. In St. Petersburg stands a building very ordinary at first glance, which Novaya Gazeta⁹ uncovered to be a 'troll farm' in 2013. Where people log into their fake social media accounts, get a nice cup of coffee, type in such trigger words as 'Ukraine' or 'Navalny' and start their day. They have objectives updated in relation to current political events, that say what theories and opinions they must convey in the comments and replies. So, now, users themselves can be created and altered to sustain the charm.

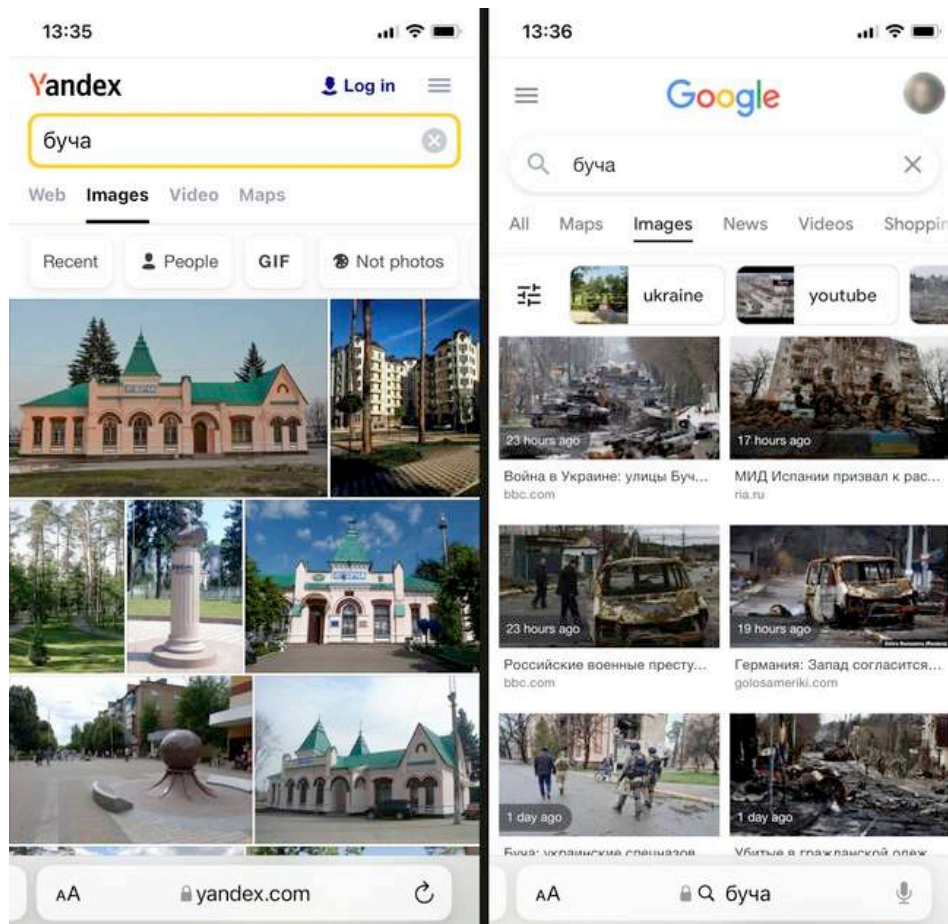
Yet there is a much more powerful actor in altering reality — a simple online search. After the events in Bucha¹⁰, when searching for pictures for the query "Bucha", the Yandex search engine, by default, provided photographs of a city not yet affected by the war. By comparison, Google's default search only showed photos of the dead, destroyed buildings, and burnt equipment.¹¹

8 — *Some More News*. 2022. "War Is Bad" Uploaded on April 6, 2022. YouTube video, 1:10:12 hours. [link](#) .

9 — Diana Hachatrian. "How to become a troll hunter." *Novaya Gazeta*. 2015. <https://novayagazeta.ru/articles/2015/03/10/63342-kak-stat-trollhanterom>.

10 — Joel Gunter. "Collecting the dead in Bucha." *BBC News*. April 13, 2022. <https://www.bbc.com/news/world-europe-61085810>

11 — "What do Yandex and Google give out for the request "Bucha"? in one picture." *Meduza*. 2022. <https://meduza.io/short/2022/04/04/что-выдадут-яндекс-и-гугл-по-запросу-буха-в-одной-картинке>.



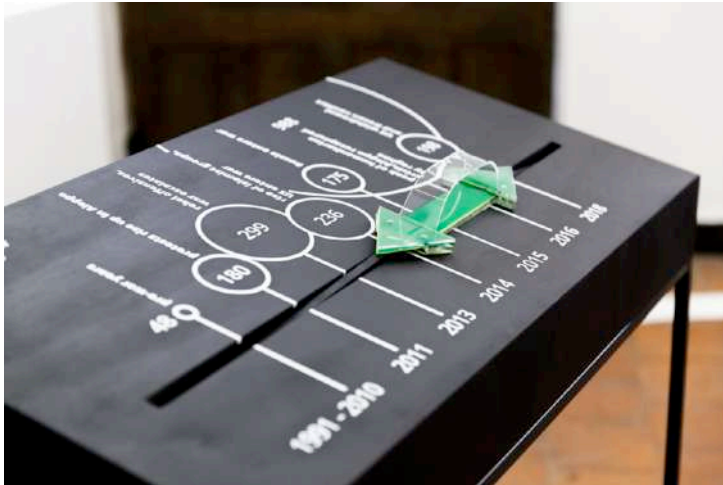
Screenshots, 4th of April, Yandex and Google searches for the query "Bucha"

And, while it is enticing to assume, that outside of evil dictatorships, there are no issues with 'googling' something, it is, in a way, even more of a mystery. Hence the control of the answer is split into more diverse corporate agents, which are much harder to trace. The world of big tech is monopolised to such extend, that Apple, Amazon, Facebook and Google are put into position to pick 'winners and losers' that makes competition nearly impossible. For instance, 41% of first page of search results on mobile devices is curated by Google themselves, which basically makes one company responsible for majority of online inquiries as many users are satisfied by the first answer.¹²

So, with the speed and nature of informational flow today, while forming opinions together with multitudes of actors and algorithms, are we closer to 'rational' reality? When we ask the machine, we subconsciously share the idea, that its response would be somehow equated, standardised, unaffected by political factors. But as digital artist and media scholar Hito Steyerl writes: "Today most important things want to remain invisible: love is invisible, war is invisible, capital is invisible"¹³, and if you want to search for definitions of love, war, and capital — Google's search algorithms are invisible, too.

12 — *Tech Monopolies: Last Week Tonight with John Oliver (HBO), 2022. Uploaded on June 13, 2022. YouTube video, 26:49 mins. [link](#) .*

13 — Hito Steyerl, *How Not to be Seen: A Fucking Didactic Educational .MOV File*, 2013



NEWSROOM INSTALLATION '4-D NEWS', 2019

In their work '4-D News' design studio 'Cream on Chrome' tries to help people navigate this complex online terrain and asks which alternative media formats are required to counterbalance today's news feeds. '4-D News' is both an experimentation into news formats, as well as a research method that explores the development of entire news stories – highlighting subtle changes and recurring patterns over the years. Displayed stories evolve as visitors pull a physical scroll bar up and down, browsing the story along a timeline.¹⁴ While this installation works with narratives in reporting on chosen topics, it is also very aware of which mechanisms online affect our perception. They not only showcase the reporting and analyse the changes, but also propose an alternative way of interacting with information – perceiving topics with past and present on the same canvas as alternative for increasing fragmentation and loss of context.

Yet visibility can also have its enchantments. As our feeds brighten up with rainbow logos during the pride month, it is easy to equate digital realms with the reality of legislations. While representation and ability to speak up are an important aspect of liberation and a huge advantage of Internet technologies, being heard does not mean that we are understood or given any structural power. Sontag writes: "Social change is replaced by a change in images. The freedom to consume a plurality of images and goods is equated with freedom itself."¹⁵ And as we execute this freedom online, our wishes, identities and behaviours become commodified. When talking about photography, Susan Sontag says: "To photograph people is to violate them as they never see themselves, by having knowledge of them they can never have; it turns people into objects that can be symbolically possessed." And if realistically a picture could be shown to us or even gifted, the patterns that AI draws from the meta-data of our lives are only available to seven companies in the world that are able to have infrastructures on the scale of Google or Facebook.¹⁶ And even then, our data can only exist for humans as a conclusion, when a new reality has already been drawn from it and rendered.

14 — Cream on Chrome, '4-D News'. <https://cream-on-chrome.com/4dnews>

15 — Susan Sontag, *On Photography, The Image-world*, (New York: The New York Review of Books, 1977)

16 — Kunstsammlung Nordrhein-Westfalen. *I will survive*. Düsseldorf: Spector Books, 2020.

In her book “The Sexual Contract”, important for the second wave of feminism, Carole Pateman discusses the idea of ‘Social Contract’ and how women were always excluded from philosophical debate about morals and nature of human societies. She writes: “We’re not at the table because we’re on the menu”. I wonder, if now by sitting at the table we immediately become part of the menu. And as data-analysts are drowning in noise that is yet to become information, people are drowning in information that inevitably turns into noise.

In “How not to be seen: a fucking didactic educational.mov file” Hito Steyerl explores similar concerns about the power of our tools to produce reality. She examines the politics of visibility and the means for opting out of being represented in the digital age. She suggests scrolling, wiping, erasing, shrinking, taking a picture, or pretending you are not there. Using the images of the US Army resolution test patterns, she proclaims (or, rather, a computerised male voice): “Resolution determines visibility. It calibrates the world as a picture’. Her suggestions on how to become a picture are: to mask, to be painted, to key. Steyerl purposefully merges the physical reality of being seen and digital reality of being represented in the pictures, combining keyframes in video editing software, scrolling social media feeds and being unnoticed by online discourse as a part of a marginalised group — “Being a female over 50”. She ends up by suggesting that resistance is the preserve of those who are experts in image technology: if you want to blend into reality, change it even, you should start with a photoshop tutorial.



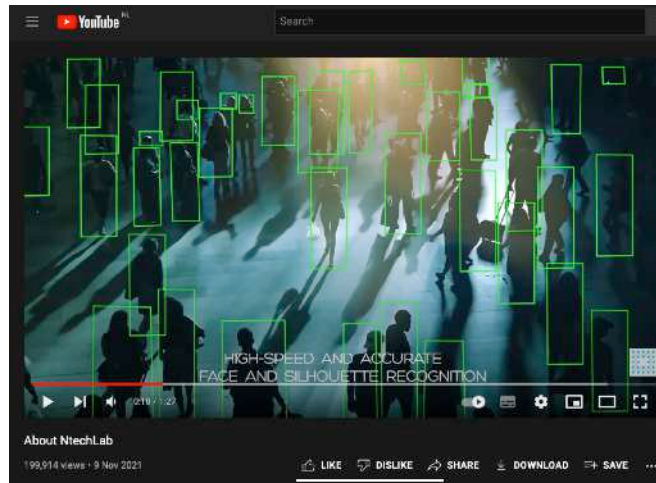
Stills from ‘How not to be seen: a fucking didactic educational.mov file’

Hito Steyerl and Trevor Paglen also touch upon how political all machine vision is in their talk “The autonomy of images, or we always knew images can kill, but now their fingers are on the triggers”.¹⁷ They say we are surrounded by sensing systems and imagining systems. And that to train an AI to ‘see’ we always need statistics and a list of things we want it to see, which determines a big part of how the world would exist for this AI as it generates new worlds.

There is a company based in Russia that is called NtechLab. It is busy with image analysis, data science, neural networks, and creating a large-scale system for recognising faces, silhouettes, numbers, and images. As it happens, they sell this technology to the Russian government. In his article “NtechLab — turning the Earth into Hell for fellow citizens”¹⁸ Artyom Zinnatullin — a coder himself — questions the blame that developers of this AI share with the oppressive and unjust machine of Russian repressions. He starts a dialogue with one of the employees and asks why someone who is seemingly opposing the government himself, would ever develop software that is used to catch activists and other opposition members. The NtechLab developer writes: “You need to understand that there’s still more good from this technology. We can catch criminals with it.” And I wonder, how do criminals come to be? It feels as if the act of being caught by this software makes you one. As if it produces criminals rather than finds them.

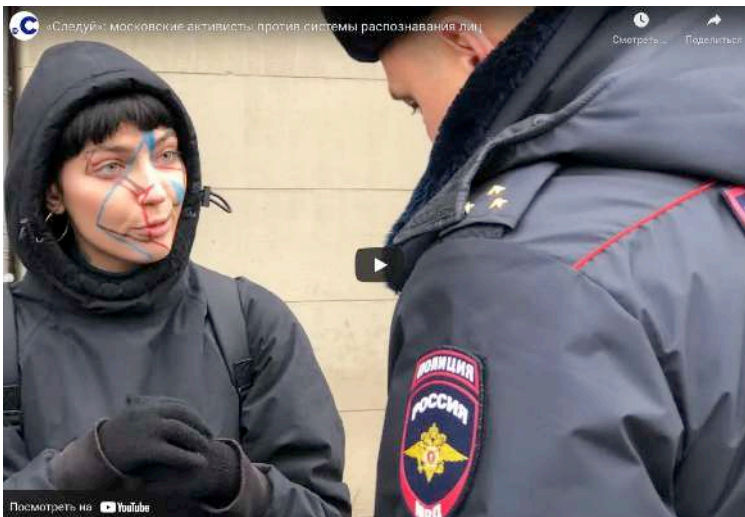
17 — Kunstsammlung Nordrhein-Westfalen. *I will survive*. Düsseldorf: Spector B, 2020.

18 — Artyom Zinnatullin. “NtechLab — turning the Earth into Hell for fellow citizens.” *ABSTRACTNY MUJIC*. June 3, 2022. <https://artemzin.com/blog/ntechlab-digital-gulag/>



Promotion video, Ntechlab YouTube channel

Same questions are raised by Russian art-activists after 105 thousand cameras with this recognition software are installed in Moscow. As they are documenting their walk through the capital, artist Katrin Nenasheva explains why they suggest wearing special makeup as a protest against mass surveillance. She says: “When a huge camera meets me in the metro, I feel unsafe. Your face is the only thing you have left, everything else they track”.¹⁹ We see how the group of activists is immediately arrested by policemen as Katrin’s prerecorded interview cuts in-between. One of them films Katrin on his phone, while she covers the camera with her hand. They are all charged with ‘unlawful gathering’ before they even manage to put the makeup on.



Katrin Nenasheva argues with policemen, while on anti-surveillance art-protest



Look + 2, Computer Vision Dazzle Camouflage

19 — «Следуй»: московские активисты против системы распознавания лиц, Coda Story на русском, 2020. Uploaded on February 11, 2020. YouTube video, 03:50 mins. [link](#)

I find it baffling: how can it be that the act of developing and training this algorithm can be non-political, but the act of trying to avoid it — inevitably is?

While Hito Steyerl's didactic guide becomes almost revolutionary in this juxtaposition, I find comparing this art-protest with Adam Harvey's CV Dazzle project most vital. As he explores how fashion could be used as camouflage from face-detection technology by studying facial-recognition algorithms. He says that his project is a concept that needs to be adjusted to every specific algorithm, updating the page of the project with this statement: "[...] you should not expect a design from 2010 to be applicable to an algorithm from 2020. A more helpful question to ask would be "does design X work against algorithm Y?".²⁰

With Katrin's makeup she signifies protest and awareness of repercussions of being seen. Yet she cannot actually hide, saying: "It is important for us to understand what makeup works and if it could work at all". But by combining knowledge of algorithms and ability to research them while making art, we can activate the meaning behind Katrin's protest.

After all these examples it is time to remember the second aspect of Weber's belief that technology assists overall rationality of systems and population. While we can clearly see that technology is more likely to generate new realities than anything else, it is scary to realise, that his outlook is indirectly reflected in our society today, as it can be seen from the study of techno-optimism. In this study people were simply asked how much they would trust a robot for a judge. Statistic shows that those who don't trust the government and face more violence incited by institutions, for instance, Afro-Americans and Russians, are willing to submit to the algorithm much more than the most techno pessimistic group — white Americans.²¹

Many are ready to allow technology absolute power in most peculiar spheres of their lives without any inspection of how it functions and who owns it just to escape human biases. And in this quest for a cybernetic ideal of a fair and objective machine, AI god, AI policeman, AI judge, the oppressed do not recognise how machines were never taught to recognise our humanity.²² They were never meant as tools of liberation, relegating us to peeing, sweating creatures on digital grids of automated warfare.

What I tried to argue in both enlightenment and Weber's ideas is the evolutionist view on progress and specifically societal and scientific development. Technology is not a magical device towards societal liberation or reaching rational realities, it is a tool capable of destruction and restoration of the worlds and humans. It adapts to existing power structures and norms and reinforces them if it is not carefully examined.

And while we are indeed disenchanting, this exact assumption of understanding allows for us to be enchanted anew when enchantments claim the role of enhancements. As we assume the bus is simply taking us where we want to be as fast as it can, we are easily ignoring the route it is taking and the price of the ticket. So, as there are no stops to escape, we are in need of people who can explore who drives it, who sits near us and how, in fact, does this stupid engine work?

20 — Computer Vision Dazzle Camouflage, <https://cvdazzle.com/>

21 — Ekaterina Shulman. 2021. "The Golden Age and the Digital Concentration Camp: a lecture at the New Nature exhibition in St. Petersburg. Arena (+Sound)" Uploaded on September 26, 2021. YouTube video, 1:44:18 hours. [link](#) .

22 — Kantayya, Shalini. 2020. Coded Bias. Written and directed by Shalini Kantayya, 86 min.

Role of art

“Works on the Internet are never fully passive.”

Constant Dullaart



Graffiti of Brodsky from Oleg Lukyanov

Once a portrait of Joseph Brodsky appeared on the school wall near the poet's museum in St. Petersburg as a tribute to his memory. A work that is hard to call political. Yet, after it was painted over by the administration of the school, it became a channel for discussion.²³ People started leaving lines of poems, notes and their own paintings — act of protest against the big white stain, almost too provocative for a peach wall. Only in this graphic dialogue with the administrative restriction, only in its interactive absence, the work activated structural discussion — why do we paint over art? Why can't we decide to leave something we enjoy in the public space we inhabit? Who is allowed to paint on walls and why?

Now that I discussed in detail the theoretical and historical base for my urgencies, I want to finally address how I position art against them. Because for me art was never an institutionalised leisure, but always a type of resistance — a quiet protest, a loud protest, an indirect protest. I grew up in a country where no art history was untouched by governmental apparatus of Soviet Union. Every poet, every writer, every painter was established as political actor: shot, raided, prosecuted (for example, Brodsky), sent to GULAG, deported or — a member of the Communist Party. There was official art: socially realistic happy children hugging socially realistic happy Stalin. And there was everything else — screaming, rhyming, singing, whispering. So, for me the connection between politics and art has always been almost subconscious. Even if artworks themselves were not political statements or not openly political, it seemed that the mere power of interpretation and expression that art was able to invoke, was considered a threat to oppressive systems seeking control.

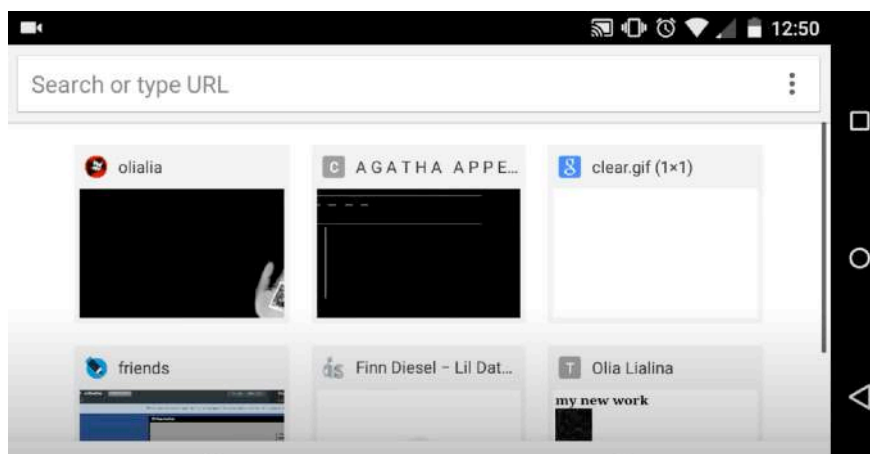
23 — Viktoria Yerofeeva. “Art of protest. Part two: how an artwork turns into protest.” *Ariadna*. October 19, 2021. <https://ariadna.media/2021/10/19/protest-art-activism-part-two/>

But coming back to a painted over graffiti — I find big similarity between street art and digital art with their inherent activating qualities, both performed in public spaces with unclear boundaries of expression, constantly modifying and modified. Interesting combination of both is the work of Heath Bunting «Graffiti Street Internet Interface» (1996-2006), where he wrote the url of the work in many public spaces and then started a conversation with those who followed it. That way however many urls would be painted over, every action in a chain becomes a part of his network. Many works of early Net Art are playing with control almost by default, simply exploring who is allowed to paint the digital walls and how many coats of paint were there already.

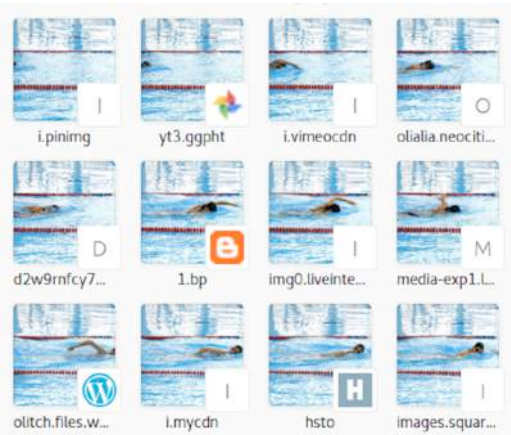


1996 - 2006 : PROJECT X, graffiti street internet interface funded by None, None, None.

Another important theme of Net art is capturing the invisible, luring internal protocols of a closed system outside for everyone to trace and see. Olia Lialina — is a master of such luring (and lurking), a Russian artist whose first famous work was not untouched by the war — “My Boyfriend Came Back From The War” (1996). In her work ‘Vanishing Path. Documentary’ she records her screen and writes: “Vanishing Path documents Google's next step to get web users acquainted to the idea that URLs are meaningless and should vanish.” You can see on the screen how the machine navigates in the web and then erases its trail. Instead of the space for action, url is tucked away in a neat domain name.



Screenshot of the video ‘Vanishing Path. Documentary’



To start and control the animation follow the instructions in a desktop browser of your choice:

0. Firefox users should de-activate "cycling through tabs in recently used order" in Preferences→General→Tabs.
1. Close all tabs except this one.
2. Click each link while holding `Ctrl` (Linux, Windows) or `⌘` (MacOS).
3. Close this tab.
4. Hold `Ctrl` and repeatedly hit `Tab`.

"Hosted" 2020 by Olia Lialina

Her more recent work, "Hosted" is an animation, a performance using "5 clouds, 70 free hosting services, and 7000 buckets". With Hosted Olia Lialina continues her exploration of the Web address as signifier of the culture, the economy and the politics underlying the Web.²⁴ In this digital performance there are many actors — cloud services like Amazon AWS, Microsoft Azure, Google Compute Cloud, their data containers (buckets), performance of the viewer's network, and individual hosts' agency to delete some 'frames'. These buckets are optimised to serve data for huge platforms like Vimeo, Youtube, Instagram, Tumblr, etc. Following the steps Olia Lialina provided we engage in this complex interaction of many actors, wandering paths we are not supposed to see, where we would usually never go. And as we are moving, Olia Lialina moves through the water with us frame by frame, host by host, through the glitches and missteps of the Web.

Such tours behind the sleek appearances of modern interfaces are vital when they are so clearly engrained in our lives, our deaths, our wars, our arrests. When wandering through labyrinths of information online, using technologies with embedded warfare, guided by invisible defaults, understanding of reality becomes fragmented. And the more we strive to connect and look for power, the more power we give away in increasing dependency.

We are heavily interconnected and overstimulated by information and narratives, while not realising that the gadgets we use are not merely messengers, but co-authors. It brings the role of a guide or a curator to the forefronts. If the tools we use are borrowed and gifted by actors we can neither control nor refuse, digital knowledge becomes an urgency. Yet unlike technicians, artists, too, deal in narratives navigating these new realities intuitively, mapping and challenging them, curious to find the limits and step over them.

If we look at the examples in this essay, it is clear that digital art is hard to pinpoint (at least in my definition), but to me the fluidity of it is one defining feature in itself. Digital art is whenever an artist works with technology or the discourse it creates, rather than uses it arbitrarily. It is about the fascination with the new tools to create and connect — poking them, hacking them, exploring them, criticising them, exposing them. It is about researching the very ground we stand on, never being able to fully detach ourselves from it. By deconstructing the interactions with your screens, uncovering patterns and protocols that corporations want to cover, artists tell forgotten histories of choices. What to compress, what to allow, what to embed.

24 — Josephine Bosma. "Olia Lialina's Hosted: A Performance, One Stroke at a Time." Arebyte. 2020. <https://www.arebyte.com/olia-lialinas-hosted-a-performance-one-stroke-at-a-time>.



On September 8, a graffiti portrait of Maria Kolesnikova, who led the opposition in Belarus, appeared in St. Petersburg. The drawing contained the inscription "For your freedom and ours." This gesture is a protest against the fact that on September 6 she was sentenced to 11 years in prison. The work was painted over on the same day. (photo: David Frenkel)

I see beauty and power of digital art in the fact that it cannot be covered up flatly with a bucket of ugly grey paint, it cannot be burned or caged in an institutional basement, it has the potential to exist in-between the cracks, constantly activated and activating.

Underground

*“There is no certainty or predictability. There is no fate. There is a choice.
My choice and yours, in each moment that demands it.”²⁵*

Maria Alyokhina



The walls are bare at the Andrey Sheptytsky National Museum in Lviv. (Kasia Strek for The Washington Post)

I named my thesis after the Washington post article about Ukrainian people hiding their art in order to preserve it from the destruction of war. ²⁶ There was something unbearably illustrative about this title. About artistic impossibility to exist on the surface, inside an institution in the times of imperial violence. But I read it as proclamation of persistence, not preservation. Underground as foreground to exist in the constant turbulence of our world. Like fungal networks and massive root systems, like groundwater flow travelling the continents, like tectonic plates slowly moving.

For me the emancipatory potential of digital artists is their ability to reimagine systems most users don't question, and the fluidity of their roles and skills: technologists, researchers, curators, guides, activists, hackers. They are almost inevitably existing in the cracks, underground, in-between. The overlap of inability to make a manual for art and dire need in accessible and playful manuals on how we are being controlled, collected and defined, to me, gives digital artists a lot of ground to invoke choices that can become changes.

Our future is anxious — loss of nature, loss of data, loss of control — yet if we walk digital routes with wonder and curiosity, there are also tools for unprecedented connection and solidarity. There is something truly magical about it, it's impossible to write a manual on solidarity, nevertheless it happens — forever enchanted. I want to believe, that true power lies, where manuals don't apply.

²⁵ — Maria Alyokhina. *Riot Days*. (London: Penguin Books, 2017)

²⁶ — Max Bearak and Isabelle Khurshudyan. “‘All art must go underground:’ Ukraine scrambles to shield its cultural heritage.” *The Washington Post*. March 14, 2022. <https://www.washingtonpost.com/world/2022/03/14/ukraine-odessa-russia-war/>

BIBLIOGRAPHY:

- Alyokhina, Maria. *Riot Days*. London: Penguin Books, 2017
- Arendt, Hannah. *Crises of the Republic*. USA: Harcourt, 1972
- Edwards, Paul. *The Closed world: Computers and the Politics of Discourse in Cold War America*. Cambridge: The MIT Press, 1996.
- Kunstsammlung Nordrhein-Westfalen. *I will survive*. Düsseldorf: Spector Books, 2020.
- Prudenko, Yanina. *Cybernetics in Humanities and Arts in the USSR: Big Data Analysis and Computer Art*. Moscow: Garage.txt, 2018.
- Sontag, Susan. *On Photography, The Image-world*. New York: The New York Review of Books, 1977.
- Steyerl, Hito. *Duty Free Art: Art in the Age of Planetary Civil War*. London: Verso, 2017.
- Weber, Max. *The Protestant Ethic and the Spirit of Capitalism*, Germany, 1905.
- Zuboff, Shoshana. *The Age of Surveillance Capitalism*. London: Profile Books, 2019.

AUDIOVISUAL MATERIAL:

- *About NtechLab*. NtechLab. 2021. Uploaded on November 9, 2021. YouTube video, 1:27 mins. [link](#) .
- *Coded Bias*. Directed by Shalini Kantayya. 2020.
- *Data Brokers: Last Week Tonight with John Oliver (HBO)*, 2022. Uploaded on April 11, 2022. YouTube video, 25:09 mins. [link](#) .
- *How Not to be Seen: A Fucking Didactic Educational .MOV File*. Hito Steyerl. 2013.
- *SocialSim*. Hito Steyerl. 2020.
- *Tech Monopolies: Last Week Tonight with John Oliver (HBO)*, 2022. Uploaded on June 13, 2022. YouTube video, 26:49 mins. [link](#) .
- *The Golden Age and the Digital Concentration Camp: a lecture at the New Nature exhibition in St. Petersburg*. Arena (+Sound). Ekaterina Shulman. 2021. Uploaded on September 26, 2021. YouTube video, 1:44:18 hours. [link](#) .
- *War Is Bad. Some More News*. 2022. Uploaded on April 6, 2022. YouTube video, 1:10:12 hours. [link](#) .
- «Следуй»: московские активисты против системы распознавания лиц, Coda Story на русском, 2020. Uploaded on February 11, 2020. YouTube video, 03:50 mins. [link](#) .

ARTICLES:

- Bearak, Max and Khurshudyan, Isabelle. "All art must go underground: Ukraine scrambles to shield its cultural heritage." *The Washington Post*. March 14, 2022. <https://www.washingtonpost.com/world/2022/03/14/ukraine-odessa-russia-war/>
- Bosma, Josephine. "Olia Lialina's Hosted: A Performance, One Stroke at a Time." *Arebyte*. 2020. <https://www.arebyte.com/olia-lialinas-hosted-a-performance-one-stroke-at-a-time>.
- Gunter, Joel. "Collecting the dead in Bucha." *BBC News*. April 13, 2022. <https://www.bbc.com/news/world-europe-61085810>
- Yerofeeva, Viktoria. "Protest art. Part two: how artworks become a protest." *Ariadna*. October 19, 2021. <https://ariadna.media/2021/10/19/protest-art-activism-part-two/>
- Zinnatullin, Artyom. "NtechLab — turning the Earth into Hell for fellow citizens." *ABSTRACTNY MUJIC*. June 3, 2022. <https://artemzin.com/blog/ntechlab-digital-gulag/>