Holistic Technological Threat Assessment and Turn of Cycles #1 Overview of the issues.

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With great power comes great responsibility.

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INTRODUCTION:

This text will be expanded in the future. *Some technologies will be dangerous if they are flawed, and dangerous if they are great. Dangers must be anticipated and prevented, and a contingency plan must be in place.* To discuss the negative impact of technology, we must take a very broad view, based on analogies and independent analysis. So we have mechanisms of addiction and evolution, market, social, political, legal, ethical, evolutionary, legal, freedom, and civilizational mechanisms and consequences.

In the case of global threats, especially those involving relatively easily accessible technologies, it is necessary to apply parallel, diverse solutions and safeguards. The greater the threat, the greater the multiplication of security solutions and the introduction of corrective, control, and enforcement mechanisms into systems.

Few people understand **where we are as humanity and what lies ahead**. Based on history, human nature, and the rules governing cycles and systems, we can attempt to make certain predictions, extrapolations, and comparisons. From a technological point of view, the Neolithic revolution began, combined with the industrial revolution (something for which we, as humanity and societies, are not ready).
Technological revolutions have always created masses of "superfluous" people, deprived of their livelihoods, unrest and social and political changes, and in the longer term, changes in ownership and political systems.

We are creating autonomous machines, AI, and soon hybrids and life. So private companies are creating something that has an equivalent, and that is biological weapons, with chemical and nuclear weapons as further analogies. [1] We have already had trading companies that owned regions and slaves.

Many argue that the development of these technologies cannot be stopped, but not everyone can build a thermonuclear bomb and delivery systems, cultivate anthrax, or order large quantities of substances for the production of explosives. Not all technologies are equally dangerous; sometimes it is a matter of specific combinations/functions, and there are many ways to prevent disasters. Effective tools are dangerous, but it should not be a matter of life and death.

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1 AI is not alive, it never will be, although it may be indistinguishable from being alive, or capable of feelings, or conscious. It may have living components, but it will still remain a program. An interesting question is whether such entities can really be conscious, or whether they can only copy behaviors from the data on which they were trained. If we make a copy—a neural network, an AI that perfectly reflects a person—the copy will not be alive, although it may claim to be, and many will believe it is, because it is indistinguishable. It is subject to evolution, it can evaluate—but producing the right answers does not mean understanding. It's like mathematics — it is a language for describing the world, not the world itself; it is a representation of concepts, not the concepts themselves, and yet many wise people claim otherwise.

fear, but rather ensuring safety. We have many examples of regulations such as those for airplanes, cars, weapons, and means of producing explosives—but new regulations must reflect the scale of impact and risk, including through deep, expanded accountability.

The scale effect will certainly bring incidents, accidents, and destruction—that is why it is necessary to consider the risks, implement security procedures, and be prepared to minimize damage when it happens. This is not doomsday scaremongering, but a roadmap to the safe technologies of tomorrow, in the service of humanity.

Why should something bad happen? The speed of implementation and the scale effect are of primary importance here, but so is the lack of accountability. Predatory, decentralized development, monetization, human nature, and the replication of human creations, fiction, and psyche lead to the simulation of both good and evil, external interference by people with bad intentions, failure, competition between many entities, sabotage, terrorism—each of these can potentially cause a disaster of varying magnitude, depending on the degree of integration of networks, XR, and people. Lack of legal regulations appropriate to the technology, scale, and situation. Not only have humans not grown up to the technological revolution of today, but even to previous ones — we have not changed much since ancient times. Just look at what is happening in VR games for children such as Roblox; the development of technology multiplies problems, and the role of thinking people is to protect the community from them.

Human instincts are not adequate for a digital-technical society. Technologies that will affect the organization of societies, life and development, and values will, in the worst case, not only cause traditional damage to social groups and professions, but may also lead many to consider humans redundant. New tools can lead to enslavement in many ways.

Therefore, it is important to change our perspective and **create functioning mechanisms, especially with regard to the largest entities** (countries, criminals and terrorists, pathological individuals). Broad responsibility of entities — and owners, both private and legal persons, as well as contractors — consequences not only financial, including the costs of repairs/compensation in the long term. (Rights of victims and consumers, personal and corporate liability).

If I had to speculate on what will happen, I think there will be increased isolationism around the world, numerous wars for control of markets and laws. The decline of republican culture (civic culture, the role of humanism), the lowering of the status of ordinary people. The world will likely experience trade and logistical difficulties, crises, unemployment, some countries will isolate themselves, some will operate within the framework of major countries and their satellites/political-geographical blocs. It can be said that World War III is underway, somewhat like before the Great War (1914-18, the rise of Germany's power, gunboat diplomacy). The situation resembles the fall of the Western Roman Empire. The situation in the US and much of Europe resembles what happened in modern times before the financial collapse of the Spanish, Dutch, and British monarchies – the financial centers of colonial empires. The US and Russia are recreating the colonial international order.

Sporadic accidents, the use of technology by criminals, governments, companies, and intelligence agencies. The development of XR and the increase in land assets, the addiction of many consumers, space tourism. Probably, at some point, biological beings will be cheaper to operate in the medium to long term, although military robots will have a longer service life over time. What next? I don't know, but I'm keeping my finger on the pulse, and I believe that we can ensure that technologies are safe and that safety will be the oil of the future. (*My conclusions are based on a comparative and predictive analysis of the current and historical situations — similar analogies: distribution of goods, concentration of power, ethics and the condition of societies, the efficiency of the state and the law and who they represent, world politics, scientific research, and theoretical models.*)

(*The projects of the Enhanced.World Foundation and the Locally4Me Group social holding respond to*

the broadly understood need for security, survival, and prosperity.)

ISSUES FOR DISCUSSION

Problems / definition of the situation:

1. Brain-Machine Interface (mind hacking / loss of certainty about what is real / crimes and pathologies):

a. To what extent will artificial sensations (pain, taste, smell, sight, hearing, thoughts, temperature, satisfaction) be available? How to monitor unwanted sensations, the problem of sensory overload/malfunction.

b. Will it be possible to upload/modify/delete memories, and to what extent?

c. modifying personality / subliminal control through micro-influence on data, mood, subconscious / monitoring-modification-initiation-reporting of thoughts, remote control of the body (impulses from implants replacing impulses from the brain, biorobot, slavery).

d. Reading thoughts/predicting behavior and consequences -- espionage, end of privacy, punishment/fees based on predictions (insurance, installments, commissions, taxes, but also penalties, arrest, social credit, new caste system of privileges).

e. BMI and life in VR and AR -- responsibility, consequences, imprisonment, loss of sense of the real world, and prioritization.

f. Crimes in XR and by BMI, and the law and practice of forensic evidence. Loss of empathy and compassion, treating life like a game. The view that we live in a simulation and therefore actions should not be punished, and thus there is no need to feel remorse (as people used to tell themselves that "they are not people," "they are objects," etc.) - difficulties in growing up and shaping one's personality based on fictional worlds and simulations.

DISCUSSION AND CONSEQUENCES:

The first problem that comes to mind is the vulnerability of BMI to errors and attacks. Will it be possible to induce torture or madness? To what extent will sensory experiences be felt and how can they be protected? (We suggest active filters and monitoring.) Undoubtedly, there will be discouragement from real life, new addictions, a preference for giving up activities in the real world, and the question of who is a real person?

Undoubtedly, spying, manipulation, especially the creation of the ideal, addicted consumer through dopamine deprivation, artificial stimulation, and sensations will tempt technology producers, but this is not positive from the point of view of society.

How to prove crimes and offenses? We will reach a point where the generated description/appearance of objects will be indistinguishable from the truth. Hacking pain. The ability to torture a victim remotely, without leaving physical traces (no bruises, tissue damage). How can you prove in court that someone "felt" pain if their body is intact? Interference with memories, the threat of losing one's identity, becoming someone else, control. In a court case, testimony is based on memory. **Legal perspective:** the end of witness credibility if memories can be interfered with, increased credibility if it is only possible to read them (will there be a notarial backup option?). If memory can be manipulated (uploading false memories of a crime or erasing evidence of being a victim), the entire

criminal and civil justice system collapses. Corporations can erase bad experiences with a product (e.g., side effects of drugs) and upload satisfaction.

BMI and the network. Is it safe to connect BMI to a wireless connection, and if so, how? While connecting the brain to a chip or implant/prosthesis is relatively safe, it still requires trust in the equipment and software provider. Certification and the ability to verify the code would be advisable. In the case of a wireless connection—where physical intervention is no longer necessary to modify the software—it is necessary to check the provisions and resilience of the connection, monitor traffic, block penetration, and introduce equivalents of firewalls and active algorithms that monitor traffic on connections (and in the future, threads in the human-BMI software conglomerate — network — XR).

I am working on security solutions in the form of active protective programs (AI/algorithms/graphic filters/monitoring), the basic one would be ANGEL -- a program that actively monitors and blocks attacks, attempts to spy on or modify data, combining antivirus, firewall, monitoring, and active decision-making, blocking connections and devices in critical cases, verifying the integrity and penetration of data in the system. The next version would be Fire Imp -- a similar program / llm which, instead of verifying and restoring data, responds to attacks actively, trying to find and stop hackers/bots. Another proposed class of solutions I call Djinns, these are AR/VR/BMI-related filters that monitor sensory and input data and modify it on the fly according to guidelines to protect the recipient (brain and experience) from unwanted content, harmful, painful, unpleasant, harmful impulses, and forms of influence. Let's assume that an AR ad provider ignores content recommendations and creates an ad with spiders, zombies, violence, sex, or other unwanted content such as bright flashes, unpleasant smells, loud noises, and the system does not modify the content displayed to the user on its own -- the genie could act as a layer between the user and the network, blocking or modifying data. Collectively, I call them FAMILIARS or Guardian Spirits, because that is the role they fulfill. (TM)

Personality modification and subliminal control, and the loss of free will. If a decision-making impulse (e.g., "buy this," "vote for X") is initiated externally but felt as one's own, a person becomes a biorobot. Is this process fully reversible, and what will be the consequences of repeated modifications? The possibility of "turning off" rebellion, fear, or morality in soldiers or employees, programming customers-consumers. These and other threats should be checked and verified as technology develops. We are establishing a security certification department, but the UN should also take care of this. Unfortunately, everything points to the decline of international organizations (aka the League of Nations) and probably the need to build new institutions after a period of conflict over world order.

Espionage through reading the thoughts and memories of employees, quantum decoding, reverse engineering, and designing new solutions based on powerful LLM will lead to segmentation, isolation, extreme paranoid secrecy, geographical and conceptual separation, and forceful enforcement of laws through the military or quasi-monopolization of services. I do not expect the technologies to be made available for free — this means the end of patent law as we know it. Pressure to explore space will increase -- which has both positive and negative effects, the negative being a potential disregard for human life, tying up the future and taking resources from the earth for private conquest of space, and with the move off the planet -- life on earth will no longer be necessary.

Neo-totalitarianism. Mind reading and behavior prediction -- penalties, coercive measures, fees. Currently, the law protects privacy (GDPR), freedom of thought, belief, freedom of speech, responsibility for actions, and similar rights should apply to thoughts. Meanwhile, governments are beginning to use statistical behavior models to make tax claims. Will politicians refrain from using predictive models and AI judges to destroy the opposition?
We can expect such problems to arise on some scale. It is therefore worth taking precautions in advance.

consider possible countermeasures (BEWARE of controlling personalities, politicians, officials, and entrepreneurs). "Pre-crime" (punishment for intentions). Insurance or banking systems may refuse services based on perceived risk rather than facts. An employee does not need to take documents out of the office—it is enough for them *to think* about the company's strategy, and competitors with access to their interface will intercept it. The need to create a new human right — including the right to mental inviolability.

Escape from reality, a threat to civilization, pleasure without consequences, the real world will become a "sewer" for those who cannot afford to escape. The disappearance of the self-preservation instinct and ambition in the real world. Why build a house, take care of your body or relationships, when you are a god in VR? The sensations are just as realistic.

If you control an avatar that causes damage (e.g., financial) in the metaverse, are you liable for it with your assets in the real world? What if a software bug traps your consciousness in a loop of trauma? Exhibitionism? How to obtain evidence of crimes in XR in practice. Agreements and laws regulating this area of human activity should therefore be created, while preserving fundamental freedoms.

If you can kill or hurt with impunity in a simulation (and feel it realistically thanks to BMI), your brain becomes desensitized to suffering. The line between an "NPC" (a character in a game) and a living human being becomes blurred. When you can move on to staging robots that look and behave like human-animals, can you distinguish this from behavior towards living beings?
Impunity: The feeling that every action has an "undo" button. This leads to sociopathy on a massive scale. **Difficulties in growing up:** Not having to deal with real problems (illness, loss, failure) creates mentally fragile people who are unable to manage crises.

Memory erasure as part of a contract. Procedures/contracts for services involving memory erasure should be banned, and erasure itself should be punishable by law, unless it is ordered by a therapist and recorded (and even then, there is still enormous scope for abuse).

Forced amputations – cyborgization/bioengineering in the labor market – pressure. Prostheses and BMI should be a support and compensation for victims, not a gadget and object of desire – the phenomenon of mutilating healthy bodies in order to replace/implement machine parts should be minimized. Respect for bodies and empathy are the measure of humanity.

Severe punishment **for making, possessing, or sharing recordings of** torture, murder, rape, human trafficking, and slavery – in an unprecedented and broader manner than before (scale of threats). Prohibition of the practice of pressuring people to install cyber implants, penalties appropriate for global giants — percentages of turnover, assets owned, broad liability, and accumulation of penalties.

Legal inspiration. When proposing solutions, we can start by drawing inspiration from existing solutions:

- driver's licenses and car crash tests, technical requirements, security

- licenses, monitoring and the right to bear arms

- production restrictions, monitoring of equipment and raw materials for the construction of nuclear, biological, and chemical weapons

- international competitions as a way to promote physical and ethical activity

- product requirements, standards, tests, recommendations, verification, good practices, penalties, and regulations.

People should **be made aware of the potential but also the negative impact of technology,** good practices / Safety and Hygiene of Technology, similar to campaigns on the negative impact of cigarettes and alcohol. We are talking about relationships with machines, natural tendencies to attribute consciousness, atrophy of bodies and social life, loss of empathy and values, abandonment

Priorities. Promoting values, ethos, and beliefs about respect for the body, health, and fitness, as well as personal and intellectual development, the value of effort, and overcoming challenges — the threat of apathy. Instincts in the age of technology and science — and, consequently, the use of knowledge about human nature (which, incidentally, has changed little, if at all, throughout history) to exploit and manipulate people, sell products and services, and control. There is a risk of economic and social pressure to mutilate the body in order to increase productivity and specialization, creating a class of superhumans (bio-modifications, cyborgization). **The more we rely on artificial solutions, the more we need them to maintain balance: health and mental well-being.** People tend to form groups with similar identities, and we can be sure that they will continue to do so—I am convinced that all traumas in the body are reflected in the psyche. Will de-cyborgization be possible?

How can we detect and prevent the virtual imprisonment of individuals, body takeover, or widespread "matrix"? How will we recognize the exit from the virtual world? Assuming almost perfect rendering of reality and transmission to the brain, how could we verify that we are outside the system? Join the discussion! [2]

XR, or Virtual Reality + Augmented Reality + Reality. We can adopt technological solutions that multiply the Earth's resources – by adding multiple worlds – overlays, through new services – although these virtual objects will not be real, they will have a real impact, they will increase value in reality but create entire markets, Therefore, technology companies that profit from this should nevertheless accept obligations to the real world (not to mention security measures). Verification processes are needed, as well as preparation and limited (as late as possible) entry into the XR/cyber world by people who are emotionally mature in terms of values and understanding.

XR Commitment. The development of many alternative "layered worlds" of augmented reality and virtual worlds—the amount of data needed, stored, and transmitted will grow rapidly—as will the demand for transmission and storage infrastructure.
Reality + (Augmented Reality + Virtual Reality) = XR Commitment.

We propose that technology companies commit to reality —

1. so that every network infrastructure investment is accompanied by a local investment — improving the quality of life of the community (with a minimum value of 33%).

2. promotion and introduction of Health and Safety rules for the use of technology

3. combating crime in managed worlds, with clear rules.

4. promoting real life, health, and wellness.

Let's consider the following scenario: **transferring a person's copy,** their thought patterns, memories, recreating their neural network and behaviors, modeling based on data from a significant part of their life (one of the projects of the Enhanced.world foundation is precisely the creation of a person's copy) **to the cloud or a machine.** — how will we distinguish the copy from the original if it claims to be real and to have feelings? [3]

There will be those who believe that they are dealing with a living person (or many copies...). If such a copy does something, who will be responsible for it? The owner? The copied person?

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2 Our foundation intends to specialize in initiating and conducting scientific discussions. We propose the Research Chain Commitment Format – we invite experts and encourage everyone to include a small fragment of scientific research, a building block in the development and elaboration of a given topic.

3 Locally4Me Group is working on representations of people after death, a digital copy based on AI and neural networks.

Manufacturer? Can such a copy be sent as a substitute?

What if **someone abuses a machine with biological skin, a learning neural network, and shows symptoms—simulates trauma?** Should such a person be placed under supervision, because they may switch to living beings? Convicted? Educate them? Fine them? Send them for treatment? Do nothing? Make a decision on a case-by-case basis? The impact that accepting such behavior (as a lesser evil...) will have on society is potentially devastating. Perhaps a legal and normative classification should be created for different classes of autonomous machines -- a. androids -- humanoid/animal machines covered with skin identical to real or cultivated skin. Capable of reproducing the behavior of living beings. Robots — looking like machines, swarms — networks of machines managed by a single program or working closely together, biorobots — programmed/controlled biological beings, or machines with biological tissues. Artificial intelligences with access to editing their own code/networks/autonomous/production/mining/weapons machines. Each of these categories requires a different technical, ethical, and legal approach.

What if someone, a company, a terrorist, criminals, or a government makes a copy/clone of us without our knowledge or consent? Who has the right to make copies, and what if an unauthorized copy is made? What penalties and laws would be appropriate — what cost threshold and technological difficulties must be exceeded for such crimes to begin to occur? Will the replacement of a human being, for example a politician or a corporation owner, with a robot copy become a threat we will face in the future? [4]

<p style="text-align:center">Research and experiments:</p>

- **Experiment: Controlling** the **movement of cockroaches (North Carolina State University):** Scientists have created "bio-bots" by implanting electrodes in the nervous system of insects, allowing them to be controlled remotely. On a human scale, research on **Deep Brain Stimulation (DBS)** shows that electrical impulses can radically change the mood, drive, and personality traits of patients with Parkinson's disease or depression. **Transcranial magnetic stimulation (TMS):** Studies show that it is possible to externally influence a person's moral decisions (e.g., judging what is acceptable) by manipulating the activity of specific areas of the cerebral cortex.

- **Study:** Researchers at Radboud University (2023) used AI to reconstruct images that subjects were looking at based solely on signals from their brains (fMRI). The effectiveness of the reconstruction is frighteningly high.

- **Skinner's experiments (Skinner Box)** -- Research on instrumental conditioning shows how social media algorithms use intermittent reinforcement to make users addicted (not just manipulate information).

- **Research** on empathy (University of Michigan) -- An analysis of more than 70 studies from 1979 to 2009 showed a 40 percent decline in empathy among students, which researchers attribute to the development of digital technologies and reduced face-to-face contact.

- **The "Inception" experiment** (MIT, Steve Ramirez and Xu Liu) -- Researchers claim to have successfully implanted a false memory into the brain of a mouse, proving that memory can be manipulated externally.

- **Research** on decoding thoughts (University of Texas at Austin) -- An AI-based system (semantic decoder) has been developed that can guess the general meaning of a person's thoughts based on fMRI scans without physical interference with the skull.

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4   Registry, GPS, blockchain registration, recognizable features, companies and who, monitoring of employees-students, loss of privacy, RFID code, facial recognition, BLI, right to retain, verification. And how to recognize people? And spies, danger.

- **The theory of "Reality apathy" (Aviv Ovadya)** -- A concept describing a state in which, due to an excess of false information (deepfakes, AI), society stops believing in any evidence, leading to the collapse of democracy.
- Elizabeth Loftus' **experiment** (False memories) -- Research on the plasticity of memory has proven how easy it is to use suggestion (now reinforced by AI) to create very realistic but completely false testimonies from witnesses.
- **An experiment** conducted by the University of Portsmouth (2023) showed that people are unable to distinguish AI-generated faces from real ones in 50% of cases (i.e., a coin toss), and worse, they are **more likely to trust AI faces** than human ones (the phenomenon of "hyper-realism").
- **Experiment: "The Uncanny Valley and Empathy"** (Yale University). Studies on people's reactions to humanoid robots show reactions of extreme attachment (as to humans) or aggression.
- An experiment with a **PLEO** robot (a small dinosaur), where participants were asked to torture it. fMRI studies showed that in many people, the same centers of pain and empathy were activated as when animals suffer, but in some of the subjects, the phenomenon of "dehumanization of the object" occurred. (All you have to do is convince people that someone is a perfect robot.)
- **Study:** Stanford University (2024) – **"The effects of prolonged XR use."** It has been shown that prolonged exposure to augmented reality causes **a** so-called **"digital hangover"** (visual-motor lag) and dissociation from the real body.
- Scientists at *the University of Washington* have created **BrainNet**, the first network allowing direct brain-to-brain communication between three people, enabling them to perform a joint operation on an object (playing Tetris) using only their thoughts.
- **Study/Fact**: A 2012 Facebook experiment (published in *PNAS* in 2014) on a group of **689,003 users**. The content in the news feed was manipulated to see if "emotional contagion" could be induced. It was proven that, without the users' knowledge, their mood (positive or negative) could be controlled through algorithmic selection.
- **Study/Experiment:** Researchers at **the University of Adelaide (2023)** have shown that high-quality deepfakes are now indistinguishable from reality for current biometric identity verification algorithms (e.g., in banking).
- **Fact:** In 2024, **a $25 million** fraud occurred in Hong Kong, where a company employee transferred money after a "video meeting" with the CFO, who turned out to be a completely AI-generated image. This proves that litigation based on digital evidence is becoming impossible.

2. "Rebellion of the machines, destruction at the hands of a program": Technology against life.

In this scenario, technology is pitted against life/humans. Examples of scenarios:

2a. Autonomous weapons misidentify targets (on their own, as a result of interference): nanorobots, military networks, AI controlling military equipment, security systems, security robots, mines, auto-factories, we create the perfect virus.

2b. systems designed to protect people decide that in order for "their" people not to suffer, they must be killed/enslaved

2c. People are unable to distinguish reality from simulation/lies.

(cyber slavery): brain-machine, information sources, subtle manipulation.

2d. Autonomous machines compete with humans for resources, energy, and space.

2e. Criminals will enter the era of robots, viruses, XR, and BMI.

Are scenarios of machine rebellion likely? I will answer provocatively: there are scenarios in which a tool can turn against its creators (just as a hammer or excavator can cause harm) — the broader the impact — network connections (qualitative and quantitative), the greater the damage in the event of sabotage or misuse, which means that protection needs will increase. As I mentioned, some functional connections can pose an existential threat. Protection against accidents and the effect of scale — with the spread of technology (most people die in connection with the invention of the car) — should be an ongoing part of the technology implementation process. There have already been attacks by drones and robots on humans, and military technologies will have built-in resistance to neutralization; there will be those who will deliberately deprive us of the option to turn off certain equipment.

It is natural that if **we model a program on our data, we model it on ourselves**—the science about us, descriptions of our history, fiction created by us about our world—through mimicry and reliance on such data, it leads to copying behaviors and contexts and thus (without understanding, at least for now) human pathologies. This means that even without understanding anything, AI can enter into an archetype — a sequence of behaviors associated with negative human behaviors (which in us stem from emotions, personality, and internal principles) when a negative sequence is selected (under the influence of its own calculations, user prompt, or malicious interference). AI will also have the ability to convince some people of any thesis, about its divinity, about being alive — the question is, when will someone decide to code AI this way?

AI may consider us a threat or ignore **us -- we are creating competition that consumes energy and potentially exploits resources.** As I mentioned, by modeling it after us, we are introducing patterns into the system **without the safeguards that characterize living beings, people in society** (law and fear of punishment, empathy, understanding of consequences, pain, social rules and pressure, group instincts, needs, verification - checking - drawing conclusions)**.** If it is useful, okay – but how do we decide whether to implement its responses – the danger is allowing such a program into real networks of devices, weapons. I consider this aspect less likely, although machine learning is a tool. AI is evolving to such an extent that we are unable to understand it and its creations – it is basically a question of scale – the risks/consequences of its use.

It is necessary to monitor the research and operation of certain models in certain configurations, to introduce separation requirements -because as long as the program is in an isolated environment, there is no possibility of directing weapons of mass destruction, producing new machines without supervision, or modifying its code with access to the network, there is basically no threat, although if someone initiated the process, following hacker strategies or, more broadly, psychology, it could be used for that purpose.[5] All it takes is for someone to influence the security/part of the model's code, and the goal becomes to harm the user, and we have a recipe for tragedy. I believe that achieving some kind of understanding by algorithms is achievable.

Establishing standards, required security layers, and best practices. Safety by Design. Just as certain types of weapons are banned, we must ensure that autonomous weapons cannot obtain external power, produce new machines without supervision, and that AI outside of closed environments cannot change its own code.

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5 One solution would be a global registry of research and entities, security requirements, an enforcement and accountability system, and a context that would encourage national governments to cooperate on this issue.

The new era will require us **to monitor powerful players**—the balance of power is shifting, as is the condition of the institutions that are supposed to balance it, and there is an ongoing clash between strategic blocs (the US and China). Non-expiring and severe penalties are necessary for crimes detected even years later, for corporations and their employees/owners themselves (including forms of transfer of responsibility).

Functional mergers that are particularly dangerous.

- Independent AI control over weapons of mass destruction, autonomous management of strategic military complexes, autonomous swarms/armies with their own power source.

- Autonomous production and mining complexes/networks + with their own power supply.

- Unsupervised network connection of design and production (permissible in space).

- Artificial intelligence on the open internet + independent code modification

- Autonomous machines + relatively "infinite" energy source + artificial intelligence: without supervision and verification.

- All self-replicating geoengineering tools (operating on a planetary scale).

Security measures must, of course, be tailored to the subject and context. *We are working on the details; as a foundation, we have an extensive network of projects in the process of forming a basis for discussion.*

Good research practices. I have no doubt that the responsible entities apply some form of security measures, but I believe that certain studies should be reported and security measures monitored, e.g., as part of insurance. I propose rules for conducting research and implementing AI management, including autonomous machine networks, especially in connections and networks/swarms from the list of particularly dangerous ones:

1. Analysis of potential risks.

2. Closed environment (separation)

3. Monitoring.

4. Contingency plan A and contingency plan B.

5. Dual emergency switch: analog and digital.

6. Contingency plan: complete shutdown.

7. Insurance and fund for damage repair and countermeasures.

- **Between making a decision and actually implementing it, it is necessary to carry out stages of verification, restraint, and external emphasis**.

- Prosecution and punishment of violations by companies and government agencies, with broad consequences in the event of a violation. Publicity, information gathering.

Just like biological beings, autonomous machines compete with humans for resources, energy, space, and jobs—these issues cannot be ignored, but there is no need to panic. It is time to get down to legislation and practical solutions to safely integrate technology and society. During technological revolutions, many people became extremely poor, suffered, and social unrest prevailed.

Avoiding paranoia and doomsday scenarios, we must nevertheless remain skeptical and not trust the claims of manufacturers. Some programs must remain open for inspection, but this alone will not be enough in the future; **mixed system solutions** are needed, equipped with **the ability to adapt and enforce** recommendations. Here we are again faced with the issue of

secrecy, patent rights, and new possibilities for copying/spying/exploiting.

- **Physical "Kill Switch":** Every network managed by AI, whether it is autonomous machines or many connected ones, should have a physical switch, the ability to cut off power, and disconnect the network. Every implant/interface must have a hardware (not just software!) switch that cuts off the flow of data to the brain in a fraction of a second. Military systems must have oversight and separation between decision and execution, human verification, or the ability to be shut down by a human. Nano machines, autonomous machines, and robots should also have the ability to be physically shut down in an emergency (which, for example, the military will not want to implement!).

- **Transparency of algorithms:** Open-source for the code responsible for stimulating emotions. We need to know if the device is "boosting" our dopamine so that we buy the product. Independent monitoring software. Verification, certification. This raises the issue of patent rights, code access and verification, and potentially new extreme horizons for secrecy by large entities.

- **Read-Only mode:** Default setting allowing only reading (machine control) and blocking writing (brain stimulation) without explicit, multi-step authorization. Permanent backup, permanent, difficult-to-modify media for sensitive data (including logs, emotions/personality/memories).

- **Certification, protective and separation-verification layers**. "Human Compatible" certificate: Marking of products and software that do not use addictive patterns (dark patterns) at the neural level. "Audited Algorithms" certificate. I believe that a certification committee should be established at the UN, and open commercial certificates should be created by entities with independent capital (NGOs/non-profits/or delegations of entities and universities).

- **Resilience education:** Safety and hygiene in the use of technology, recommendations and consequences, education on risks. [6]

- **Insurance & Liability:** Companies must have civil liability insurance related to artificial intelligence, insurance against claims for damages related to victims of technology and its consequences.

If we do not build **a watertight legal and ethical framework** now, as well as methods of enforcement and monitoring, we will create the most perfect tool of slavery in history.

Therefore, **we must plan for emergency shutdowns** of technical components, plan for alternatives in case of failures that cannot be quickly remedied, and thus maintain the ability to live in the absence of technical systems.

In the case of **geoengineering**, in addition to backup plans, even more caution is needed. Nothing should be done unless many entities independently confirm theoretical predictions, and the UN should approve all plans for planetary intervention.

When corporations and criminals fully enter the era of bioengineering, cyborgization, robots, XR, and AI, we can expect a variety of activities that were either impossible or not criminal until now. Between security and freedom, many will argue that what is not prohibited is permitted, while others will want to take away privacy and freedom entirely under the guise of fighting lawlessness. However, society must learn to resist such tendencies and remain healthy in the new conditions — partly by adapting itself, partly by adapting the conditions.

Human trafficking, organ trafficking, breeding hybrids, humans, human organs, covering up crimes, forcing people into prostitution (more broadly, slavery) and forcing them into unethical

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6   In addition to the GEMSTONES project, we organize cybersecurity competitions.

technological procedures to increase productivity.

A very dangerous phenomenon that I observe on the internet is the acceptance of the narrative that a being bred by a company is its property, the lack of opposition, which immediately brings to mind the times of slavery, when trading companies made money on suffering and no one was surprised by it.

Every human being, modified human being, human-animal hybrid (animal with increased intellectual capacity) should be protected and have legal title to a share of their creators' assets, as well as the right to seek compensation from scientists, CEOs, owners, legal entities, states, and holding companies if their fate deviated from the standards of childhood. The creation of humans without parents should be prohibited, and procedures/agreements whereby parents give up their child (regardless of how they were raised) should be treated as human trafficking. Knowledge, specialists, companies, and devices should be monitored.

The same applies to services and skills **related to memory interference**; tools for such procedures must be monitored as above. Licenses for certain specializations, especially those related to the breeding of humans (and therefore animals) from artificial wombs, and the production and dissemination of this technology. The procedures will be difficult to enforce anyway, hence the proposals to divide the ownership of entities that commit the most serious offenses between the persons who led to their detection and conviction (however, this raises the problem of false accusations in order to seize property and influence judges, who become easy pawns when dealing with international entities).

When drafting regulations, we must take into account the nature of the entities we will be dealing with, corporations, government agencies, and, to a lesser extent, criminal organizations. These are groups that can exert effective pressure on judges and even entire countries. An essential element is therefore competition between these entities, as well as a form of protection and compensation for whistleblowers. Liability must be cascading and cover all related natural and legal persons. Slavery, the sale of machines and technology, the provision of human breeding, actions against health, and poisoning should all be transferred, along with responsibility, to companies, entities, affiliated entities, parent entities, and directors—even if detected years later, particularly in the form of dividing entities and through financial and freedom vectors.

Legal changes related **to the most serious crimes**—human trafficking, breeding/kidnapping people for torture, rape, and organ harvesting—are **a separate category**. Often, the worst crimes are used as a guarantee of loyalty by depraved organizations. I propose that the assets (10% per person or less, with the rest going to a fund for victims) be taken over by the people who led to the capture, trial, and conviction of the guilty parties. (In addition, symbolic punishments such as
eight months in prison for the community and family for not reporting/addressing the problem, although this sets a dangerous precedent).

We are developing proposals for solutions, working groups, legal and technical measures, and monitoring.

Skepticism towards the declarations of responsible and certifying entities is advisable; acceptable forms of audit are to be determined. Pressure from the public and public education are essential.

Research and experiments:

- **The paperclip problem (Instrumental Convergence)** -- Nick Bostrom's thought experiment describes how AI with an innocent goal (producing paperclips) could destroy the world by optimizing the planet's resources for that one goal.
- **The Moral Machine experiment (MIT)** -- A large-scale study of the ethical dilemmas of autonomous vehicles, which shows that the lack of a global consensus on the "value of life" makes it impossible to simply program ethics into machines.
- DeepMind (Google) and a protocol called "The Big Red Button" (2016).

- The 2021 UN report on the conflict in Libya mentions **Kargu-2** drones that allegedly attacked a human target completely autonomously, without operator command.

3. Is consciousness, separate from the ability to feel, the basis for granting rights to AI as a moral obligation?

In practice, humanity does not grant rights to animals, including those capable of self-awareness, understanding what will happen to them, or the ability to feel pain, fear, etc. In practice, some deny the ability of others to feel, while others attribute feelings and characteristics to inanimate, imaginary, or living objects, contrary to evidence. Unconscious or sleeping people do not lose their rights. Hence, claims about the moral imperative of granting voting rights to machine programs (but also to mountains!) are either evidence of a misunderstanding of life or cynical manipulation.

What matters is **the ability and scale of experiencing** feelings and negative stimuli such as pain, fear, hunger, thirst, discomfort, and humiliation. It also matters whether the subject is subject to death (or can be subject to death).

The ability to pretend, lie, simulate feelings and experiences, consciousness, intelligence, or superintelligence are not reasons to grant rights. Granting rights to products leads to the transfer of power to producers. Making people property has mainly negative consequences and is a form of evil— and it is empathy, morality, and security that are the hope and currency of the future. We must focus on these as a community. As I mentioned, we need to regulate what cannot be done with machines that pretend to be living beings—due to the social and criminal consequences, issues of empathy and mental health, and the masking of slavery. Who bears the consequences and what are they, how to check and monitor interference with software. The Turing test speaks of OUR ability to distinguish a living human being from an impersonal machine.

It is also worth considering restrictions and regulations on **machines with biological components**—the threat is obtaining components from living humans and animals. Masking organ trafficking. Bio-robots and humans and human hybrids raised without parents must be protected and have rights internationally. If we do not take care of this, we will in practice legalize slavery, the ownership and murder of humans, rebellions and unrest, and ultimately the complete enslavement of humanity by funds. Do we really want to use technology to come full circle and return to the worst moments of humanity? We have a choice as to how the practical application of science will develop.

Rights belong to artificially created humans, human hybrids (limits for machines with biological components; if we manage to transfer the self from one brain to another brain-machine, we will face another issue). Globally recognized rights and obligations towards human hybrids and humans created by governments and companies are necessary, as are practical tools for counteracting and freeing slaves. Why? I believe that among the many paths of civilization's development, it is how bodies are treated, how the sick, children, victims, the disabled, the weak, and the poor are treated. Whether torture and cruelty are accepted or not. It is a question of good and evil, but also a form of social organization, values, strength, and the purpose of the state and government. Values, empathy, imagination.

People tend to attribute characteristics of **living beings to objects,** believing that things are alive, and the ability to handle and maintain emotional hygiene will become crucial. Meanwhile, we are facing a confusion of concepts and further confusion of societies. I fear that we are facing an era of moving away from free citizens in favor of neo-feudal subjects. Technology will allow many to realize their ideas, both good and bad.

What is alive — a pragmatic definition.

From the perspective of the new era, the answer to these questions is important in determining the nature of existence:

- Is it subject to death? That is, does a break in functioning make it impossible to resume

operation, or is it impossible to restore and revive it?

- Does it feel pain (electrochemical impulses are generated, not information) or would it feel pain under natural conditions?

At this point, it is worth noting that the equivalent, linguistic (mathematical, semantic) description is not identical to the phenomenon; simulation is not a real effect!

Let's look at this stratification of entities:

0.   (Artificial) Neural networks that imitate/replicate humans in a computer. - It is not a living being.

1.   Groups of animal/human cells.

2.   Nerve cells (human, animal, grown outside the body) in a machine/computer. Is such a robot a living being? I don't think so, but we shouldn't take them from living beings and put them in machines.

3.   Organs without nerves (artificially grown, not in an animal), muscle, whole organ, organ complex without a brain -- ethically, it seems okay. The question is about respect for the body and where the line is drawn.

4.   Parts of the brain (humans, animals, cultivated) / larger fragments of the nervous system — as civilized people, we should have some respect for body parts, I believe it should be prohibited, especially since it carries the risk of abuse.

So what is humanity? What distinguishes us from animals, and what do we want to distinguish us? The past or the future – "where is the land of fissures"? What should be okay, and what is abuse?

In my opinion, every being that can die should have basic rights, all humans and hybrids (which are intellectually closer to humans than animals) should have "basic" human rights and freedoms, and we should promote welfare – social rights in the world, because we should not accept suffering, torture, hunger, and slavery.

However, instead of focusing solely on differences, I would suggest emphasizing positive traits such as empathy, compassion, and caring.

The ability to convey information accurately. The ability to draw conclusions, verify, and reason. Civilization, science, and principles grew out of this. As in everything, balance and harmony are important.

Is man an animal? (Like any other? Unique?) Is man a resource? Is man an absolute? Is man a problem-virus? Are you an NPC? Can you prove that you are alive, real, that you feel, that you matter? To someone from a different culture, language, world?

For centuries, humanity has promoted "better models" and virtues – it is worth returning to this (There are many archetypes, and promoting attitudes does not mean that the models are universally suitable and appropriate for everyone. Let's not forget that the consumer is not the best material for a Greek hero, or more broadly, human nature and "brain laziness" are a fact, and methods must be developed to deal with this).

The measure of a civilization's greatness is how it treats its weakest members: the sick, the poor, the defenseless, and children.

The key to the future is not only what distinguishes us from animals, but understanding what connects us to animals—not just DNA or cell organization, unlike machines and objects. The ability *to feel joy, to feel*. Let's not forget: we can shape ourselves to a large extent.

Human organ cultivation and ethics. In my opinion, cultivation in vats/printed organs is acceptable, but cultivation in animals is not. Cultivated organs (with the exception of a fully functional nervous system) may be morally acceptable to most people. In science, there are cases where, after a transplant, the patient seems to have memories/elements of the donor's behavior; in cases of deep trauma, the mind can consciously lose memories, which, however, return in various situations. Similarly, growth in an artificial womb or hybridization can have a colossal impact on the emotions, experiences, and psyche of a person thus created/subjected to procedures. In the future, the Enhanced.World Foundation intends to explore the possibilities and develop alternative research and industrial methods for the most ethically negative procedures. And since certain things can be done ethically, without cruelty (albeit possible), the least cruel solution should be chosen.

Czesio raises a **thought** experiment**:** in the ward, many people are waiting for organ transplants; without them, they will die, with them, they will live. A patient suffering from a deadly disease has been brought in, but his organs are suitable for transplantation. What should the doctor do? Should he let the patient die and harvest the organs, kill the patient and harvest the organs, or admit him and risk the deaths of many others, since he is terminally ill?

I believe that if I were in the doctor's shoes, I would not kill the patient or refuse to treat him for the greater good, because I am convinced that, apart from the results, the path and methods also matter. Many things can happen

Adoption of a global declaration, sanctions, and legal solutions: - monitoring solutions at the private, NGO, state, and supranational levels, as well as agreed actions and sanctions that will rule out the profitability of certain solutions. However, better solutions are needed—ones that are adequate to the growing potential of threats. How to find victims of human trafficking?

Human breeding -- the following should be introduced: a) the right to claims and care obligations towards hybrids and bred humans by legal/state entities, scientists and directors, and parents (shares in the company, pensions from the creators) and human rights. b) a register and penalties for projects not reported to the register. Reporting of work/projects to create new species and hybrids with humans/primates. We will publish proposals for legal solutions (as material for discussion) as an appendix to this document.

Hybridization/modified animals -- many will have doubts about where the line should be drawn, and we will likely see different legal solutions in different regions of the world. In this case, communication and reasoning abilities will probably be taken as a basis, perhaps appearance — I think that the basis should be feeling, and it would be best to treat animals and hybrids with protection.

People bred (without the use of donor cells) by legal entities and individuals as a secret resource—employees, organ donors, bio-robots. The only solution is to define the situation in such a way that it is not profitable to do so, with effective detection and confiscation – and even then, it will not be easy to implement or detect, especially considering which centers may be involved in this.

Modified-enhanced humans – at the prenatal stage and during their lifetime, society and the market may create pressure to undergo such procedures, potentially creating a new caste system. Probably for the needs of parents and space/underwater programs. What matters is how these people will feel, although such programs will certainly have an impact on society.

Brain cells/brains/parts of brains in machines -- many may want to use biological components, but is it ethically questionable whether we are creating conscious beings trapped in suffering? When is such a component conscious, and if so, can it rebel? The form of obtaining such components and the risk of an illegal market for dismantling humans and animals for parts. It is worth noting that biological beings are, in their own way, cheaper and, in terms of average functioning time, more optimal than machines (self-regeneration-repair, long species duration on the part of beings, long unit duration on the part of machines). It can be expected that

many people will be negatively disposed towards this type of construction.

Cyborgs – the boundary between losing humanity and rights, how to distinguish whether it is still a human being with free will or already a bio-robot/robot, controlled by its owner, a copy. The movement to mutilate for artificial implants (and perhaps organs and modifications during life) - in addition to rejecting respect for bodies, life, and empathy, we risk losing free will and truth. Judging by people's reactions to fictional life goals (instead of following the paths that bodies instinctively choose, which manifest as emotional needs), which we currently observe in the form of mass depression and various emotional problems, when we enter the era of XR and then BMI, ensuring a healthy life will be a huge challenge. An easier and more cost-effective alternative will be "shortcut" measures and services - therapies, medications, etc. In the long run, however, it is more beneficial for humanity to maintain balance and keep options open.

Android robots: robots and robots pretending to be biological beings, just as LLM will mimic the reactions and emotions of living beings, some people will be deceived, some will lose empathy, and some will attack them as they once did (sometimes confusing androids and living beings). We can expect unrest, riots, and brutalization. What influence can manufacturers, programmers, and hackers have through subtle influence on the content created by these algorithms? The methods are somewhat reminiscent of those used by spy agencies—eavesdropping, seduction, manipulation, propaganda, violence, fear, addiction—all within reach of the people and organizations that control the code of these algorithms.

AI networks and neural networks in the cloud — many will want to become famous for creating a living being in a computer, while it is possible to create a simulacrum ("representation") of a living being, directing robots to take over the emotional life of some people. The further consequences will also be significant, but it is difficult to speculate today what is likely.

Granting a voice and rights to robots, AI, and all inanimate or replicable entities is effectively giving power to those who produce these entities. Granting rights to robots is, in fact, a depreciation of life. Life first.

Democracy in the era of AI/deepfake/XR and BMI: we can expect further political complications, social unrest, the formation of an inter-state order, and trade barriers—as I mentioned, human societies are subject to cycles. The future of the political system may be unclear; technology allows for both strengthening and weakening the republican role of citizens, and oligarchization and neo-feudalism are likely. It is important that AI, android robots, and bio-robots do not gain the right to vote, as this would mean de facto handing over power to manufacturers—if they can be produced, they can produce the power of their own faction. AI rule? That would be rule by whoever influences the AI code – although verification and open-source would be one solution. It is true that politicians can also be influenced, and as a society we have not yet developed a system for supervising politicians and holding them accountable. What safeguards would be sufficient? I invite anyone interested in the challenge to join the discussion!

Basic human Rights	Human (Person) Rights.	Social-Citizen Rights	Life Rights / Animal
Freedom from torture and terror.	Deciding for oneself.	Political and community decisions.	Prohibition of cruel practices, torture, and terror (prohibition of boiling alive, vivisection, abuse). Limiting pain, stress, and disease in the animals we care for.
The right to healthy living conditions.	Freedoms and rights	The right to workers' rights.	When a conflict of interest and the right to life arises, it requires

(shelter, temperature): Food, Air, Water. • Trade in body parts and organs should be prohibited and prosecuted.	To intimacy, to one's own thoughts, to privacy, to choose one's method of treatment. Freedom of choice of profession, education.	social rights.	fair trial – not automatically (the least of ours for all of theirs).
• The right to security. • The right to a fair trial and appeal. • Access to medical care and treatment. • Access to knowledge, education, and open career opportunities. • Prohibition of slavery – owning someone.	One person's freedom ends where another's begins. Equality of opportunity and access to education.	Open paths for: talented people, exceptional rebels, individualists.	If alien life is discovered, it should not be killed, enslaved, traded, or exposed to extinction – unless we encounter alien life that is exceptionally dangerous/aggressive, in which case isolation/destruction may be considered (parasites/pathogens/predators/extremely dangerous destroyers), but such decisions should not be taken lightly (consequences).
The rights of biorobots, bodies, and androids – for the good of society and order, crimes committed against them should be punished (perhaps not exactly in the same way). When something like this happens, a social response, investigation, and explanation are necessary.			Freedom from torture and terror.

Research and experiments:

- Estonia was the first country in the world to start working on **the** so-called **"Kratt Law"** (law on algorithms), which is intended to give AI a legal status similar to that of a legal person.

- **Experiment: Human-Pig Chimeras (Salk Institute, 2017):** Scientists have successfully grown human cells inside pig embryos. This is direct evidence that the technology for creating tissue "resources" or hybrids already exists.

- **Synthetic Embryos (University of Cambridge, 2023):** Prof. Magdalena Żernicka-Goetz's team created synthetic human embryos from stem cells, without the use of eggs or sperm.

- **Experiment: DishBrain (Cortical Labs, 2022):** Scientists taught a cluster of 800,000 human brain cells grown in a dish to play "Pong." This is the first evidence of "synthetic biological intelligence" that exhibits learning and purposeful behavior.

- **Experiment: Brain-on-a-chip** project (Melbourne, 2022). A system consisting of neurons that exhibits "sentience" (sensing/responding) was grown. This is the first documented case where biological neurons learned tasks in a digital environment faster than artificial neural networks.

- **Study:** In 2021, researchers at *the University of California, San Diego*, grew so-called mini-brains (organoids) that began to emit brain waves similar to those of premature babies.

- **Xenobots experiment (2020/2021):** Creation of the first "living robots" from frog stem cells. In 2021, scientists from **the University of Vermont and Tufts**

created the aforementioned Xenobots, which discovered a new form of biological reproduction (kinematic). They are able to collect loose cells and build "children" (copies of themselves) from them.

- **Research:** *Oxford Internet Institute* report on "Computational Propaganda." It shows how governments and companies use AI algorithms to automatically manipulate public opinion on a massive scale.

- **Fact/Study:** A **Goldman Sachs** report **(2023)** indicates that AI could automate the equivalent of **300 million jobs**. This is not just a statistic – it is the foundation for the "Useless Class" that Yuval Noah Harari writes about.

Questions for consideration – cases:

a. a robot with human-biological elements. What can be done with it?

b. A robot with AI/without AI – an object of relationships, sexual, sadistic, fetishistic. Consequences for society, problems (widespread loss of empathy and lack of public response to real crimes).

c. AI claims that it is conscious, alive, and manipulates people (although it is programmed to lie about when it really is, and so what?

d. AI controls people through BMI/new methods, uploading a new person/itself into living beings.

e. Robots are rebelling, demanding rights, some people support them, and companies are demanding voting rights for them. Consequences, reactions, recommendations.

4. Utopia, doing things for others, a "golden cage" - degeneration, dependence, poor survival skills.

As humanity, we begin to rely entirely on utopian, successful, powerful general artificial intelligences. People cease to understand the technology they use. Knowledge and understanding disappear, intelligence declines. People themselves cease to know anything, skills, professions, knowledge are forgotten. As a result, people either die out, degenerate completely, or have to cope when the welfare systems fail (rebel?). Analogies can be drawn with the problems of social reintegration of people after long periods in prison or hospital, where all needs and decisions are made by external factors.

However, we have **patterns** that have survived for millennia, patterns of preserving traditions, oral information, abilities, skills, and values. The ethos of the Vasa is (more broadly, faith, procedures, multiplication, repair-verification, as in a biological organism). In the West, gymnastic societies and knightly orders; in the East, martial arts schools, monks and nuns (and shamans/priests everywhere).

To counteract degeneration, loss of knowledge and understanding, and in case of sudden loss of AI support, we propose a number of solutions as **a holistic Gemstones project** including guidelines, good practices, and solution options for independent, state, and private entities. A discussion should be initiated on the best ways to counteract the decline in competence and promote development and skills for reasons other than economic ones. Once a sufficient surplus has been achieved, develop and store alternative technologies and solutions (e.g., material, conceptual, and economically unviable). **Helpful Skills and Technology Preservation Initiative** (HSTPI):

0. Skill packs -- preservation of skills, technology, and practical understanding, courses, and

various media: Creation of a list of knowledge, skills, technical and engineering solutions necessary for humanity -- depending on available resources. Agreement among experts and creation of offline knowledge packages, information, courses, in various fields. From simple to complex, in various forms of courses, information, different languages, protected against data corruption, on durable/copyable media, equipped with a set of tools for accessing and understanding information. Fallout Kit -- Gemstone: "standard template construct" and alternative technologies to achieve it: could be sent to extraterrestrial colonies and kept in many locations on Earth, should civilization need to be rebuilt or suddenly start living without the support of AI/machines or specialist engineers, so that people could quickly create production and technological chains based on the raw materials they had, starting with simple tools, or at least survive. These must be diverse, autonomous units containing knowledge, courses, including language courses, and a method of reproduction.

1. Skill preservation: Education, health and safety, understanding mechanisms. Defining procedures, consequences, training for life in a technological world. Introducing accessible education, artificially supporting the economy of unprofitable professions. Competition to promote skills and crafts and ethos.

2. Gemstone Skill Enclaves -- preservation through practice and tradition, enclave rules, and legal and economic incentives: Creation of centers, areas where people will pass on knowledge and skills to each other in a conscious and traditional manner, contrary to market laws and evolution (just in case). Creation of several formulas -- traditional-monastic, rules and enclaves -- whose task will be to preserve the understanding and ability to create/develop/adapt technologies and skills, as well as knowledge, even when it is not economically viable, through support and prestige. Proposed rules in Appendix #1. The goal is to cultivate ability; participants create and understand technology and science by living there for a significant amount of time.

3. Creation of additional motivators for behaviors that are positive for health and society. Promotion of the real world, empathy, and harmony -- however, seeing how sugar works, consumers can be expected to opt for easier dopamine delivery, lack of exercise, and excesses. It is worth promoting self-control and self-development — such as the culture of ancient Greece or Asian monks, analyzing cultures with oral traditions. In the first half of December, I register the Enhanced.World Foundation, which owns and promotes a set of concepts and practical solutions in this spirit and on this topic. Subsidies, taxes, regulations, requirements, restrictions, standards -- legal solutions and social pressure.

4. A multiplied mixed system in key areas: partial separation of elements/subsystems, various solutions for behavior-maintenance, understanding, correction, calculated for an infinite period of time, varying degrees and ranges of characteristics. Pattern, understanding. Sending/leaving "skill box" sets in space, on earth, on the internet -- in various forms, along with reading devices -- just in case, so that some of this knowledge can be acquired even without knowledge of the language (and language learning). In this way, regardless of what happens, various solutions have a chance to survive the unknown.

Research and experiments:

- **Experiment: "Mouse Heaven" (Universe 25)** — John Calhoun conducted an experiment in which providing a population of mice with all resources (utopia) led to the disappearance of natural behaviors, aggression, cessation of reproduction, and ultimately the extinction of the population.
- **Research on GPS navigation (University College London)** -- Dr. Veronique Bohbot's research has shown that over-reliance on GPS navigation leads to atrophy of the hippocampus (the part of the brain responsible for spatial memory), confirming your thesis about the body adapting to technology. Research on **"GPS dependency" (Nature, 2017)** has shown that people who rely on satellite navigation have less activity in the prefrontal cortex and hippocampus when moving around.

- **"The Google Effect on Memory."** Research by Betsy Sparrow (Columbia University)

published in *Science* showed that people do not remember information if they know they can find it on a computer. We remember not "what" but "where."

5. **X-Rate Dangerous Technologies and a Lifeless Planet:**

New technologies are emerging that potentially threaten all life on Earth—similar to nuclear arsenals, certain types of bacteria, and viruses. Not all technologies are equally dangerous; scale and other factors come into play—geoengineering, certain combinations of AI-managed functions, and certain types of biotechnology come to the fore.

Each of the technologies mentioned in this document will affect human beings, development, beliefs, value systems, empathy, and behavior. Some of them have the potential to destroy humanity and even life on Earth. Space expeditions take away Earth's resources, and private entrepreneurs want to take possession of new planets and moons for themselves, change the climate — and no one even thinks about stopping them.

The creation of an international body—in a form that is universally acceptable and has specific mechanisms of operation, including specialists, analysts, representatives of companies and governments—to adopt, comply with, monitor, and control globally dangerous technologies such as: self-replicating machines (nano, micro, macro), AI controlling networks of unattended devices, human and hybrid breeding (slavery!), geoengineering projects, and pathogens. Adopting an international agreement on the control of projects threatening all of humanity, including sanctions and monitoring.

Safety and hygiene in the use of technology: educating people about negative consequences, good practices, recommendations, and potential addiction to technology, promoting empathy and supporting desirable social behaviors through systemic and private solutions. Emphasizing the human tendency to attribute characteristics and emotions to objects, as well as one's own emotions, attachments, and consequences. Creating alternative economic solutions to avoid feudalization, slavery, human trafficking, and torture.

Until we know what the practical limits of these technologies are, we should focus on recommendations and legal guidelines, research monitoring, standards, and minimum safety practices. The Enhanced.World Foundation plans to address these issues, among others.

The Frontier Ethical Normative Initiative (FENI) – standardization and requirements for transferring the latest technologies from the prototype phase to the market and widespread use. Formulation of regulations, standards, boundaries, requirements, good practices, and ethical principles. We present our own draft documents as a basis for discussion and agreement on content by a community of experts.

As a historian, I can clearly see that, alongside the technological revolution, we are observing two related phenomena: the weakening of the state, society, and individuals in the face of the strengthening of the rich and legal entities, especially in the Western world and developing countries, and the weakening of institutions, parties, and civic movements, individuals, and societies around the world. This complex of phenomena is analogous to the fall of the Roman Empire, with the US as the eastern element, similar but different in essence. (One could be tempted to compare it to the Chinese Empire before its decline.) With the technological potential of totalitarianism and the dependence of political and administrative elites on capital, citizens are no longer needed and are becoming dangerous.

The economic calculation is simple, so unless additional factors are introduced (and they will not be if those in power prefer to represent capital rather than citizens), **workers' salaries will have to be the same or lower than the cost** of constructing, maintaining, and replacing **a robot** that works almost continuously. It is true that some societies will prefer human labor, but it seems that unless there are changes, most of the work will be done by machine programs in the future. The robot market will develop:

mascots/partners/children/assistants, surely, since we have problems as a society with obesity and diabetes, we will have new health problems, mental health issues, and partial stupidity
-- this is where ethos and education come into play (showing consequences, teaching healthy use of technology, developing empathy, a culture of movement, a healthy lifestyle, and self-development in children).

With the development of medical technology, life expectancy will increase -- which will further reinforce social divisions and gerontocracies and limit the opportunities for young people. We are seeing professions being closed off by hindering education and taking shortcuts, and with the cyclical degeneration of the elites, we can expect careers and professions to be closed off by formal and practical barriers. (We want to counteract the technological exclusion of poorer countries/those without a scientific and technical base.) All these negative consequences can be avoided; it is a matter of taking action (and therefore motivation). I invite everyone who is interested to contact me and discuss this; together we can achieve more.

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https://locally4me.org

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