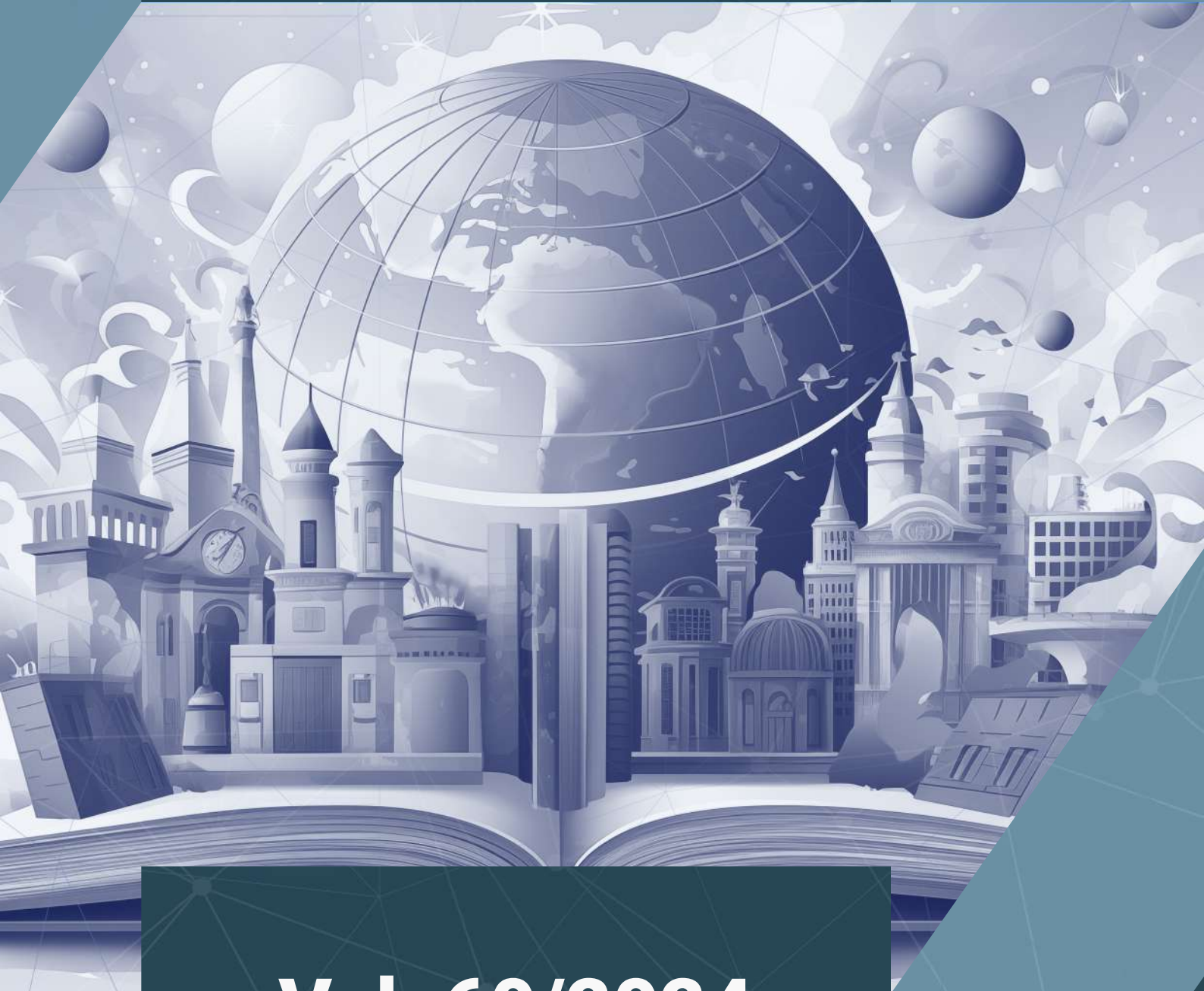




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Anxiety Over the Future: Cultural and Historical Insights into Technological Fears

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Abstract. This study seeks to analyze how people perceive fear and risks differently today compared to how they viewed them in the past, elements that are closely related to technological development and its influence on everyday life, even if they have an impact at the micro or macro level. In this article we will analyze historical data to see how people perceived the utility and the risks associated with technological development in the past such as the development of forging metal, making of the wheel, invention of the press or the engine. We will also analyze some more modern examples and we will end up talking about some recent technologies and what advantages and disadvantages they would present for modern society.

Keywords. risk, social fear, technology, history, progress, development

Introduction

Firstly, it is essential to highlight what technology is and what technological changes are, how and when they occur and what is their result.

Over the last 200 years, the meaning of the term "technology" has undergone significant changes. Prior to the 20th century, the term was infrequently encountered in the English language and served two primary purposes: either describing or examining practical arts, or denoting technical education, as exemplified by the Massachusetts Institute of Technology [1].

In the 20th century, the concept of "technology" became increasingly important, being closely related to the second industrial revolution. In the first decades of the 20th century, American researchers in the field of social sciences, including Thorstein Veblen, translated the ideas from the German concept "Technik" into the term "technology". Although in German and other European languages there is a distinction between "technik" and "technology", in English these terms are often equivalent and refer to the same field. By the 1930s, "technology" encompassed not only the study of the industrial arts but also the procedures and techniques used in scientific research as well as the manufacturing of goods and services [2].

Thus, we can define technology as the collection of strategies, aptitudes, tactics, and procedures employed to accomplish goals, whether it involves detailed knowledge of the workings of machinery or not.

The development and use of basic tools represents the simplest form of technology, an element that throughout history represented the basis of progress and the development of human civilization. Even though this technological development has come with many advantages, it has influenced the way people perceive the risks of everyday life.

In prehistory, the invention of stone tools and the discovery of how to control fire had a significant impact on food resources. Later, the "revolution" of the Neolithic period expanded this knowledge and practically doubled the number of usable resources in a territory. The invention of the wheel contributed significantly to the expansion of people's mobility and their ability to control their environment.

Technology has a wide range of impacts. It has facilitated the growth of more sophisticated economies, such as the current global economy, and has contributed to the emergence of an upper class and a more comfortable lifestyle. However, numerous technological processes generate undesirable by-products like pollution and exhaust natural resources, which negatively affect the Earth's environment. Innovations have always had a significant impact on societal values and generated ethical dilemmas. Examples include extending the concept of efficiency to human productivity or the challenges of bioethics.

In 1937, sociologist Read Bain, an American scholar, expressed that technology encompasses all of the equipment, machinery, utensils, weapons, instruments, housing, clothes, and communication and transportation devices, as well as the abilities we need to create and operate them. Even today, academics still frequently use Bain's definition, particularly social scientists. In scientific research and academic discourse, scientists and engineers tend to conceptualize technology as a form of applied science, rather than reducing it to the simple use of human-made objects or processes. Thus, they focus their attention on the fundamental principles underlying technological development and the application of these principles in practice [3]. W. Brian Arthur describes technology as "a means to achieve a human goal", similar to the description above [4].

One could consider technology to be an activity that modifies and influences culture. Additionally, it involves applying mathematics, science, and the arts to enhance our lives. The development of communication technologies, which has lowered barriers to interpersonal communication and sparked the emergence of new subcultures, represents a contemporary example. Similarly, the advent of cyberculture stems from the development of the Internet and computers [5].

In the present paper I seek to longitudinally analyze how people have perceived over time the potential risks associated with technological development and its impact on people's lives, society and civilization.

Risk, fear and technology

In his works, Nicholas Taleb has as main topics addressed decision theory, probability and risk. It states that the evolution of humanity has not been based on a steady and planned development of technology, but rather on sudden, unplanned leaps that have had a significant and unforeseen impact on people's lives, whether it is life-saving discoveries and they have enhanced the comfort of everyday life, or they have achieved the opposite [6].

Thus, we can say that it is not the technological changes themselves that would produce fear, but rather the changes in personal, social and economic life, generated by the technological changes, especially the sudden ones, would produce fear.

The perception of risk is a significant theme in the current work, representing a crucial aspect of contemporary society. Individuals encounter risks across various domains, including

financial markets, nuclear power facilities, natural calamities, and privacy breaches in telecommunications systems. These diverse contexts underscore the pivotal role of uncertainty and potential harm. Consequently, risk and its analysis remain subjects of immense interest across disciplines such as psychology, economics, sociology, cultural studies, philosophy, political science, and engineering.

Continuing, we can highlight five ways in which the term risk has been used in the specialized literature:

- an unwanted occurrence that could happen or not
- the reason behind an undesirable event that might or might not happen [7]
- the likelihood that a negative event will occur, whether it does or does not
- the reality that a choice is made in light of established probability
- the expectation of undesirable events, which may or may not occur, and its statistical value [8]

Thereby, we can observe how humanity, throughout history, in order to minimize the risks around itself, needed to look for new, more effective solutions to survive, so that new technologies appeared.

Milestones in the history of technology

The use of tools by humans in the early period of history was a process involving discovery and then development and evolution. The use of various tools remained relatively unchanged during early human history. Archaeologists have found that the use of tools and a complex set of behaviors associated with the emergence of modern language dates back to about 50,000 years ago [9].

Since ancient times, man has created tools from stone. The oldest tools, found through archaeological research, are estimated to be millions of years old and are characterized as little more than fractured rocks. Following these discoveries, it was found that around 75,000 years ago, man was able to produce finer tools by bending and flaking under pressure [10].

One of the earliest sources of energy, fire, was discovered and used, and this marked a turning point in human technological evolution. The precise date of its discovery is up for debate, but evidence such as burnt animal bones found at the Cradle of Humankind suggests that (,) the control of fire by *Homo erectus* occurred more than a million years ago. In addition, debate within the scientific community indicates that (,) fire control may have occurred between 500-400 ka. Early humans were able to cook a variety of consumable foods thanks to fire, which was fed by wood or coal, thus improving their digestibility and at the same time expanding the number of foods that could be consumed [11].

During the Paleolithic period, humans made significant advances in technology such as clothing and shelter. Exactly when these technologies were adopted cannot be determined with certainty, but they had a significant impact on the progress of humanity. As the Paleolithic progressed, dwellings evolved with humanity and became larger, sturdier and more sophisticated, with many temporary huts built of wood dating from 380 ka. Clothing, which developed from the furs and skins of hunted animals, provided humans with a means to expand into colder regions, leading to their migration from Africa by 200 ka and later to other continents such as Eurasia [12].

In the Neolithic Period, man benefited from a remarkable technological ascent, beginning with the invention of polished stone axes. These allowed the clearing of forests for the purpose of creating farms, which led to increased use at this stage. However, the use of polished stone axes was also documented in the preceding Mesolithic in some regions such as

Ireland. Agriculture gave populations the opportunity to feed their families and settle in fixed places, which led to higher fertility and the simultaneous raising of more children, as they no longer had to be provided with transport, as was the case necessary in nomadic cultures. Moreover, children were able to contribute significantly to agricultural production compared to the labor required in the economy based on hunting and gathering [13].

With an ever-increasing population and labor supply, there has been a significant specialization of work. This phenomenon led to the recognition of why early Neolithic villages developed into small cities, such as Uruk, or how early civilizations, such as Sumer, developed. However, it is assumed that the emergence of social structures focused much more on a hierarchical structure, on a specialized workforce, on trade and warfare between adjacent cultures, as well as the necessity of working together as a collective to overcome survival obstacles, food and environment, such as irrigation, contributed to this change, resulting in increased labor specialization [14].

Ongoing advancements resulted in the invention of the furnace and bellows, enabling the melting and forging of naturally occurring metals like gold, silver, and lead, which were found in relatively pure forms in nature for the first time [15]. The use of copper as a material for tools was quickly recognized by humans in the Neolithic era (about 10 ka). The advantages of copper over traditional materials such as stone, bone and wood were obvious, which increased its popularity. Natural copper does not usually occur in significant quantities, but its ores are common enough. They produce light metal when smelted using wood or coal fire. Later, metalworking advancements led to the discovery of alloys like brass and bronze approximately 6,000 years ago. The earliest uses of harder alloys, such as iron and steel, date back to around 1800 BC [16].

As early as the 8th millennium BC, historical documents attest that people began to harness other sources of energy, such as wind. Its first known use was as a sailing vessel, the first reference to such a vehicle being in a boat that sailed on the Nile. From the beginning of history, the Egyptians and Sumerians used their ability to build irrigation canals and "catch" basins to supply their crops with water. These techniques were used to take advantage of the annual flooding of the Nile and to reroute water from the Euphrates and Tigris rivers [17].

According to archaeological findings, the invention of the wheel dates back to around 4000 BC, at a time when this technology was probably developed separately but almost simultaneously in Mesopotamia (present-day Iraq), Central Europe (Cucuteni-Trypillia Culture) and the Caucasus from the North (Maykop culture) [18].

The invention of the wheel had a major impact on trade and warfare, as it was discovered that different heavy materials or other loads could be transported using wheeled wagons, materials that were otherwise difficult to transport. The ancient Sumerians were supposed to have invented the potter's wheel and were the first to use it [19].

Following the fall of the Roman Empire, technological advancements during the Middle Ages led to new products like horseshoes and harnesses as well as innovations like the production of silk. Utilizing basic devices like the lever, pulley or screw allowed for the creation of more complex tools such as windmills, wheelbarrows or clocks. In the Renaissance era, the printing press contributed significantly to the communication and distribution of knowledge but also to the association of technology with science, marking the beginning of a cycle of mutual advancement. These advances allowed for a more efficient supply and greater availability of consumer goods.

The Industrial Revolution in the United Kingdom during the 18th century was characterized by significant technological advancements, particularly in the domains of

transportation and metallurgy, as well as in the fields of agriculture, manufacturing, and mining. This was possible due to the discovery of steam power and its widespread use in factories. The second industrial revolution (1870 - 1914) brought progress in harnessing electrical energy, thus allowing innovations such as: the light bulb, the electric motor or many others. This contributed to the development of powered flight as well as medicine, chemistry, physics and engineering.

Personal transportation was revolutionized by the automobile, leading to the emergence of sprawling urban areas whose inhabitants depend on automobiles for transportation and transportation of supplies. Also, the field of communication developed and improved significantly with the advent of the telegraph, telephone, radio and television, and finally the computer and the Internet.

At the end of the 19th century and the beginning of the 20th century, there were revolutions in transportation, thanks to the invention of the automobile and the airplane. This century was characterized by many discoveries and innovations, starting with nuclear fission, which led to weapons and nuclear power, to the miniaturization of computers, information technology, the Internet, and satellites used for telecommunications. In medicine, this period included open heart surgery, modern therapy such as stem cell therapy, various new drugs and treatments.

Fear of technology – case study - The Luddite movement

Given that we have already briefly presented some of the most important landmarks in the history of technology, we can focus on certain human behaviors, including social movements and groups that strongly opposed technology and its development for various reasons, but which can be seen to they are based on certain fears.

We can start by talking about the Luddites. The Luddites were a covert, oath-bound group of 19th-century English textile workers who formed a radical faction known for destroying textile machinery. It is believed they took their name from Ned Ludd, a mythical weaver purportedly from Anstey, near Leicester. The Luddites protested against manufacturers who, according to them, used machines "fraudulently and deceptively" to bypass standard labor practices. They were concerned that the time and effort invested in mastering their craft would be rendered obsolete as machines replaced their roles in the industry [20].

Many Luddites were former workshop owners who had been forced to close their businesses because factories could produce and sell the same products at lower prices. When these workshop owners sought employment in factories, they often found it challenging to secure jobs because factory production required fewer workers than traditional workshop methods. This situation resulted in widespread unemployment and discontent, contributing to a major crisis in England [21].

The Luddite movement originated in Nottingham, England, and escalated into a widespread rebellion that spanned from 1811 to 1816. As the unrest grew, factory and mill owners began using force against the protesters, which included shootings. Ultimately, the movement was quelled by legal and military intervention, leading to the execution and penal transportation of many accused Luddites [22].

Over time, the term "Luddite" has evolved to describe individuals who oppose industrialization, automation, computerization, or new technologies in general. In contemporary contexts, Neo-Luddism or New Luddism represents a philosophy that resists various forms of modern technology. The term is often used pejoratively to label those with technophobic tendencies, drawing on the historical legacy of the original English Luddites. This concept will be explored further in a subsequent subchapter [23].

Neo-Luddism is a non-hierarchical, leaderless movement made up of different independent organizations that oppose modern technologies and advocate for a return to more primitive levels of technology. This movement is characterized by practices such as passive rejection of technology, targeting those who produce environmentally harmful technologies, promoting a simpler lifestyle, or engaging in acts of technological sabotage. The anti-globalization movement, anarcho-primitivism, radical environmentalism, and deep ecology are all linked to the modern neo-Luddite movement [24].

Neo-Luddism is driven by concerns about the effects of technology on individuals, communities, and the environment. The movement advocates for the precautionary principle, which demands that new technologies be thoroughly proven safe before they are implemented, due to the potential unknown consequences they might cause.

The present perspective differs from the original Luddite philosophy in that Luddism opposes all technological advancements, whereas Neoluddism specifically targets technology considered harmful or destructive to society. [25].

Neo-Luddism advocates for a deliberate slowdown or cessation of technological advancements. It promotes a lifestyle that rejects specific technologies, viewing this approach as the optimal path forward. According to Robin and Webster, Neo-Luddism envisions a return to nature and idealized natural communities. Rather than embracing industrial capitalism, Neo-Luddism sees the Amish and the Chipko movement in Nepal and India as possible future models because they are small-scale agricultural communities [26].

Neo-Luddism holds that new technologies cannot solve problems that already exist, like biological weapons, nuclear war, and environmental degradation, without possibly posing new risks [27].

In such instances, we might even discuss a type of opposition to scientific principles. Those who hold anti-scientific views do not accept science as an objective method capable of generating universally applicable knowledge. This trend often manifests in the rejection of scientific concepts and includes pseudoscientific methods that claim to be scientific but reject the scientific approach. Anti-science tendencies can also lead to belief in conspiracy theories. The lack of trust in science is closely linked to the promotion of political extremism and skepticism toward medical treatments or other scientifically proven methods [29].

Modern cultural poses of fear of technology

We can observe how the phenomenon of fear of technology has existed throughout history in countless poses.

If we talk about fear of technology, it is necessary to first define this concept. Technophobia is an "irrational or disproportionate fear of technology, especially advanced digital technology, including computers, robots, and artificial intelligence," or, as noted earlier, a form of Luddism, more specifically an aversion to new technology or technology demands are changing.

In addition, modern definitions of technophobia include fear, distaste, or unease with sophisticated technology or complicated gadgets, particularly PCs, tablets, and smartphones. Technophobia has many different interpretations, but as technology advances, these interpretations are growing more intricate [30].

During the Industrial Revolution in England, technophobia emerged as a notable movement. As new machines were introduced, capable of performing tasks previously done by skilled craftsmen using unskilled labor, those with established trades became apprehensive

about losing their livelihoods. The fear of displacement by technology played a significant role in shaping early technophobia.

One of the first examples from literature that exposes man's fear of technology is the work *Frankenstein* [31].

Written by Mary Shelley and published in 1818 during a time known as the Industrial Revolution, *Frankenstein* heightened society's anxieties about rapid scientific progress. This is considered the first published work of science fiction.

The story of Victor Frankenstein, a scientist obsessed with the idea of creating life, reflects fears about the unintended consequences of technological innovation. The monster that Frankenstein creates is not only a physical being, but also a representation of the dangers hidden in the thoughtless use of technology.

The monster, though created through technology, is essentially human, with emotions and desires. But, due to society's rejection and misunderstanding, he becomes violent. This can be interpreted as a warning that technology, in the wrong hands or used without understanding and respect, can have devastating results.

Furthermore, Frankenstein himself suffers as a result of his creation, losing everything he loved. This can be seen as a metaphor for how technology can consume an individual's life and lead to isolation and suffering.

We can say that, "*Frankenstein*" is an early work that explores man's fear of technology, highlighting the potential dangers of uncontrolled scientific progress. It is a powerful example of how literature can reflect and respond to social and technological change.

At the same time, moving to the present, the fear of robots and how they can replace either humans or their work has been a frightening phenomenon for humans since the beginning of the industrial age. This element persists even more today, when what seemed unimaginable two centuries ago, can now be a reality [32].

Other more modern cultural examples present in cinemas would be the films *The Terminator*, *Blade Runner* or *The Matrix*.

In the first case it is about a world where people lost control over their own creations, intelligent machines, and how they decided to exterminate all of humanity [33].

In the second film, it is highlighted how the synthetic human replicas created by and living with humans become unhappy and dissatisfied with their own human-created limitations and end up demanding, sometimes violently, to change them.

In the case of the film *The Matrix*, we are discussing a cyberpunk tale in which artificial intelligence has caused the rise of a race of strong, self-aware machines that shut down people in an interactive neural simulation called the Matrix so that people can be used as a source of energy. This story takes place after humanity has experienced a technological decline.

Another film that wants to develop the idea of fear of technology, but from another point of view, is the film *Avatar* made by James Cameron in 2009 and continued in 2022. This illustrates how technology affects those who use it to their advantage and graphically conveys the fear it instills in people who are not familiar with the idea. The idea is reinforced that the aliens on the planet Pandora are not only scared of technology, but something to be loathed; the technology's capacity for destruction might outweigh their own existence. The film aims to create an immersive experience for viewers, allowing them to feel as though they are actively participating in a world where a technophobic civilization grapples with its challenges [34].

With this in mind, I conclude the article by presenting a series of comparisons and conclusions.

Comparisons and conclusions

We can see how although a good part of the technologies developed by mankind have had and have as their main aim the improvement of living and human life, some of them can also be used for nefarious purposes.

Here we can see some examples of the duality of some of the products of technology along history:

Table 1 – Positive and negative effects of technological development comparison

Object or field	Positive effect	Negative effect
Metal forging	<ul style="list-style-type: none"> Producing tools for hunting, gathering or building 	<ul style="list-style-type: none"> Producing tools for killing or destroying
Basic weapons (bow, sword, spear etc)	<ul style="list-style-type: none"> Defending someone's life Hunting 	<ul style="list-style-type: none"> Taking someone's life
The Press	<ul style="list-style-type: none"> More access to information for the masses 	<ul style="list-style-type: none"> Chance for the leaders of a country to easily spread misinformation or propaganda
Motor	<ul style="list-style-type: none"> Creating means of production Creating means of transport 	<ul style="list-style-type: none"> Mass producing weapons Mass producing engines of war
Industrialization	<ul style="list-style-type: none"> Automatization of jobs. Cheaper and more products available for the people 	<ul style="list-style-type: none"> Loss of jobs Riots and protests
Tanks	<ul style="list-style-type: none"> Defending one's border and country 	<ul style="list-style-type: none"> Invading weaker countries
Nuclear power	<ul style="list-style-type: none"> Sustainable, affordable and clean energy production 	<ul style="list-style-type: none"> Nuclear devices capable of destroying humankind
Rocketry	<ul style="list-style-type: none"> Chance of space exploration and fast travel across the globe 	<ul style="list-style-type: none"> Chance for mutually assured intercontinental destruction
Medicine development	<ul style="list-style-type: none"> Eradication of many diseases Creation of antibiotics and vaccines 	<ul style="list-style-type: none"> Creation of bioweapons or viruses
Internet	<ul style="list-style-type: none"> Access to information worldwide for almost anyone 	<ul style="list-style-type: none"> Easily spread misinformation, fake news and propaganda Too much information

		<ul style="list-style-type: none"> • Reason for censorship
Social media	<ul style="list-style-type: none"> • Easily shared photos, information and stories with anyone in the world 	<ul style="list-style-type: none"> • Dependency • Social physical deprivation • Depression
Telecommunications technology	<ul style="list-style-type: none"> • Almost instant information transmission from one part of the globe to the other • Huge opportunity for businesses 	<ul style="list-style-type: none"> • Fear of radiation
Artificial Intelligence	<ul style="list-style-type: none"> • Next stage in human evolution • Limitless potential for development and leisure 	<ul style="list-style-type: none"> • Human extinction • Human enslavement

Those are just a few examples of the positive and negative effects of technology that humankind had problems with and some that which we still do.

It is clear that all the time, throughout history, people have had many reasons to create new technologies and use them, either for beneficial or negative purposes, or for reasons of survival, whether that means physical violence, hunting, aggression or only defensive acts of self-defense. Whether it was the increase of efficiency and productivity or the development of medicine to solve various health problems, or of modern technologies to make the transfer of information and the field of communications more efficient, we can see how along with the technological advance, the way people perceive risks associated with these changes. What in the past seemed dangerous, now seems acceptable and rather normal. What seemed in the past to be from the realm of science fiction now seems to be right next to us.

It seems clear that fear generated by technology can have devastating effects on society and can produce extreme changes in human behavior. These changes can be generated by feelings of instability or loss of lifestyle, feelings accentuated by technological changes. As we progress, it becomes increasingly important to understand fear as an important factor in the analysis of human behavior and social relations.

References

- [1] Mannix, Loretta H. & Stratton, Julius A. (2005). *Mind and Hand: The Birth of MIT*, MIT Press, Cambridge, 2005, pp. 190–92.
- [2] Schatzberg, Eric. (2006). Technik Comes to America: Changing Meanings of Technology Before 1930. *Technology and Culture*, vol. 47, pp. 486-512. <http://dx.doi.org/10.1353/tech.2006.0201>.
- [3] MacKenzie, Donald A. & Wajcman, Judy. (1999). Introductory Essay. *The Social Shaping of Technology*, Open University Press, Buckingham, p. 6.
- [4] Arthur, W. Brian. (2009). *The Nature of Technology*, Free Press, New York, p. 28.
- [5] Macek, Jakub. (2005). Defining Cyberculture. Accessed from https://web.archive.org/web/20070703200319/http://macek.czechian.net/defining_cyberculture.htm.

- [6] Taleb, Nicolas N. (2018). *The Black Swan. The Impact of the Highly Improbable*, Curtea Veche Publishing, București.
- [7] Rosa, Eugene A. (1998). Metatheoretical Foundations for Post-Normal Risk. *Journal of Risk Research*, vol. 1, pp. 15–44. <https://doi.org/10.1080/136698798377303>.
- [8] Graham, John D. & Wiener, Jonathan B. (1995). *Risk vs. Risk*. Harvard university press, Cambridge.
- [9] Wade, Nicholas. (2003). Early Voices: The Leap to Language. *The New York Times*. Accessed from <https://www.nytimes.com/2003/07/15/science/early-voices-the-leap-to-language.html>.
- [10] Bower, Bruce. (2010). *Stone Agers Sharpened SKills 55,000 Years Earlier Than Thought*. Accessed from <https://www.wired.com/2010/10/stone-tool-sharpening/>.
- [11] Stahl, Ann B. (1984). Hominid dietary selection before fire. *Current Anthropology*, vol. 25, pp. 151-168. <https://doi.org/10.1086/203106>.
- [12] Villa Paola. (1983). *Terra Amata and the Middle Pleistocene archaeological record of southern France*, University of California Press, Berkeley, p. 303.
- [13] Sussman, Robert W &, Hall, Roberta L. (1972). Child Transport, Family Size, and Increase in Human Population During the Neolithic. *Current Anthropology*, vol. 13, pp. 258-67. <https://doi.org/10.1086/201274>.
- [14] Patterson, Gordon M. (1992). *The ESSENTIALS of Ancient History*, Research & Education Association, Piscataway.
- [15] Cramb, Alan W. (1964). A Short History of Metals. *Nature*, vol. 203, p. 337. <https://doi.org/10.1038/203337a0>.
- [16] Hall, Harry Reginald Holland. (1911). Ceramics. *Encyclopædia Britannica*, vol. 5, Cambridge University Press, Cambridge, pp. 703-760.
- [17] Crawford, Harriet. (2013). *The Sumerian World*, New York and London, Routledge, England, pp. 34–43.
- [18] Potts, Daniel T. (2012). *A Companion to the Archaeology of the Ancient Near East*, Blackwell, Oxford, p. 285.
- [19] Noah, Kramer Samuel. (1963). *The Sumerians: Their History, Culture, and Character*, University of Chicago Press, Chicago, 1963, p. 290.
- [20] Byrne, Richard. (2013). A Nod to Ned Ludd. *The Baffler*, vol. 23 (23), pp. 120-128.
- [21] Andrews, Evan. (2015) *Who were the Luddites?*. Accessed from <https://www.history.com/news/who-were-the-luddites>.
- [22] Linton, David. (1993). THE LUDDITES: How Did They Get That Bad Reputation?. *Labor History*, vol. 33, no. 4, p. 529-537. <https://doi.org/10.1080/00236569200890281>.
- [23] Brosnan, Mark J. (1998). *Technophobia: the psychological impact of Information Technology*, Routledge, London, p. 155.
- [24] Jones, Steve E. (2006). *Against technology: from the Luddites to neo-Luddism*, CRC Press, Boca Raton, p. 20.
- [25] Christensen, Karen & Levinson, David. (2003). *Encyclopedia of community: from the village to the virtual world*, SAGE, vol. 3, p. 886.
- [26] Graham, Gordon. (1999). *The Internet: a philosophical inquiry*, Routledge, London, p. 9.
- [27] Huesemann, Michael H. & Huesemann, Joyce A. (2011). *Technofix: Why Technology Won't Save Us or the Environment*, New Society Publishers, Gabriola Island, British Columbia, Canada, p. 464.
- [28] Holton, Gerald. (1993). *Science and Anti-science*, Harvard University Press, Cambridge, pp. 145-190.

- [29] Hotez, Peter J. (2021). Mounting antiscience aggression in the United States. *PLOS*, vol. 19. <https://doi.org/10.1371%2Fjournal.pbio.3001369>.
- [30] *Technophobia*. Accessed from <https://my.clevelandclinic.org/health/diseases/22853-technophobia>.
- [31] Shelley, Mary. (2018). *Frankenstein; or a postmodern Prometheus*, Grupul Editorial Art, Bucuresti.
- [32] Szollosy, Michael F. (2017). Frankenstein and our fear of robots: projection in our cultural perception of technology. *AI & Soc*, vol. 32, pp. 433–439. <https://link.springer.com/article/10.1007/s00146-016-0654-7>.
- [33] Rogers, Ryan & College, Marist. (2022). Critical Essay—Old Games, Same Concerns: Examining First Generation Video Games Through Popular Press Coverage from 1972-1985. *Technoculture: an online journal of technology in society*. Accessed from <https://tcjournal.org/vol3/rogers>.
- [34] Goodyear, Dana. (2009) *Man of Extremes*. Accessed from <https://www.newyorker.com/magazine/2009/10/26/man-of-extremes-james-cameron-profile-avatar>.