
ISSUES OF MISINFORMATION, MEDIA MANIPULATION, PROPAGANDA IN CYBERSPACE

Maciej Tanaś

University of Justice, 50 Wiśniowa Street, 02-520 Warsaw, Poland

E-mail: maciej.tanas@swws.edu.pl

Received 25 March 2023; accepted 2 July 2023; published 30 July 2023

Abstract. The internet creates a virtual space where individuals strive to capture their dreams, art, and culture. Within it, one can find the greatness and dignity of humanity, but also the baseness and wickedness that signify the decline of the spirit. The internet has drastically diminished the significance of space and distance in social interactions. It has enabled the crossing of temporal boundaries, provided anonymity in contacts, and facilitated access to previously inaccessible information, including open educational resources and sources of cultures different from one's own. The language of digital media is a system of signs. Without understanding them, contemporary individuals become slaves, and their lives become meaningless and purposeless play. Illiteracy and low computer and media literacy can become sources of social and cultural manipulation on an unprecedented scale. Information networks connect not only universities, businesses, and people, but they have also become tools for playing out cultural, social, economic, political rivalries, as well as criminal and terrorist activities, and more recently, military actions. The COVID-19 pandemic and the war in Ukraine have their dramatic images in the real world, but also in cyberspace. This article fills a gap in this area by addressing the issues of misinformation, media manipulation, propaganda, and infodemics. It presents a classification of security threats to children, youth, and adults and describes selected initiatives undertaken in this regard by the European Union. The author draws upon humanistic and social thought, pointing out avenues for analysis and ways to counteract negative consequences.

Keywords: manipulation; media disinformation; infodemic; pandemic; cyberspace; human security; education

Reference to this paper should be made as follows: Tanaś, M. 2023. Issues of misinformation, media manipulation, propaganda in cyberspace. *Journal of Security and Sustainability Issues*, 13, 289-301. <https://doi.org/10.47459/jssi.2023.13.31>

JEL Classifications: I2

1. Introduction

The terrifying pandemic, helplessness in the face of the virus, economic and medical barriers in many countries, tragedies of individuals and entire societies have placed humanity in front of new questions that demand answers about the meaning of existence, the fragile human fate, possibilities of defense and action, life, suffering, and death. It is not easy to provide rational answers to such questions. Perhaps that is why, in such circumstances, philosophical reflection, as well as literature, film, painting, sculpture, and music, have become expressions of human passions, thoughts, fear, concerns, and hopes... Do not the fragments of Albert Camus' "The Plague" sound like a depiction of the current experience of the COVID-19 pandemic caused by the SARS-CoV-2 coronavirus and the compelled need for isolation (Szczerba, 2021)?

The novel by Albert Camus, titled "The Plague," originally published in 1947 as "La Peste" in French, depicting an epidemic of plague in the Algerian city of Oran and symbolically addressing the global plague of fascism, published by the French publishing house Gallimard, achieved a remarkable level of success within the first two months of 2020, garnering significant sales figures.

On February 24, 2022, hordes of barbarians attacked a free country. They murder, destroy cities and villages. Listen, world! Even a two-year-old girl... We must not remain silent!

The swings, now overturned in despair,
In muddy depths, a plush teddy bear.
Rockets, tearing the sky with their might,
Shatter Ukraine's serene blue light.
In airplane's bellies, a slumbering breath,
Whispers of death, awaiting its depth.

The blood of defenders flows. "A rope and branch bent under the weight" (Miłosz, 1950) of those who raised their hands against innocent people, against those who brought medical aid, against defenseless mothers and children...

The ground forces of the Russian Federation launched an attack from the territory of Russia and Belarus. Missile strikes targeted Ukrainian command centers, weapon depots, and airports. Explosions were heard in Kiev, Odessa, and Kharkiv. President Volodymyr Zelensky declared a state of war. This "aggressor war," as Dmytro Kuleba called it on Twitter, and as the whole free world sees it, was falsely labeled by Vladimir Putin as a "special military operation" (Russian: специальная военная операция). The world was shocked.

Despite the misfortunes, suppression, or even contempt shown by many towards the conscience and fate of ordinary people, the author of this work shares the belief that peace, love, and goodness are the greatest things in this world. They will prevail!

El sueño de la razón produce monstruos – When reason sleeps, monsters awaken – this most famous print by Francisco Goya has been generating numerous associations for over 220 years. The series "Los Caprichos" – "The Caprices" – addresses, among other things, the wicked mistreatment of children for sexual purposes, witchcraft, numerous superstitions, prostitution, satire of doctors, politicians, and the clergy...

I cannot resist the impression that the print symbolically illustrates societal fears and concerns related to information technologies, the exuberant optimism regarding the use of digital media, concerns about the safety of children and youth, and perhaps even expresses a paralyzing fear of war.

The Spanish title of the print, published in 1899 and currently housed in the Museo Nacional del Prado, captures attention with its accurate, timeless aphorism – when reason sleeps, monsters awaken. It foretells the end of the old order and suggests catastrophic visions of the future.

2. The challenge of unverified information: the rise of infodemic, social media, denialism, and misinformation

Nowadays, they are accompanied by gloomy predictions Yuvala Noaha Harari (2018) about millions of biologically redundant people in the era of developing information technologies and biotechnology, Manfred Spitzer's evocative vision (2013) digital dementia, ideologically motivated expectations of Ivan Illich's (1976) and many more. Despite misfortunes, despised by many conscience and the fate of the common man, somewhere deep down the eternal thought germinates timidly: And of the things of this world, peace, love and goodness are the greatest. They will win! After all, it has not only religious or philosophical roots, but its accuracy is proved by the story of a man who survived the terrible turmoil of times past.

The global web is full of contradictory information, carrying sensational news, often untrue or even thoughtless. Truth and falsehood have become entangled with people's fears and hopes, creating a Gordian knot - a complicated, almost impossible to solve social, political and cultural situation. Unravelling it with a simple and radical cut seems impossible.

This time it is not only about untangling the elaborately tied knot from the dogwood bast connecting the yoke and drawbar of Gordias' royal chariot or his son Midas, but about fate, and perhaps even about the survival of man and the communities he created.

People overwhelmed by the responsibility of choice are faced with a torrent of unverified information, not subjected to scientific analysis or verification. In the absence of knowledge or even thoughtlessness - they forget about the meaning of life and values. They are guided by emotions and faith in the rightness of arguments presented intrusively in the network, they escape into superstition, they become believers in conspiracy or anti-system theories.

Lost in the torrent of false, incomplete, vague information, they deceive their loved ones and deceive themselves by taking on ready-made roles that give them meaning that they do not have to create themselves. As in Sartre, they live in bad faith - *mauvaise foi* - turning away from their freedom and from creating their own meaning.

A significant factor in the enslavement of man in the digital media space has become infodemic, i.e. the rapid and far-reaching spread of both true and untrue information about something. Both facts and rumours and fears mix and spread rapidly and widely.

The term "infodemic" was used in 2003 in connection with SARS (Rothkopf, 2003) and reused during the COVID-19 pandemic (Merriam-Webster, 2020). The United Nations and the World Health Organization began using it during the COVID-19 pandemic as early as March 31, 2020 (2020). UNESCO also used the term "desinfodemia" to refer to disinformation campaigns about COVID-19 (Ziccardi Capaldo, 2020).

Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization (WHO), at a meeting of foreign and security policy experts in Munich, Germany, in mid-February 2020, referring to fake news spreading faster and easier than the virus, confirmed that: "We are not only fighting the epidemic; We're fighting the infodemic" (Merriam-Webster, 2020).

The excessive, usually unbelievable amount of information about the pandemic, spreading quickly and making it difficult to find a solution, is closely related to the distribution of various conspiracy theories via social media. The World Health Organization pointed out that the COVID-19 infodemic involves spreading various forms of distorted information, from conspiracy theories to so-called "fake news" (WHO, 2020). The latter are defined as information that only mimics the form of media news, but differs from them in the process of elaboration and intention (Lazer et al., 2018).

The infodemic, which contains information contrary to common sense and current knowledge in addition to real ones, is unfortunately not perceived in terms of responsibility. Its source is not only the lack of knowledge, manipulation and media disinformation, but also the downplaying of professional responsibility by journalists and even doctors (Solecka, 2021). It is facilitated by the "bipolarity" characteristic of the media, i.e. inviting people with extremely different views to journalistic programmes. This is to make the debate more attractive, popularize emotions and opinions and increase viewership. The media discourse has little in common with substantive argumentation, but unfortunately it is characteristic not only for politicians' speeches, but also for people who do not perform these functions.

This phenomenon is particularly evident on social networks. It is accompanied by denialism - i.e. a psychological predisposition to reject information coming from experts, belief in "magic" means, a tendency to conspiratorial thinking, ideological motivations, or simplistic, inadequate or fundamentalist attitudes, rites and religious beliefs.

Incorrect information – „*misinformation*” (Baines & Elliott, 2020; Brennen, Howard, Nielsen & Simon, 2020) – intertwine on websites with "disinformation" (Lazer et al., 2018). Among them, there is also "malin-

formation” (Baines & Elliott, 2020), understood as true information subject to reconfiguration. According to an estimate by the Reuters Institute, 38% of false information on the web was deliberately fabricated (Brennen, Howard, Nielsen & Simon, 2020, as cited in Duplaga, 2020). The consequence of this state of affairs is that the recommendations disseminated by public health institutions are ignored or questioned. Infodemic deepens information noise, creates anxiety, difficulties in understanding the problem and effective decision-making. In short, its effect is information overload exceeding the possibilities of assimilation, logical, consistent with reality processing and accurate use of the acquired data.

3. The disinformation: a historical perspective and modern challenges

History proves that for centuries the media have served purposes that are not always truthful, or even falsifying it. An example is one of the most famous messages in history, called the “Emska message”. It was sent by telegraph on 13 July 1870 from Bad Ems, King Wilhelm I of Prussia to Otto von Bismarck. The Reich Chancellor reworded it to insult the French Emperor Napoleon III Bonaparte and provoke war. On the same day, the cable was published in the German press. Napoleon III’s reaction was to declare war on Prussia on July 19, 1870. Thus began that cruel war. Disinformation, personal ambitions, an excess of self-assurance, a lack of a sense of reality, and an overbearing political agenda ultimately led to the transformation of the Second French Empire into the Third French Republic. These factors also resulted in the removal of Napoleon III from power, the cession of the territories of Alsace and part of Lorraine to the newly formed German Empire, and the payment of a substantial sum of 5 billion francs in gold, which was immense for that period.

The word “disinformation” comes from Russian (дезинформация). They were created in the mid-nineteenth century to define the Russian practice of misleading in order to achieve tactical and strategic benefits (image, political, financial and military). However, attempts to use disinformation can be found not only in the Emska message, but also much earlier.

The history of political thought records several examples of spectacular use of disinformation. Let’s recall two of them:

- In 1787, Grigory Potemkin took Empress Catherine II to Crimea and along the route they were supposed to travel, he ordered the construction of mock villages.
- In 1834, after the November Uprising in Russia, Emperor Nicholas I established the Archaeographic Commission, which destroyed, manipulated, and falsified historical documents from the territories of the Polish-Lithuanian Commonwealth (known as the First Polish Republic) to incorporate them into the historical science and educational system of the Russian Empire.

It is worth noting that disinformation and propaganda became crucial tools of both domestic and international policy in Nazi Germany. The creator of this disinformation-propaganda apparatus, which aimed to counter frustration and identify an enemy to hate and fight by all means, was Joseph Goebbels.

Certainly, the origins of using disinformation can be traced back to China. It was there, in the 6th century BCE, that a military treatise called “The Art of War” was written by Sun Tzu. Its underlying belief was that “the supreme art of war is to subdue the enemy without fighting.” Therefore, it recommended various tactics, including:

- Discrediting everything good in the enemy’s country.
- Involving representatives of the ruling class of the enemy in criminal activities.
- Undermining the reputation of the ruling class of the attacked country and, at the right moment, subjecting them to the contempt of their fellow citizens.
- Disrupting the enemy government’s activities.
- Causing disputes and discord among the citizens of the attacked country.

The mentioned “Art of War” by Sun Tzu consists of 13 chapters, each dedicated to a different aspect of the art of war (Sun Tzu, n.d.).

In March 2015, the EU set up a dedicated cell to analyse disinformation – EUvsDisinfo. By March 2019, the team had identified over 5,000 cases of disinformation. By analyzing data and monitoring media in multiple languages, EUvsDisinfo identifies, compiles, and exposes cases of disinformation originating from pro-Kremlin media. These cases are collected in the EUvsDisinfo database, which is the only open-source repository of its kind with search capabilities. The database is updated on a weekly basis. As of July 3, 2023, there were already 15,520 cases documented.

The digitization and convergence of media, as well as the widespread access to information, have facilitated disinformation and manipulative actions on an unprecedented scale. They no longer affect only individuals but entire social groups and populations.

Intentionally false information misleads, creates a distorted view of the world, provokes erroneous decision-making, fosters the shaping of opinions desired by the sender, and inspires socially dangerous behaviors and actions (legal, economic, political, military, etc.). The new human-created digital space is a testament to human creativity on one hand but a source of concerns, frustrations, risks, pessimism, and control on the other. Undoubtedly, disinformation and manipulation in the cyber realm have serious economic, political, military, legal, and educational consequences. However, pedagogical research in this area is sporadic and fragmented.

It is worth recalling the research of Soroush Vosoughi, Deb Roy and Sinan Aral (2018). They show that between 2006 and 2017, about 3 million people posted 126,000 messages on Twitter more than 4.5 million times. Six independent organizations verified the information as true or false. It turned out that robots transmitted real and fake news at the same rate, while humans did it more often in the case of fake news. Falsehood was spread much faster, deeper, and wider than truth in all categories of information, and the effects were more pronounced with fake political news than fake news about terrorism, natural disasters, science, urban legends, or financial information.

In January 2018, the European Commission established HLEG (High-Level Expert) Group *on fake news and online disinformation*). Its task is to advise on policy initiatives to combat fake news and disinformation spread online. The published report presents an understanding of disinformation as a phenomenon that goes far beyond the term “fake news” and states that the problems of disinformation are deeply linked to the development of digital media. Its dissemination is led by state or non-state political actors, for-profit actors, the media, citizens, individually or in groups. Communication infrastructure is used to produce, disseminate and amplify disinformation on a massive scale, often in new ways, still poorly mapped and understood (2018). HLEG has formulated five basic objectives of action (2018):

1. Increasing the transparency of online messages through privacy-compliant sharing of data about the systems that enable their circulation online;
2. Promoting media and information literacy to counter disinformation and help users navigate the digital media environment;
3. Develop tools to enable users to fight disinformation and foster positive engagement with fast-growing information technologies;
4. Protecting the diversity and sustainability of the European news media ecosystem;
5. Promote research on disinformation in the European Union in order to assess different actors and take the necessary responses.

4. Philosophical perspectives on freedom: the influence of technology and media. Cybercrime and threats in digital space and the need for action and coordination

The second objective – promoting media and information literacy to tackle disinformation and help users navigate the digital media environment – is a clear confirmation of the need to design appropriate educational programmes at education and higher education level. They point to the substantive and social necessity of decisive systemic action.

It is worth reminding that the lack of freedom, total dependence on others or another human being, is a loss of freedom, enslavement. The problem of technological enslavement of man in the era of turbulent development of information networks requires urgent and wise preventive actions, also in the field of education.

People are entangled very strongly, although in a differentiated way, in history and cultural traditions, in social, economic and political reality. They are limited by customs, laws and prohibitions. Breaking out of them, even the right one, many times exceeds the strength of a single man. It would seem that he can never be completely free. Pressed into his own body, social, cultural and religious norms, he struggles to make decisions about life paths and accepted values. It seems to be, as Blaise Pascal said: “nothingness in the face of infinity, a middle between nothing and everything. It is infinitely distant from the understanding of ultimateness; The purpose of things and their origins are forever hidden in an inscrutable mystery; He is as incapable of seeing the nothingness from which he has been rescued as he is of the infinity into which he has been plunged” (Pascal, 1954).

According to this great philosopher, mathematician, physicist and theologian, man is the weakest reed in nature, but a thinking reed. Can it really be free? Or is it just a puppet put on the hand of history, a puppet moved by unrecognized forces by means of threads or wires suspended on the cross of power, social or economic status? Seemingly free, but enslaved...

For centuries, the holy book of Christians has brought hope to many people. In the Bible, we can read that humans have been endowed with free will, possessing the ability to choose life paths, ideals, and be guided by their own values. Freedom is understood as the capacity for independent decision-making and personal responsibility for those choices. As individuals are thrown into the whirlwind of history, social structures, and politics, they reveal the truth about themselves through the choices they make and their actions. Does their freedom lie in this? Does behaving in accordance with an ethical code, as discussed by Immanuel Kant in his categorical imperative, solve the problem? Has not the fidelity to medical and human ethics given Dr. Rieux from “The Plague” by Camus the ability to fight the disease amidst helpless enslavement?

The key to understanding freedom is also worth looking for in the reflection of Gottfried Wilhelm Leibniz (Филиппов, 2007), that “the more we follow reason, the more free we are, and the more enslaved we are, the more we allow ourselves to be ruled by passions”. An excellent literary example of a man enslaved by his own passions and lust for power, which lead him to ruin is “Macbeth” by William Shakespeare.

This is not the time and place here to recall the deeply humanistic thoughts of many other great men of thought and pen - philosophers, poets and writers. It was rather about drawing attention to the role of emotions dominating in the IT network, cities of reason and the threat resulting from the lack of the necessary distance.

In this context, it is also worth recalling the category of commitment, in the way Tadeusz Gadacz is understood: „...Independence in various forms of subordination is also an obligation for us. We are obliged to our own time, homeland, culture, language, family, traditions, religions, and finally to our own lives. Sometimes, for some people, this commitment may be experienced as a limitation or even a shackle. That is why some change the country, the language, try to break with their own tradition. In making such a rupture, however, they must take root elsewhere, or choose the fate of eternal wanderers” (2021).

Categories of commitment, like responsibility, are not only underestimated on the Internet, but even treated as undesirable barriers to social discourse, behind which hides apparent attractiveness, sensation and ... possible profit.

In 1885, François Auguste René Rodin was commissioned to build a gate for the State Museum in Paris. He didn't start working on it until three years later and never finished it. The “Gates of Hell” were cast in bronze only after his death. There are 108 figures in the composition, most of them symbolize variants of human flaws. In the upper part of the sculpture, in its center, is the figure of the Poet, which is the result of admiration for Dante's Divine Comedy. An enlarged copy of this figure from the gate is the monument “Le Penseur”. Accord-

ing to the author, the bronze figure of the “Thinker” asks eternal questions: „Who am I?”, “Where do I come from and where am I going?”, “What is my goal?”

How symbolic these questions are for the present... A man fascinated and overwhelmed by technology, lost in the illusion of IT networks and virtual worlds, with his eyes fixed on the ground, forgets about his roots, morality and the purpose of life. He becomes a puppet, a theatrical puppet placed on a stick of desire, a puppet on the market of vanity and ubiquitous manipulation. It is stuck in the vestibule of the abyss. He loses himself and his freedom.

Decades ago, Neil Postman wrote about the triumph of technology over culture (1995). He claimed that we become slaves of our own tools, that technology redefines concepts and language, and thus also our identity, unnoticed and so effectively. He warned against the naive belief that the essential, if not the only, goal of human work and thought is efficiency. He worried about the fate of a society obsessed with the idea that technical means can relieve man of thought and action. This leads to the loss of one’s freedom and autonomy. In his opinion, the evolution of technical means and their growing social role since about 1911 leads to the disastrous triumph of technology over culture, to spiritual desolation, all-encompassing infantilization and thoughtlessness. The flood of data that we deal with in the digital media space, their excess, uselessness, cause confusion and difficulty in reaching the information that is important for the problems being solved. His work echoes the thoughts of Aldous Huxley (2011). Like the author of *Brave New World*, he warns people against a utopian vision of lasting happiness and comfort in a world full of emotions and dominated by the mass culture of the industrial age.

The fourth industrial revolution seems to deepen the technological enslavement of man. The contemporary world is becoming ahistorical, devoid of cultural context and great symbols. People thirsty for digital gadgets, drown in Internet connections without noticing that “... Uncontrolled growth destroys the most vital sources of our humanity. It creates a culture without moral foundations. It undermines certain mental processes and social relationships that give value to human life. Technology is both our friend and our enemy” (Postman, 1995).

Before the pandemic, the social discourse focused on the spectacular achievements of robotics and artificial intelligence. “Dreams and fears of an endless war between reason and mindless, cruel force were returning. These fears took shape not only in combat robots equipped with secret weapons and in clever drones that could spread biological plague, but also in thousands of questions. Questions and doubts about human fate in a world where the line between the use of information and communication technologies for the good of man or for his control, censorship and elimination, use and destruction, is so delicate and fluid” (Tanaš, Shakhov, 2021).

It must not be forgotten that the initiator, creator and practical executor of the fourth industrial revolution is man. It reflects his dreams and possibilities, the play of global interests, but also reveals the positive and negative features of human nature.

COVID-19 has somewhat overshadowed the problem of threats present in the space of IT networks. However, more and more effective and easier to use tools are still being created. Therefore, personal, social and cultural threats are increasing, including crimes committed by people with less technical knowledge. This is stated in Europol’s IOCTA 2020 European Cybercrime Centre (EC3) report, which presents the results of the diagnosis of the state and directions of development of cybercrime in Europe, as well as key recommendations for law enforcement authorities, policy makers and regulators to enable them to respond effectively and in a coordinated manner to cybercrime (OSAC, 2021). According to the report, “the state of the pandemic has exacerbated all previously known problems” (Maj, 2020). The number of social engineering crimes has increased, such as smishing, i.e. scams using text messages, false promises of quick profits, web skimming - consisting in phishing data from bank cards by entering a special code, attacks on ATMs using the so-called black-boxes, i.e. external devices enabling the extraction of money without authorization and others (Maj, 2020).

The web is full of pedophilic content, physical and psychological violence, materials promoting behaviors harm-

ful to health and life, encouraging self-harm, suicide, use of active substances, restrictive slimming or animal abuse. In short, content - having a negative impact on the mental, emotional and social development of children and adolescents. Along with them, deviant sexual behavior is promoted and images of brutal abuse of children for these purposes are presented. Discriminatory content, messages promoting stereotypes, hostility and hatred, is accompanied by fake messages published in order to deliberately manipulate and mislead recipients.

Already at the time of the creation of the Internet (Web 1.0), there were problems related to the placement of harmful materials in it and violation of the confidentiality of access to data. Subsequent threats (Web 2.0) were associated with unethical, vile and criminal behavior of a person on the Internet and the types of activities undertaken by him. There were threats resulting from disorders of personal relationships. Children and young people turned out to be particularly vulnerable to these dangers caused by people with different social and cultural competences, goals, needs and skills. This was facilitated by: a subjective sense of agency, a desire for adventure, breaking secrets and prohibitions, competition and the desire to succeed in online computer games, as well as the ease of relieving everyday emotional tensions and establishing contacts with peers, lack of physical effort and finally - the feeling of being in their own youth world beyond the control of adults.

Social media quickly became a destructive tool in the hands of criminals: Facebook, Instagram and other and mobile Internet applications, such as TikTok, enabling the placement and sending of very short video materials, Snapchat for communication using short videos and chat, but also advertising and promotion of journalistic and entertainment corporations, and finally YouTube - a website that allows posting, live broadcasting, rating and commenting on movies, different videos... After all, YouTube has been used for patostreaming, endemic Polish broadcast to spread highly harmful content live, such as alcoholic libations, domestic violence and aggressive behavior. All these tools allow minors to function in the global communities they build and others. And most often outside of parental control.

The use of social media for social engineering crimes is accompanied by illegal activities that cause large financial losses, such as uploading ransomware - malware that threatens to publish victims' data or block access if the victim fails to pay the ransom. There is also a growing number of attacks using emotet – a strain of malware used to gain access to the system to download data from infected computers. Scams involving the hijacking of the victim's account, called SIM swapping, are also on the rise.

Threats related to cybercrime not only do not show a decreasing trend during the pandemic, but on the contrary - their number and varieties are growing, and new IT tools are also being created, which are becoming more and more attractive to criminals. The phrase that we live in a "new normal" is therefore only a euphemism to tame the growing horror of the reality around us.

The multifunctionality of the network and the universality of its use mean that its use can be and often is - a boon, but undoubtedly also conducive to crime, often becoming a source of misfortune for individuals and social groups. After all, the network is a playing field for economic, political and even military interests.

The growing number of threats requires coordination of actions for the safety of children, young people, but also adults in cyberspace. Particularly dangerous for their development and functioning seem to be:

- 1) the information and propaganda function of the network, opening up numerous cognitive fields, but also preventing the Internet user from making a proper self-assessment, and through the speed of transmission and the multitude of parallel channels, depriving him of the time needed for reflection and action and making it difficult for him to understand reality;
- 2) confusion of real and media reality and difficulties in identifying and distinguishing them cause the emergence of an incoherent, discontinuous vision of the world, resulting in ethical chaos, worldview and personality disorders;
- 3) The pursuit of fun at all costs, focusing on temporary profit, adopting a consumerist lifestyle, threaten to lose information, disturb the sense of one's own identity and function in the real world;
- 4) Internet content too often gives rise to contradictory educational objectives and content;

- 5) Interpersonal communication in the network carried out using computers and smartphones on social networks and in discussion groups and instant messengers, can (and often does) cause many such negative consequences as replacing natural interpersonal relationships with contact with the heroes of computer games and television series and other people who become the object of special admiration and even worship for the media cause.

5. Updated social threats in cyberspace

On the basis of media pedagogy, many works have been created pointing to the threat associated with the development of cyberspace. The results of the research carried out until 2019 allowed to develop catalogues of personal, social and cultural threats (Tanaś, Galanciak, 2019, p. 49; Tanaś, 2016, pp. 41-55). The first of them – personal – included a number of factors dangerous for physical, intellectual, emotional and moral development, but also for competence. The second – social – pointed to digital illiteracy and social exclusion, risky behaviour, the possibility of a drastic increase in unemployment, uncontrolled trade in personal data and unethical use of data, criminal and civil crime and terrorism. The third – cultural – warned against the spread of erroneous constructions and homogenization of language, uncritical transfer of cultural patterns, absorption of cultural minorities by the hegemon, cultural manipulation, multiplication of the power of cultural conflicts, as well as threats to cultural identity.

They were the basis for putting forward and justifying the thesis about the need to implement universal media education (and not only IT and information) and about the urgent need to develop preventive educational programs, as well as the necessary legislative work in this area. Research and analysis of the available literature have highlighted the need to create a comprehensive strategy, instead of fragmentary, inconsistent and ineffective actions taken so far.

The above-mentioned systemate of personal, social and cultural threats in cyberspace needs to be updated today. The number and level of threats only to the social sphere have almost doubled. Five of them seem particularly dangerous:

1. Value instability and erosion of social norms;
2. Lowering the quality of traditional ties and their partial disappearance;
3. Increase in the number of perpetrators and victims of disinformation and media manipulation;
4. A sharp increase in the power of social divisions and discriminatory actions;
5. Tearing the protective coat over childhood.

The above list of threats is not exhaustive. The registry of old and new threats will soon significantly increase the possible consequences of artificial intelligence applications. The multifunctionality of IT networks and the universality of their use mean that their use can be and often is - a boon, but undoubtedly also conducive to crime, often becoming a source of misfortune for individuals and social groups. After all, the network is a playing field of economic, political, social, cultural interests, but also - military.

6. Distortion of reality and social-cultural changes

Technological development has possessed people like an acute psychosis. The distortion of the perception of reality caused by the network, the inability to distinguish in the cyberspace mixed with the real world between the virtual and the real, this disturbance of consciousness, the madness of the soul becomes the state of mind of too many. Unfortunately, also children and young people. It is worth remembering the words of Sławomir Mrożek, with which “Sexmission” begins - a cult film by Juliusz Machulski with Jerzy Stuhr and Olgierd Łukasiewicz from 1983 - “Tomorrow is today, but tomorrow”.

Not for the first time, social and cultural changes are accelerating in a sudden and unpredictable way before our eyes (Szymański, 2015, 2019; Galas, 2013; Kwiecińska, Łukasik, 2012). They are essential for the practice of the humanities and social sciences. This time, the course of these transformations is extremely rapid and, let us

add, strongly dependent on the development of information technologies. As well as the processes associated with cultural phenomena, consisting in the appearance, spread or disappearance of material and symbolic elements. It is no longer just about the human gap or the modification of social roles and the imperative of lifelong learning. Everyday reality seems to brutally verify our dreams and traditional educational concepts.

The media discourse is ignited by robotics and artificial intelligence. Dreams and fears of an endless war of reason against mindless, cruel force return. These fears take shape not only in combat robots equipped with secret weapons and in clever drones that can spread biological plague, but also in thousands of questions. Questions and doubts about human fate in a world where the line between the use of technology for the good of man or for his control, censorship and elimination, use and destruction, is so delicate and fluid (Tanaś, Shakhov, 2021).

There are two spaces in which man lives. The first – real, physical, the world of life and death, the world of smells, taste, touch, tears and love. And the second virtual one – born of eternal dreams about superhuman possibilities, about the elimination of the barriers of time and distance.

While the first of these spaces – physical – has been legislatively codified for centuries, the second – virtual – appearing under the false umbrella of unlimited freedom, is a place of control of man and social communities. It is a space for police services, but also for bandit activity. Too often, a person dies in it, lost, entangled and enslaved in the gutter of information and flickering digital images. Too often...

With the help of information technology, man created a virtual world. Currently, he transfers institutions known to him there, records the knowledge accumulated over the centuries, places his art and directs dreams. It tries to imitate the real world, but it is different from it. So is education using digital media. It is up to us that this education should not be lame and foolish.

In the field of social change analysis, a foundation has been laid by such influential sociologists as Anthony Giddens, Robert K. Merton, Zygmunt Bauman, and Piotr Sztompka, to name a few. Accompanying their intellectual contributions are the insightful pedagogical reflections of prominent educators like Zbigniew Kwieciński and Mirosław J. Szymański, among others. These seminal works have been further enriched by the perspectives of cultural experts, including Irena Wojnar and Teresa Hejnicka-Bezwińska, who addressed the cultural evolution of this academic discourse. The impact of these scholars' insights on our understanding of social and cultural change is profound, particularly for researchers delving into the exploration of human liberation, subjugation, and the role of education within the digital media landscape.

7. Summary and conclusions

A researcher of the fate of a man building his dream world of knowledge, culture and art in cyberspace has at his disposal a chest full of treasures. It shines with the ideas of open science and open educational resources, mass distance learning (Mooc's), artificial intelligence, new methods and tools of cognition (BigData, Avatar Based Models) and the online research space.

Among the jewels circulate the thoughts of representatives of social sciences, who see in new technologies powerful tools for social and cultural change, but also the threat of using them by man against another man.

It is necessary to wake up from the overwhelming powerlessness and discouragement in order to undertake the effort of humanistic, and not only IT and technical media education on the eternal path of introducing children and young people to the world of human culture and values. The direction of the trail is indicated by pedagogy, which ".../ not only aims at getting to know and diagnosing reality, but also at changing it, to creating a better world ... it is a sensitive science and practice, open to both interdisciplinary and interparadigmatic dialogue and to "the things of this world" (Cybal-Michalska, et al, 2022, p. 8).

The observation of Agnieszka Cybal-Michalska, Agnieszka Gromkowska-Melosik and the other editors of the multi-author monograph “The Identity of Contemporary Pedagogy” assigns pedagogy a wide field of cognitive and practical activity. Noticing the need for this specificity consisting in “practical sensitivity”, as well as the use of the achievements of several sciences and exceeding the set of beliefs, attitudes and convictions shared by scholars practicing particular disciplines – is consistent with the way of thinking about the field shared by the author of this work, to which he devoted several decades of research and teaching work.

References

- European Commission, Directorate-General for Communication Networks, Content and Technology, (2018). *A multi-dimensional approach to disinformation. Report of the independent High level Group on fake news and online disinformation*, <https://op.europa.eu/en/publication-detail/-/publication/6ef4df8b-4cea-11e8-be1d-01aa75ed71a1/language-en> (accessed 07.04.2023).
- Bauman, Z., Leoncini, T. (2018). *Płynne pokolenie [Liquid generation]*. Wydawnictwo Czarna Owca, Warszawa.
- Bauman, Z. (2017). *Szkice z teorii kultury [Sketches from the theory of culture]*. Wydawnictwo Naukowe Scholar, Warszawa.
- Baines, D., Elliott, R.J.R. (2020). *Defining misinformation, disinformation and malinformation: An urgent need for clarity during the COVID-19 infodemic*. Discussion Papers 2006, Department of Economics, University of Birmingham, Birmingham, 1-23.
- Brennen, J.S., Simon, F., Howard, P.N., Nielsen, R.K. (2020). *Types, sources, and claims of COVID-19 misinformation*. <https://reuter-institute.politics.ox.ac.uk/types-sources-and-claims-covid-19-misinformation>, (accessed 07.04.2023)
- Ziccardi Capaldo, G. (2020). *The Global Community Yearbook of International Law and Jurisprudence 2019*. Oxford University Press, Oxford, 341.
- Castells, M. (2008). *Spoleczeństwo sieci [Network society]*. Wydawnictwo Naukowe PWN, Warszawa.
- Cybal-Michalska, A., Gromkowska-Melosik, A., et al. (2015). *Młodzież w dobie przemian społeczno-kulturowych [Youth in the era of social and cultural changes]*. Wydawnictwo Naukowe UAM, Poznań.
- Cybal-Michalska, A., Gromkowska-Melosik, A., Kuszak, K., Piorunek, M., Segiet, W. (2022). *Tożsamość pedagogiki współczesnej [The identity of contemporary pedagogy]*. Wydawnictwo Naukowe UAM, Poznań.
- Duplaga, M. (2020). *Infodemia COVID-19*. <https://izp.wnz.cm.uj.edu.pl/pl/blog/infodemia-covid-19/> (accessed 07.04.2023).
- Gadacz, T. (2018). *Filozofia wolności „Dyskusja o wolności” [Philosophy of Freedom “Discussion of Freedom”]*. Goethe Institut Polska. <https://www.goethe.de/ins/pl/pl/kul/ges/21184099.html> (accessed: 07.04.2023).
- Galas, B. (2013). *Anomia, lęk, pragmatyzm: młoda generacja wobec zmian społecznych [Anomy, fear, pragmatism: the young generation in the face of social change]*. Wydawnictwo UKSW, Warszawa.
- Hejnicka-Bezwińska, T. (2015). *Praktyka edukacyjna w warunkach zmiany kulturowej (w poszukiwaniu logiki zmian) [Educational practice in the conditions of cultural change (in search of the logic of change)]*. Wydawnictwo Naukowe PWN, Warszawa.
- Huxley, A. (2011). *Nowy wspaniały świat [A new, wonderful world]*. Wydawnictwo Muza S.A., Warszawa.
- Kwiecińska, R., Łukasik, J.M. (2012). *Zmiana społeczna. Edukacja - polityka oświatowa – kultura [Social change. Education - educational policy - culture]*. Wydawnictwo Naukowe UP, Kraków.
- Lazer, D.M.J., Baum, M.A., Benkler, Y., Berinsky, A.J., et al. (2018). *The science of fake news*. *Science*, 359, (6380): 1094-1097.
- Łukasik, J.M., Nowosad, I., Szymański, M.J. (2021). *Szkoła i nauczyciel w obliczu zmian społecznych i edukacyjnych [School and teacher in the face of social and educational changes]*. Oficyna Wydawnicza Impuls, Kraków.
- Maj, M. (2020). *Cyberprzestępczość 2020: Lepsze narzędzia, smishing, sim swaping i co jeszcze? [Cybercrime 2020: Better tools, smishing, sim swapping and what else?]*, *Niebezpiecznik.pl*, <https://b.imm.com.pl/EZRLPT/z/i>, (accessed 07.04.2023).
- Marzec-Holka, K., Radziejewicz-Winnicki, A., Wilkomirska, A. (2018). *Nauki społeczne wobec zmiany – alternatywa scalania (inspiracje dla współczesnej pedagogiki) [Social sciences and change - an alternative to merging (inspirations for modern pedagogy)]*. Wydawnictwo Uniwersytetu Warszawskiego, Warszawa.
- Melosik, Z. (2021). *Isolacjonizm mniejszości, hybrydyzacja tożsamości i dylematy edukacji międzykulturowej [Isolationism of mino-*

- rities, hybridization of identity and dilemmas of intercultural education]. *Edukacja Międzykulturowa*, 2(15): 37-55.
- Merton, R. (2002). *Teoria socjologiczna i struktura społeczna [Sociological theory and social structure]*. Wydawnictwo Naukowe PWN, Warszawa.
- Miłosz, Cz. (1953). *Który skrzywdziłeś.... [Who have you hurt....]*, In: *Światło dzienne [Daylight]*. Instytut Literacki, Paris.
- OSAC. (2020). *Internet Organised Crime Threat Assessment (IOCTA)*, Bureau of Diplomatic Security U.S. Department of State, Washington, D.C, <https://www.osac.gov/Content/Report/154b85ed-d47f-41be-bf7b-19d5f42ce551>, (accessed 07.04.2023).
- Pascal, B. (1954). *Myśli, Dysproporcja [bezsilność] człowieka [Thoughts, Disproportion [powerlessness] of man]*, vol 84, transl. T. Boy-Żeleński, <https://sady.up.krakow.pl/fil.pascal.mysli.htm> (accessed 07.04.2023).
- Postman, N. (1995). *Technopol. Triumf techniki nad kulturą [Technopoly. The triumph of technology over culture]*, transl. A. Tanalska-Dulęba, Państwowy Instytut Wydawniczy, Warszawa.
- Merriam-Webster. (2020). *Rise of 'Infodemic'*, <https://www.merriam-webster.com/words-at-play/words-were-watching-infodemic-meaning> (accessed 07.04.2023).
- Rothkopf, D.J. (2003). *SARS also spurs an 'information epidemic*, *Newsday*.
- Rotkiewicz, H. (1995). *O zniewoleniu technologicznym człowieka i nadziei wiązanej z wychowaniem : poglądy Herberta Marcusego i Ericha Fromma [On the technological enslavement of man and the hope associated with upbringing: the views of Herbert Marcuse and Erich Fromm]*. *Seminare. Poszukiwania naukowe*, 11: 147-160.
- Solecka, M. (2021). *Między wolnością słowa a infodemią [Between freedom of speech and infodemic]*. *Medycyna Praktyczna. Pediaatria*, 4(136): 16-17.
- Szczerba, J. (2020). „*Dżuma*” Alberta Camusa bestsellerem. Przez koronawirusa? [“*The Plague*” by Albert Camus is a bestseller. Because of the coronavirus?], *Wyborcza.pl. Kultura*, <https://wyborcza.pl/7,75410,25756711,dzuma-alberta-camusa-bestsellerem-przez-koronawirusa.html?disableRedirects=true> (accessed 07.04.2023).
- Szempruch, J. (2012), *Nauczyciel w warunkach zmiany społecznej i edukacyjnej [A teacher in conditions of social and educational change]*. Oficyna Wydawnicza Impuls, Kraków.
- Szymański, M.J. (2014), *Edukacyjne problemy współczesności [Educational problems of the present day]*. Oficyna Wydawnicza Impuls, Kraków.
- Szymański, M.J. (2019), *Krótkie wykłady z socjologii edukacji [Short lectures on the sociology of education]*, Wolters Kluwer Polska, Warszawa.
- Szymański, M.J. (2015), *Studia i szkice z socjologii edukacji [Studies and Sketches in the Sociology of Education]*. Wydawnictwo Akademii Pedagogiki Specjalnej, Warszawa.
- Sztompka, P. (2016), *Social spaces and social relations*. Bogunia-Borowska, M., (ed.), Series: *Warsaw Studies in Philosophy and Social Sciences*. Peter Lang Verlag, Frankfurt-New York.
- Tanaś, M., Galanciak, S. (2019), *Dziecko w sieci zagrożeń. Ryzykowne zachowania internetowe dzieci i młodzieży jako wyzwanie dla edukacji [A child in the web of threats. Risky Internet behaviors of children and youth as a challenge for education]*, In: *Edukacja – Relacja – Zabawa. Wieloaspektowość Internetu w kontekście bezpieczeństwa dzieci i młodzieży [Education - Relationship - Fun. Multifaceted nature of the Internet in the context of the safety of children and youth]*, A. Wrońska, R. Lew-Starowicz, A. Rywczyńska, (ed.), Wydawnictwo Fundacja Rozwoju Systemu Edukacji, Warszawa.
- Tanaś, M. (2016), *Primum non nocere a internetowa przestrzeń wolności i aktywności nastolatków [Primum non nocere and the Internet space of teenagers' freedom and activity]*, In: *Nastolatki wobec internetu [Teenagers to the Internet]*, M. Tanaś, (ed.), Naukowa i Akademicka Sieć Komputerowa, Warszawa.
- Tanaś, M., Szachow V. (2021), *Щодо потреби комплементарної освіти після пандемії [Regarding the need for complementary education after the pandemic]*, Наукові записки Вінницького державного педагогічного університету імені Михайла Коцюбинського. Серія: Педагогіка і психологія [Scientific notes of Vinnytsia State Pedagogical University named after Mykhailo Kotsyubynskyi. Series: Pedagogy and psychology], Ministry of Education and Science of Ukraine, Winnica.
- United Nations, Department of Global Communications. (2020). *UN tackles 'infodemic' of misinformation*, <https://www.un.org/en/un-coronavirus-communications-team/un-tackling-%E2%80%98infodemic%E2%80%99-misinformation-and-cybercrime-covid-19> (accessed 07.04.2023).

Wojnar, I. (2021), *Humanistyczne ambiwalencje globalizacji. Zbiór studiów [Humanistic ambivalences of globalization. Collection of studies]*. Polska Akademia Nauk, Warszawa.

Merriam-Webster. (2020), *Words We're Watching: 'Infodemic'*, <https://www.merriam-webster.com/words-at-play/words-were-watching-infodemic-meaning> (accessed 07.04.2023).

World Health Organisation. (2020), *Novel Coronavirus (2019-nCoV) Situation Report – 13*, <https://apps.who.int/iris/bitstream/handle/10665/330778/nCoVsitrep02Feb2020-eng.pdf?sequence=1&isAllowed=y> (accessed 07.04.2023).

Maciej TANAS is Proxy for Science of the University of Justice, PL.
ORCID ID: 0000-0001-5700-7148