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THE RIGHT TO ATTENTION IN THE INFORMATION ECONOMY: A TOOL TO PROTECT INDIVIDUALS AGAINST FUNCTIONAL ILLITERACY

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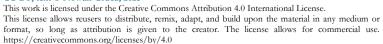
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Abstract In a technological reality increasingly dominated by screen devices, there has been a decline in peoples' ability to use written and spoken language in a way that enables us to function effectively in society (functional illiteracy). Every seventh 15-year-old does not have sufficient reading skills and can only decode the text. From the perspective of education, one of the crucial causes of the threat of functional illiteracy are the significant distractions resulting from the improper use of screen devices. Thus, the modern economy, based on the exploitation of attention, appears to excessively strain individuals' ability to concentrate, leading to a decline in cognitive autonomy and the growing problem of functional illiteracy. The aim of this article is to analyse the right to attention as a tool to protect individuals in the context of the impact of digital technologies on education and cognitive development. The article examines the relationship between the right to attention, mental integrity, educational challenges, and the necessity of regulating mechanisms within the information economy. The article highlights the particular harm that attention economy poses to vulnerable groups, especially children.

Keywords

functional illiteracy, right to attention, technological revolution, technologically inclusive education, information economy







1 Introduction

We are witnessing the Fourth Industrial Revolution (as defined by Rifkin) (Schwab, 2018, p. 5; Kraljić, 2024, p. 141), and are faced with entirely new challenges. Previously, humans developed tools and subdued the earth. Now, we are increasingly mastering control over our own bodies and continually expanding our physical, intellectual, and cognitive capabilities. People are becoming progressively connected to technology. Our thinking systems are increasingly dependent on mechanical, nonbiological circuits. We integrate with smartphones and other devices that support our life processes in many areas. Living in the modern world without adopting some form of technology is practically impossible, and certainly significantly limited and impoverished. Virtual reality appears as a parallel dimension in which human activities are organised. Some suggest that the digital world is the natural living environment for a new species of human, sometimes referred to as homo electronicus or digital native (Selwyn, 2009, p. 367).

Modern digital technologies play a crucial role in education and social communication. However, their uncontrolled use leads to the disintegration of cognitive abilities, exacerbating the problem of functional illiteracy. Increasing research indicates that students who spend excessive amounts of time on screen devices struggle with reading comprehension, critical text analysis, and maintaining sustained attention.

Technical advancements, beneficial as they are, nonetheless are fraying ethical, legal, and educational frameworks. Addressing these emerging issues requires thorough investigation and the development of pertinent questions. Consequently, this article seeks to examine how the technological revolution influences the need to safeguard the right to attention, particularly with respect to the educational challenges posed by a world dominated by screens. It aims to pinpoint significant problems and challenges while outlining essential areas for reform. The research problem is encapsulated in the following question: Do we need to protect the right to attention in a reality dominated by screen devices? The study analysed relevant literature and research reports from sociology, pedagogy, psychology, and psychiatry, combined with the results of the author's own research. Achieving this goal required an introduction to the issue, presentation of analysis, and reflections on digital illiteracy and the problem of attention deficits (deep attention vs. hyperattention). This

allowed me to demonstrate the interrelationships between the technological revolution and the need to protect the right to attention.

This work is theoretical in nature and interventionist in nature, aiming to pose important questions regarding the future of education in an evolving technological reality. I assume that clearly articulating the issues is a crucial step toward finding solutions to problems such as the development of functional illiteracy, the right to attention in the digital world, and the increasing social polarisation due to technological advancements.

2 Functional Illiteracy

The ability to read and write is considered a crucial skill for humanity. However, more than a billion people in developing countries still lack these abilities. In developed countries, this problem is not prevalent, but many individuals, although they can read and write, do not understand the messages they receive and do not know how to apply them practically. Additionally, a significant portion of these people struggle to construct written texts. People are spending more time online, communicating through social networks and messaging apps. As a result, they write increasingly shorter messages, rely on smart dictionaries, and often neglect diacritical marks and punctuation. They are integrating more rapidly with artificial intelligence and are eager to utilise the power of machine learning-based language models. A notable example is the currently popular chat GPT (Generative Pre-trained Transformer), which enables the creation of texts, answers questions, generates creative content, and supports many other language tasks (see Franczyk & Rajchel, 2024, pp. 89-101). UNESCO, which recognises the right to literacy as a fundamental right, emphasises that the definition of literacy is continuously evolving under the influence of technology. Consequently, there is an increasing emphasis on the need for a new understanding of what literacy is and what skills it encompasses (Ciepielak & Krzykawski, 2023).

Illiteracy is defined as the condition where adults, as per UNESCO's standard, aged over 15, do not possess the skills to read, write, or carry out fundamental mathematical tasks. An adult who is illiterate: 1) is unable to read or write; 2) is metaphorically ignorant in a specific area; essentially, an ignoramus. A semiliterate person, therefore, refers to someone lacking literacy skills (Furmanek, 2017, p. 22).

Functional illiteracy is a phenomenon that involves the inability to use written and spoken language in a way that enables one to function effectively in society. Although these people may know the letters and be able to read them, they have difficulty understanding, analysing, and using the information contained in the texts. An illiterate functionalist can put letters together in words and words in sentences. They can decode a written message at a basic level but struggle to interpret and comprehend the message. Functional illiteracy is measured through tests that assess the ability to understand and use texts in the context of everyday tasks. An example is the Programme for the International Assessment of Adult Competencies (PIAAC), which examines adults' competences in reading, numeracy, and problem-solving.

Functional illiteracy is a growing problem that affects not only developing countries but also wealthy societies, such as the Netherlands. This crisis has a significant negative impact on participation in the labour market, health, and political stability. The inability to understand complex texts and critically evaluate information leads to difficulties in professional development and access to well-paying jobs. Furthermore, functional illiteracy is correlated with poorer health outcomes, as individuals with limited reading skills struggle to comprehend medical instructions and health-related information. Politically, it can contribute to social polarisation, as people who cannot analyse and verify information are more susceptible to misinformation and populist narratives (Marry & Melik, 2024, p. 6-7).

The causes of functional illiteracy are numerous and complex. For the purpose of this article, it is essential to highlight the lack of adequate access to primary education, poor quality of teaching, limited access to educational resources, and the absence of a stimulating environment. Individual factors also play a role, such as health problems, including dyslexia, and emotional and behavioural difficulties.

Research on the origins of functional illiteracy identifies 'five forms of poverty' linked to this issue. These include economic poverty (experiencing poverty during upbringing and adulthood), social poverty (lack of support and understanding in one's living environment), communication poverty (absence of family discussions), educational poverty (teachers' low competence, inability to support students, and a lack of programmes tailored to the needs of students with low academic achievements), and political poverty (ineffective reforms in school and teacher

professional development systems, and the absence of effective political initiatives to support children from socially disadvantaged backgrounds) (Przybylska, 2014, p. 109; Przybylska & Nuissl, 2015, p. 101-107).

The 2018 PISA study (2024) already showed that one in seven 15-year-olds lacks sufficient reading skills to understand a text, even if they are able to decode it. Notably, an increasing number of researchers, such as Justyna Januszewska, point out that functional illiterates are unable to name the emotions they experience. They have a limited vocabulary and poor understanding of abstract concepts. Since they cannot name what they feel, they cannot distinguish between frustration and sadness, making it harder for them to cope. Therefore, we are dealing with a significant deficiency which, although not directly caused by a lack of reading comprehension skills, is related to it (Januszewska, 2021).

The causes of this situation are complex, but the culprits can be identified as: the shift in communication methods driven by social media and messaging apps, the socialled infoxication (information overload) that forces us to process content superficially, and the culture of nanoseconds that relies on headlines, leads, and short texts. Additionally, the modern education system contributes to this by favouring knowledge tests over longer written responses. To function effectively in modern society, which is based on knowledge, it is necessary not only to have reading and writing skills but also the ability to apply them practically in everyday life. Therefore, a high level of literacy is needed, including the ability to think, interpret, reason, criticise, and remember. For contemporary and future education, the aspect of functional literacy clearly emerges, with a particular emphasis on developing students' ability to maintain attention.

3 The Battle for Attention

In the digital, information-cluttered market, attention has become a resource that is easy to exploit and fiercely contested. Digital information sources and social media are designed to engage our attention to the maximum extent. Meanwhile, short, intensely stimulating foods that affect the dopaminergic system result in deeper attention deficits. This problem has become a widespread health problem, significantly contributing to the rise of depression and behavioural disorders, which predominantly affect the younger generation today (Wilmer & Chein, 2016).

Advocates for the right to attention, Anna Cieplak and Michał Krzykawski cite alarming data presented by Michel Desmurget regarding the screen time of children and adolescents living in Western societies. Children at the aged of two spend three hours a day on electronic devices, children aged eight to twelve spend about five hours, and teenagers aged thirteen to eighteen spend nearly seven hours a day. Annually, this amounts to 1000 hours for preschoolers (more than one school year), 1700 hours for middle school children (two school years), and 2400 hours for high school youth (two and a half school years) (Ciepielak & Krzykawski, 2023).

The brain activity of people using the Internet explains why concentration becomes difficult in the digital world. Having to select links and simultaneously process a huge amount of stimuli requires constant mental coordination, which distracts the brain from analysing information in depth. As a result, we lose the ability to understand and remember. When browsing information, we fall into the trap of mindlessly clicking, instead of reading with understanding. Often we do not even remember what we read before. Research shows that readers of traditional texts remember and learn more than those who use linked texts. The reader's attention is directed to the 'hypertext mechanism' and its functions, not to acquiring knowledge. The medium of communication 'blurs' the meaning of words. Disorientation and cognitive overload when reading hypertext disrupt the reading and comprehension processes. Processing excess visual stimuli reduces the level of understanding compared to linear text. The Internet combines hypertext technology with multimedia, and divided attention further weakens human cognitive abilities (Szumera, 2016, pp. 519-521).

Katherine Hayles posits that, in an era of omnipresent, technologically generated information, we are witnessing a significant transformation in how our attention is allocated. Traditionally, what is known as deep attention was understood as the capacity to focus on a single task or object for an extended period, such as reading a novel or critically analysing an extensive text. This mode is characterised by persistence, systematic involvement, and the ability to ignore extraneous stimuli, thereby facilitating deep understanding and rigorous analysis. Such an approach is indispensable in educational settings, scholarly research, and solving complex problems. As daily life becomes increasingly dominated by digital technologies – ranging from social media and smartphones to continuous notifications and a multiplicity of information stream – an alternative model of concentration emerges,

referred to as hyperattention. Hyperattention is defined as rapid switching between different tasks or streams of information. In this mode, numerous stimuli are processed almost instantaneously, yet the tolerance for boredom is considerably lower. When an activity fails to provide immediate stimulation or reward, an individual operating under hyperattention quickly loses interest and transitions to another source of stimulation (Hayles, 2007, pp. 189-191).

In practice, this implies that people who exhibit hyperattention tend to forego indepth analysis of singular content in favour of superficial browsing, scanning, and fragmentary synthesis of information. This mode of 'reading' is an adaptation to an environment where information is not only abundant but also dynamically changing. On the one hand, hyperattention enables the reader to rapidly extract the most pertinent data; on the other hand, it can lead to fragmented content processing, potentially resulting in a diluted understanding of the underlying message. The implications of this cognitive shift are multifaceted. In the educational arena, traditional pedagogical methods rely heavily on deep attention, such as prolonged reading and textual analysis. If students, conditioned by constant digital stimulation and rapid task switching, fail to cultivate the capacity for sustained focus, their ability to engage in critical thinking and thorough analysis may be compromised (Hayles, 1999, p. 59). Nevertheless, Hayles does not advocate for the complete abandonment of hyperattention; rather, she contends that both modes have their distinct roles in contemporary society. The key challenge is to achieve a balance: harnessing the benefits of rapid switching in scenarios that demand immediate responsiveness while simultaneously fostering the capacity for sustained concentration necessary for deep information processing.

From a broader sociocultural perspective, this trend may lead to a transformation in cognitive paradigms. Younger generations, constantly exposed to incessant streams of information, are developing cognitive habits that differ markedly from those typical of the analogue era. This evolution forces educational and cultural institutions to adapt their communicative strategies and create environments that support both hyperattention and deep attention. For example, educators might integrate courses that combine immediate interactivity and stimulation with activities that require prolonged, focused engagement, thereby better-preparing students for a world inundated with information (Leer & Williams, 2020).

In summary, the shift from deep attention to hyperattention, as delineated by Katherine Hayles, is an adaptive response to an information-saturated environment. Although hyperattention facilitates a rapid response and efficient extraction of critical information, it simultaneously carries the risk of superficial content processing. Therefore, the contemporary challenge is to integrate these dual modes of attention in a manner that takes advantage of their respective strengths while mitigating potential deficiencies.

The results presented in the recently published OECD report Students (OECD, 2024), digital devices, and success, which concerns the impact of smartphones and other screen devices on learning outcomes among children and adolescents are noteworthy. The concerning trend of difficulties in concentration is noticeable in educational systems worldwide. Research shows that:

- 59 percent of students in OECD countries report being distracted by screens during maths lessons.
- Students exposed to excessive use of technology achieve lower scores on reading comprehension and literacy tests.

Based on the conclusions of the cited report, the first observation that comes to mind is that excessive or inappropriate use of screens (phones, tablets, laptops) at school causes significant distraction of the entire group (class) of students and negatively affects their mental well-being. Particular attention is paid to the problem of using screen devices for entertainment outside of educational purposes and without supervision. Therefore, we can conclude that the issue of using screen devices is becoming a significant problem and requires regulation. However, what its scope should be is a matter of debate and requires thorough consideration. It does not seem that a simple ban on the use of screens will be an effective solution here. One argument against an absolute ban on the use of technology is the risk of digital exclusion of children from families with low cultural capital, who therefore have limited access to technology and school or other educational institutions may be the only place where they can catch up on these arrears. Some students, despite using technology, do not have the competence to search and verify data, which in a world based on information and data results in deepening educational inequalities. For this reason, it is essential to implementing educational programmes that support deep reading and concentration.

4 Towards Technologically Inclusive Education

In a world dominated by screens and integrated with technology to such an extent that we are now testing the possibilities of transferring the mind to a computer, the Cartesian vision of separating body and mind is becoming increasingly real. In this technological reality, the cyber student, as the youngest and most defenceless source of social subversion, represents all ethical and social dilemmas and therefore has unique educational needs. Teachers and educators, as well as education and education systems, remain unprepared for them for various reasons. We are witnessing a technological revolution for which we, as a society, simply have not had time to prepare. Today, we face the challenges brought by technologies completely by surprise, just as our ethical, social, and legal systems remain unready. Today, probably like never before, system limitations and the resulting negligence and backwardness will manifest themselves in unwanted ways. As noted in the introduction, the first step to change is to identify and name it.

As mentioned earlier, every seventh 15-year-old does not have sufficient reading skills and can only decode the text. We as a society are therefore at risk of functional illiteracy, and accordingly schools and other educational units should intensify efforts to develop socially important skills, such as searching for information and its interpretation, analysing data, distinguishing facts from opinions, and critical thinking. Counteracting the loss of ability to interpret and understand reading text cannot be achieved without developing programmes to counteract the loss of attention. As Anna Cieplak and Michał Krzykawski (Ciepielak & Krzykawski, 2023) point out, the distinction between close reading and hyperreading is crucial to understanding the current educational situation. The ability to read carefully, as a cognitive strategy associated with deep attention, is indispensable not only when interpreting literary or cultural texts that we usually associate with humanities subjects, but also when analysing mathematical theorems. We may conclude that a person who cannot read carefully will not be a good mathematician, and a humanist without the ability to think mathematically will lose an important tool to interpret the world, often without realising it.

Therefore, in the queue for attention, schools and educational institutions should take a leading place, trying to overtake technological giants who, in pursuit of profit, completely outside our awareness, rob us, especially the young generation, of our

cognitive abilities. Attractive, interactive content that engages attention not only weakens the ability to read deeply but also has a profound impact on our mental well-being. It is enough to point out the fear or anxiety associated with withdrawal from the phone (FOMO - fear of missing out), which resembles withdrawal symptoms in addictions. Using popular applications such as TikTok can cause impatience and difficulty in delaying gratification. These apps condition users to getting reinforcement easily and quickly, making them (especially but not only, young people) easily lose interest in anything that requires time and effort. People with depression or other mental difficulties can receive content directly related to their condition. The application may also lead to a specific craving for dopamine and develop addiction. In the information civilisation, there has been a loss of trust in human judgment and subjective assessments. We trust computer analyses more, which leads to the decline of individual responsibility, as it is difficult to be accountable for "computer decisions". Computer technology fosters the belief that technological innovations are synonymous with human progress (Szumera, 2016, p. 519).

Therefore, a young person needs to support the use of technology, which cannot be limited to classes that are not necessarily attractive to digital hygiene. It is important to raise awareness of the importance of interpersonal interactions and the impact of consumed content on cognitive abilities and the psyche. It is, therefore, important, as Cieplak & Krzykawski underline, to create cooperation programmes between cultural institutions, libraries, research institutions, and public health entities (Ciepielak & Krzykawski, 2023).

Published research reports (UNESCO, PISA, OECD) suggest an obvious conclusion: the problem of screen devices at school should be regulated. Schools should be completely free from them, or their presence in lessons or activities should be extremely limited. It does not seem that a simple ban on screen use will be an effective solution here. The digital environment offers educational opportunities, but they are not without challenges and risks. In the context of threats, responsible use of technology requires awareness of the content consumed and its impact on the psyche, and the ability to distinguish real content from the so-called fake news, awareness of the threats related to cyberbullying and issues related to loss of privacy. The ban on the use of technology will not necessarily make young people use it more safely and securely.

There are interesting studies that highlight the beneficial impact of technology on memory and learning, provided that it is used appropriately. The aspect of creativity stimulated and generated by technology is particularly under-recognised in the context of the educational and emotional development of the younger generation. We have become accustomed to thinking of young people as users of screen technology who passively and often mindlessly consume content. However, they can also use technology creatively and innovatively. This presents an important area for development within technologically inclusive education (Ching-Ting & Ming-Chaun & Chin-Chung, 2014, p. 89).

5 Do We Need a Right to Attention?

Modern digital technologies play a crucial role in education (Kraljić, 2024) and social communication. However, their uncontrolled use leads to the disintegration of cognitive abilities, exacerbating the problem of functional illiteracy. As demonstrated in the earlier section of this article, an increasing number of studies indicate that students who spend excessive amounts of time on screen devices struggle with reading comprehension, critical text analysis, and maintaining sustained attention.

In an educational context, a significant issue is the superficial processing of information and the difficulty of distinguishing facts from opinions. The studies presented above indicate that hyperattention, characterised by rapid switching between stimuli, limits the ability to focus on a single text for an extended period. A reader who is unable to engage in deep reading will struggle to interpret both mathematical proofs and complex humanities texts. The lack of clarity and brevity of digital content contributes to the erosion of language skills, reduced vocabulary, and difficulties in logical analysis.

Similarly to physical harm, manipulative attention engagement - for instance, through content-personalising algorithms – can lead to the degradation of cognitive abilities, increasing an individual's susceptibility to misinformation, and hindering the development of reading and analytical skills (Januszewska, 2021).

Attention has become an economic resource subject to manipulation and exploitation, particularly in the technology and advertising sectors. In the academic literature, attention is often compared to currency, emphasising its measurable

economic value and vulnerability to exploitation. Consequently, there is a growing need for legal protection of attention against unwanted use, manipulation, and forced transmission of information (Tran, 2023, pp. 1035-1037).

The attention economy, based on advertising models and algorithmic content selection systems, turns the ability to concentrate into an object of manipulation and exploitation. For example, an excessive number of unwanted messages leads to wasted time and reduced efficiency. Telemarketing and online advertisements often exploit human attention in unethical ways, causing financial and psychological harm. In some cases, individuals are forced into the compulsory sharing of various data and information. All of this contributes to the modern individual's loss of mental autonomy. In response to this challenge, the question arises: Should the right to attention be recognised as a distinct legal category?

The literature emphasises that attention is a crucial cognitive resource and its excessive exploitation affects an individual's ability to make decisions and pursue personal goals (Ocklenburg & Güntürkün, 2024, pp. 211–239).

According to Kantian political philosophy, the state has an obligation to protect citizens from harms that restrict their capacity for self-realisation. The right to attention can be understood both as a right to liberty and a right to claim. This means that individuals should have the right to direct their attention freely while also being protected from the imposition of distracting stimuli without their consent (Kärki & Kurki, 2023, pp. 6-8). In the context of education, this means the necessity of regulating digital technologies to ensure the protection of attention.

Tran (2023, pp. 1041-1043) proposes that the right to attention should include:

- 1. the right to refuse attention, ensuring protection against excessive advertisements and digital content;
- 2. the right to protection from spam and algorithms that manipulate attention;
- 3. the right to informed consent, granting users full control over the content they consume.

Bartomiej Chomański argues that the right to attention can be seen as an extension of the right to mental integrity, which originates from the right to bodily integrity. His justification is based on the assumption that since attention is a key element of cognitive processes, its violation may lead to the weakening of an individual's autonomy. Similarly to bodily violations, forced or manipulative engagement in attention can be a form of interference with an individual's cognitive sovereignty. Therefore, in the attention economy, excessive exposure to hyperstimuli, addictive mechanisms, and forced transmission of information can be perceived as a threat to psychological autonomy (Chomański, 2023, pp. 4-5).

The modern attention economy, driven by digital advertising, social networks, and personalised algorithms, often exploits users' attention without considering their rights. As a result, users are exposed to constant competition for their attention, which can weaken their ability to manage time and cognitive resources independently. This raises the question of whether attention can be regarded as a form of property. In a broad sense, attention shares characteristics with other resources subject to legal regulation, such as information, labour, or intellectual goods.

It is widely accepted that international law protects human autonomy, the freedom to shape one's own life, expressed through the right to self-determination and personal decision making, physical and mental integrity, personality development, and the right to live according to one's own will. However, without legally defined criteria for permissible interference in the brain and mind, the right to autonomy and self-determination remains fundamentally at risk as technologies capable of influencing human mental processes become a reality. It is difficult to deny that the ability to recognise mental states, including hidden intentions, dreams, or thoughts, through technological methods has the potential to deeply disrupt personal development and influence an individual's behaviour and decision-making, particularly when these processes occur below the threshold of consciousness. Consequently, in light of the technological revolution, the protection of mental integrity must be ensured at a level at least equivalent to the current protection of physical integrity.

Social and technological evolution has led to a growing need for the protection of attention, which now permeates many aspects of human life and requires specific legal safeguards. Although the right to attention may currently be regarded as a derivative right, dependent on the violation of other rights, particularly the right to privacy, it is worth considering whether, in the future, it could be recognised as an autonomous right.

The right to attention, understood as the right to maintain concentration ability, cognitive integrity, and protection against informational manipulation, can currently be derived from existing human rights guarantees, particularly Article 8 of the ECHR, which broadly protects various aspects of private life. As technologies capable of reading mental processes at the neuronal level continue to develop, this protection must be expanded to include safeguards regarding access to neurological data and unauthorised interference with the mind. Concepts such as neuroprivacy, psychological privacy, and emerging neurorights represent attempts to incorporate the challenges of protecting cognitive freedom and personal identity into legal frameworks. In practice, this means that the state should not only refrain from interfering in the mental sphere, but should also actively support programmes that enable individuals to protect their mental integrity.

The modern economy, based on the exploitation of attention, appears to excessively strain individuals' ability to concentrate, leading to a decline in cognitive autonomy and the growing issue of functional illiteracy. In this context, protecting the right to attention could lead to the following:

- 1. new regulations regarding internet law and protecting the weaker party in legal relationships;
- 2. developing mechanisms that grant users control over content selection algorithms;
- 3. protecting vulnerable populations, including children and adolescents, from excessive exploitation of attention.

The right to attention is a crucial element in protecting individuals from excessive exploitation of cognitive abilities and the rise of functional illiteracy. In the face of growing digital challenges, the following measures are essential:

- 1. legal regulations protecting individual attention in education and the information economy;
- 2. educational programmes supporting the development of deep reading and text analysis skills;
- 3. social campaigns promoting conscious use of digital technologies.

Legal regulations should be complemented by cultural changes and educational initiatives that help people better manage their attention in the digital environment. Collective social efforts can counteract the negative effects of the attention economy and ensure that technology serves to enhance rather than limit individual freedom.

6 Conclusion

Modern reality, dominated by screen devices, presents society with challenges related both to access to technology and its impact on cognitive functions. On the one hand, technology fosters creativity, innovation, and rapid information exchange. On the other hand, excessive and uncontrolled use of screens contributes to deepening attention deficits. Research indicates that young people are changing from traditional deep attention to hyperattention, characterised by rapid switching between stimuli and superficial information processing. This shift affects not only the quality of content processing, but also the development of skills essential for effective functioning in society, particularly in educational and professional contexts.

The analyses presented in this article show that human attention has become a scarce and highly valuable resource in the digital economy. At the same time, attention is a crucial element of cognitive functioning and disrupting it can weaken individual autonomy. Despite its fundamental role in modern education and the economy, there are no sufficiently clear legal frameworks that recognise attention as a legally protected asset. This regulatory gap results in ineffective attention protection, which is particularly significant in the context of technology companies that exploit user engagement mechanisms without oversight.

The concept of the right to attention raises the question of whether individuals should have legal rights regarding how their attention is directed, utilised, and protected from interference. The discussion surrounding the right to attention encompasses legal, ethical, psychological and social dimensions, highlighting its

connection to individual autonomy, mental integrity, and the impact of technology on cognitive functions.

The technological revolution, which is reshaping both cognitive processes and educational models, presents contemporary society with a variety of challenges. The right to attention, understood as the protection of concentration, deep information processing, and cognitive integrity, is becoming an essential element of modern human rights guarantees. Its protection requires an integrated approach that combines educational system reforms, legal safeguards – such as those within the framework of neuro-rights – and developing social awareness regarding responsible technology use. Only through such measures will it be possible to counteract the growing inequalities and risks associated with the digital era while ensuring individuals full autonomy and freedom in shaping their own identity.

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References

- Ching-Ting, H., Ming-Chaun, L. & Chin-Chung, T. (2014). The Influence of Young Children's Use of Technology on Their Learning. A Review. *Journal of Educational Technology & Society*, 17(4), 85–99.
- Chomański, B. (2022). Mental Integrity in the Attention Economy: In Search of the Right to Attention. *Neuroethics*, 16(1). Retrieved from: https://link.springer.com/article/10.1007/s12152-022-09514-x (June 23, 2024).
- Cieplak, A. Krzykawski, M. (2023). Czytać, pisać, uważać. Dwutygodnik.com, strona kultury, wyd. 367. Retrieved from: https://www.dwutygodnik.com/artykul/10870-czytac-pisac-uwazac.html (June 6, 2024).
- Desmurget, M. (2020). La Fabrique du crétin digital. Les dangers des écrans pour nos enfants. Paris: Seuil. Franczyk, A., Rajchel, A. (2024). Postawy studentów wobec ChatGPT w edukacji, Horyzonty
- Furmanek, W. (2017). Analfabetyzm funkcjonalny czasu transformacji cywilizacji. Edukacja Technika Informatyka, 1(19). Retrieved from: repozytorium.ur.edu.pl (June 21, 2024).
- Hayles, K. (2007). Hyper and Deep Attention: The Generational Divide in Cognitive Modes. Profession, 1, 187-199.

Wychowania. Edukacja w dobie sztucznej inteligencji, 23(65), 89-101.

- Hayles, N. K. (1999). How We Became Posthuman. Chicago: Chicago: The University of Chicago Press.
 Hertz, N. (2023). Neurorights Do we Need New Human Rights? A Reconsideration of the Right to Freedom of Thought. Neuroethics, 16(5), 4-15.
- Januszewska, P. (2021). Czytasz, ale nie rozumiesz. Możliwe, że jesteś współczesnym analfabeta. Krytyka Polityczna. Retrieved from: https://krytykapolityczna.pl/kraj/paulina-januszewska-justyna-suchecka-analfabetyzm-funkcjonalny/ (May 15, 2024).

- Kärki, K. & Kurki, V. (2023). Does a Person Have a Right to Attention? Depends on What She is Doing (January 2, 2024). *Philosophy & Technology*, 36, art. No. 86.
- Kraljić, S. (2024). The right to education in a digital era. IN: Sannikova, L. (ed.). Digital technologies and distributed registries for sustainable development: legal challenges. 1st ed. Cham: Springer, 135-153.
- Merry, M. S., van Melik, R. (2024). Can schools and libraries curb the functional illiteracy crisis? Insights from the Netherlands. *Critical Studies in Education*, 1–20.
- Ocklenburg, S. & Güntürkün, O. (2024). The Lateralized Brain (Second Edition). San Diego: Academic Press.
- OECD Directorate for Education and Skills (2024). Students, digital devices, and success. Retrieved from: https://www.oecd.org/pisa/aboutpisa/English%20V3_WEB.pdf, (June 19, 2024).
- Przybylska E. (2014). Analfabetyzm funkcjonalny dorostych jako problem społeczny, egzystencjalny i pedagogiczny. Toruń: Wydawnictwo Naukowe Uniwersytetu Mikołaja Kopernika.
- Przybylska, E. & Nuissl E. (2015). Alfabetyzacja dorosłych: obszary badań i wyzwania w drugiej dekadzie XXI wieku. Szkice Humanistyczne, 3-4, 93–123.
- Schwab, K. (2018). Czwarta rewolucja przemysłowa. Warszawa: Studio Emka
- Selwyn, N. (2009). The digital native myth and reality. Ashb Proceedings, 61, 364-379.
- Szumera, G. (2016). Człowiek a współczesne technologie informacyjne. Zeszyty Naukowe Politechniki Śluskiej, Organizacja i Zarządzanie, 95, 515-528.
- The 2018 PISA Study. Retrieved from: https://www.oecd.org/pisa/publications/pisa-2018-results.htm access: (June 10, 2024).
- Tran, J. L. (2016). The Right to Attention. *Indiana Law Journal*, 91(3), 1023-1062, Retrieved from: https://www.repository.law.indiana.edu/cgi/viewcontent.cgi?article=11211&context=ilj (June 28, 2024).
- Van der Leer, D. & Williams, S. (2020). From Deep to Hyper Attention, and Back. Retrieved from: https://dvdl.co/from-deep-to-hyper-attention-and-back/ (June 28, 2024).
- Wilmer, H. H. & Chein, J. M. (2016). Mobile technology habits: patterns of association among device usage, intertemporal preference, impulse control, and reward sensitivity. *Psychonomic Bulletin & Review*, 23(5), 1607-1614.

Povzetek v slovenskem jeziku

V tehnološki realnosti, v kateri vse bolj dominirajo zaslonske naprave, se je zmanjšala sposobnost ljudi pri uporabi pisanega in rabljenega jezika na način, ki nam omogoča učinkovito delovanje v družbi (funkcionalna nepismenost). Vsak sedmi petnajstletnik nima zadostnih bralnih spretnosti in zna besedilo le dekodirati. Z vidika izobraževanja so eden ključnih vzrokov za grožnjo funkcionalne nepismenosti velike motnje, ki so posledica nepravilne uporabe zaslonskih naprav. Tako se zdi, da sodobno gospodarstvo, ki temelji na izkoriščanju pozornosti, pretirano obremenjuje posameznikovo sposobnost koncentracije, kar vodi v upad kognitivne avtonomije in vse večji problem funkcionalne nepismenosti. Namen članka je analizirati pravico do pozornosti kot orodje za zaščito posameznikov v luči vpliva digitalnih tehnologij na izobraževanje in kognitivni razvoj. Članek preučuje razmerje med pravico do pozornosti, duševno celovitostjo, izzivi izobraževanja in potrebo po regulativnih mehanizmih v informacijskem gospodarstvu. Članek poudarja posebno škodo, ki jo ekonomija pozornosti povzroča ranljivim skupinam, zlasti otrokom.