

In the Web of Doubts and Prospects. Consequences of the Digitisation of the Modern Society

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Abstract. *New information and communication technologies are an inherent part of the contemporary man's living space. Since their very beginning, the media have always, to a lesser or greater extent, determined the functioning of individuals. Today, however, due to unlimited access, impressive growth of the media market and human creativity in the area of new technological developments, the involvement of mass media in people's lives is taking on a new, unprecedented dimension. Such a state of affairs was envisaged as early as in the middle of the last century by, among others, M. McLuhan, who wrote that "the new media will transform us entirely: nothing will remain unchanged, untouched", or J. Baudrillard, who speculated at the time that media would become the life itself. Nowadays, these speculations are taking on a real form, especially as regards the net generation, which is an audience strongly dominated by the impact of the media for a simple reason, i.e. because its representatives — contemporary children and young people, unlike adults, were born and have been growing up in the digital world. Thus, the article is an attempt to present opportunities, challenges and threats involving widespread use of the latest technologies by digital natives³. The authors show consequences of the phenomenon in the social, cultural, educational and security dimensions through references to the Polish and foreign literature, focusing on ambivalent implications of changes in the net generation's way of thinking, communicating, collecting information and learning. Moreover, the article gives examples of juvenile perpetrators of attacks who were strongly linked with the virtual world prior to committing their crimes.*

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Introduction

Security is a basic need of every individual, regardless of their age, gender, social status, or place of living. It is a value which ensures confidence and stability, and enables a person's free development⁴. Security is connected with some risks which hinder this state and process, as well as giving rise to fear and uncertainty. As observed by S. Lem, "threats, which are in great abundance anyway, are lurking everywhere"⁵. Some phenomena related to the growing popularity of new

¹ McLuhan M, Fiore Q, *The Medium is the Massage*. New York: Random House, 1967, p. 41.

² See more broadly: Baudrillard J, *Symulakry i symulacja*, trans. by Królak S. Warsaw: Wydawnictwo Sic!, 2005.

³ The term 'digital natives' was first used by M. Prensky in the article *Digital Natives, Digital Immigrants* in 2001. See: <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>, accessed: 21.06.16.

⁴ Stańczyk J, *Współczesne pojmowanie bezpieczeństwa*. Warsaw: Wydawca Instytut Studiów Politycznych PAN, 1996, pp. 19–20.

⁵ Lem S, Fiałkowski T, *Świat na krawędzi*. Krakow: Wydawnictwo Literackie, 2000, p. 227.

information and communication technologies become apparent and increase together with the traditional threats such as the military, political, economic, ecological or social ones⁶. Both city and country dwellers are exposed to the dangers as digitization plays a more and more important role in people's lives. B. Szmigielska accurately expressed that currently "those who do not appear on the Internet, do not exist, and the things that cannot be found on the Internet, do not exist either"⁷. As a consequence new information and communication technologies determine the nature and quality of different aspects of life. It is common to use computer programmes, systems or applications and internet services to introduce innovative solutions. It contributes to the development and progress of the society and improves the quality of human life. One of the areas where new technologies are used intensively is medicine with their surgical robots operated by surgeons and used for precise cutting. Currently scientists also work on how to read electromagnetic waves coming from the brain⁸. These are the civilization achievements which are useful and should be improved. However, at the time of escalation of digitization it would be risky to make security of marginal significance. New information and communication technologies can be a source of danger which damages child security, family security or modern state security. The consequences of disturbing the security by the network is particularly alarming in case of the youngest internet users. The net generation which starts using tablets and smartphones in the very first years of their lives is often unaware of the threats, which are hidden on the Internet. Therefore, it is worth focusing on the issue of threats and analyse them.

The aim of the article is to present the opportunities and threats for the modern society in relation to the common use of new technologies. In the article the authors refer to the net generation, based on the example of a child and analyse the literature concerning pedagogy, sociology or security sciences.

"Domesticating" a Child

The sphere of modern children's lives is far more different than the sphere of life in the previous centuries. The changes are determined by the transformations within life and the growing-up of a child as well as the attitude to their cognitive or social development. Up until the mid-19th century the position of a child was of marginal significance, which was confirmed in the research of the French historian P. Ariès. The author emphasises that until the 16th century the category of child did not appear in the public discourse. In the Middle Ages play a child was presented as a miniature of an adult. A child was different from a grown-up only

⁶ Bezpieczeństwo narodowe Polski w XXI wieku, Jakubczak R, Flis J (Ed.). Warsaw: Wydawnictwo Bellona, 2006, p. 460 (the typology of threats to national security according to K. Przeworski).

⁷ Szmigielska B, *Całe życie w sieci*. Krakow: Wydawnictwo Uniwersytetu Jagiellońskiego, 2008, p. 7.

⁸ Staruszek z e-papierosem, czyli jak bardzo chcemy być nowocześni. *Electronic source*: <http://www.newsweek.pl/styl-zycia/nowoczesne-technologie-mozliwosci-i-zagrozenia,artykuly,383968,1.html>, accessed: 21.10.2016.

in strength and size, however no one gave any thought to the nature of child's development, their role in a family or society, their education or rights⁹.

Thanks to the 19th century revolutions: American, French and the British industrial revolution initiated the avalanche of changes in the society leading to e.g. extending human life, changes in the sources of earnings, changes in family life. The last changes had a direct impact on the shaping of the new concept of childhood. Within the new concept a child had special rights guaranteed in the Convention on the Rights of the Child, was released from obligatory work for the society, and as a consequence a child was "domesticated"¹⁰. Bringing the child home meant taking care of the child, expressing parental feelings, but also "taming" the child's uncivilised nature. Until then the child had been the resident of streets, fields, meadows and forests. The child lived far away from social restrictions and limits simply because the child was not within the adults' interest. Along with the subjective attitude to children and reducing the family relations, the space for children started to be perceived as a source of dangers and threats¹¹. Therefore, since then, home has become the main space within which children can exist and where, on the one hand, they feel safe and secure and, on the other hand, they have been obliged to comply with applicable domestic rules. What is more, domestication, to some extent, involves the subjugation of the child's nature and spontaneity, which previously resounded with children's folklore characterised by freshness and unconventionality¹². In modern reality, it can be observed that while domestication of the child has resulted in the restriction of his/her easy-going nature, the media create completely different horizons in the subject matter¹³. Together with technological advances and expansion of digitisation, it can be observed that network has become a space where experiences are freely exchanged, games are played and one's own emotions are expressed. Children appear to find in the net responses to their own needs and effortlessly surf the net, acquiring more and more competences¹⁴. In many authors' opinion, the Internet space is becoming a dominant one in the life of today's children, in which they release their inborn creativity and willingness to learn¹⁵, are no longer under parental supervision, gain autonomy while creating new cultures and communities¹⁶, or become wiser and more familiar with innovative solutions

⁹ Ariès P, *Historia dzieciństwa. Dziecko i rodzina w czasach ancien régime'u*, trans. Ochab M. Warsaw: Wydawnictwo Aletheia, 2010, p. 12.

¹⁰ Maciejewska-Mroczek E, *Mrówcza zabawa. Współczesne zabawki a społeczne konstruowanie dziecka*. Krakow: Wydawnictwo Prac Naukowych UNIVERSITAS, 2012, p. 126ff.

¹¹ *Ibid.*, p. 128.

¹² Papużyńska J, *Folklor dziecięcy i jego losy. Tekstualia*, 2010, No. 2(21), p. 38.

¹³ See: James A, Jenks C, Prout A, *Theorizing Childhood*. London: Polity Press, 1998.

¹⁴ Samborska I, *Przemiany dzieciństwa jako wyznacznik przemian edukacyjnych [in:] Ogródzka-Mazur E and others (Eds), Edukacja małego dziecka. Nowe konteksty, poglądy i doświadczenia*. Bielsko-Biała, Krakow: Wydawnictwo Impuls, 2010, pp. 17–18.

¹⁵ Papert S, *The Children's Machine: Rethinking School in the Age of the Computer*. New York: Basic Books, 1993.

¹⁶ Katz J, *Virtuous Reality: How America Surrendered Discussion of Moral Values to Opportunists, Nitwits and Blockheads like William Bennet*. New York: Random House, 1997, pp. 173–174.

than adults¹⁷. On the other hand, it is said that ‘immersion in the reality of simulation deprives children of solid structures, and the line of demarcation between reality and fiction has been blurred [...]. Children build their imaginary vision of the world based on mediated experience¹⁸. Some alarming findings indicate that there is a threat to children and young people’s safety resulting from increasing electronic aggression and cybercrime¹⁹, a growing wave of cyber addictions leading to disturbances in social relationships²⁰, or controversial theses causing mental degradation, progressing through the overuse of social media²¹. The importance of the aforementioned changes encourages the author to carry out a more thorough analysis, which the author attempts to achieve in the next part of the article.

Perspectives of Children Networking

Almost since the very beginning of their lives, today’s children have been able to establish close relations with the media. As they grow up, the relations become more and more intensified. Simulated reality is actually incredibly attractive and interesting to children because it differs from reality in which they grow up. Consequences of this intensifying relation has been described by M. Prensky, who refers to today’s young people, who have been born and grown up in the world of modern technologies, as *digital natives*, as opposed to *digital immigrants*, the generation of adults with memories of times with no Internet or mobile phones²². Therefore, the way digital natives and digital immigrants function has to be different, ‘the change is so fundamental that there is no alternative. The revolution of digital technology has deprived young people of their cultural roots, making it alien to previous generations²³. The differences are visible, among others, at the level of thinking and processing information²⁴.

More conscious functioning of children in the social life, bigger participation in controlling their own development, freedom in making choices, autonomy

¹⁷ Tapscott D, Cyfrowa dorosłość. Jak pokolenie sieci zmienia nasz świat. Warsaw: Wydawnictwo Akademickie i Profesjonalne, 2010, p. 78ff.

¹⁸ Samborska I, Przemiana dzieciństwa..., *op. cit.*, p. 18.

¹⁹ Kowalski R.M, Limber S.P, Agatston P.W, Cyberprzemoc wśród dzieci i młodzieży. Trans. Wicher A. Krakow: Wydawnictwo Uniwersytetu Jagiellońskiego, 2010; Pyżalski J, Agresja elektroniczna wśród dzieci i młodzieży. Sopot: Gdańskie Wydawnictwo Psychologiczne, 2011.

²⁰ Jędrzejko M, Morańska D, Pułapki współczesności. Część I. Cyfrowi Tubylcy — socjopedagogiczne aspekty nowych technologii cyfrowych. Wyższa Szkoła Biznesu w Dąbrowie Górniczej, Oficyna Wyd. ASPRA-JR, p. 251ff.

²¹ See more broadly: Spitzer M, Cyfrowa demencja. W jaki sposób pozbawiamy rozum siebie i swoje dzieci. Trans. Lipiński A. Słupsk: Wydawnictwo Dobra Literatura, 2013.

²² Prensky M, Digital Natives, Digital Immigrants, Part I, 2001. *Electronic source*: <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>, accessed: 21.06.2016.

²³ Pyżalski J, Agresja elektroniczna..., *op. cit.*, p. 26.

²⁴ See: Prensky M, Digital Natives..., *op. cit.*; Górny A, Zygmunt A, Świat według „Click Generation”, [in:] Łaciak B (Ed.), Nowe społeczne wymiary dzieciństwa. Warsaw: Wydawnictwo Akademickie „Żak”, 2011, p. 59; Dylak S, Architektura wiedzy w szkole. Warsaw: Wydawnictwo Difin, 2013, p. 86; Jędrzejko M, Morańska D, Pułapki współczesności..., *op. cit.*, p. 45.

to satisfy their needs are an example of the above mentioned changes. It turns out, however, that the new generation people, who were born in a digital era, are adapting to the conditions of the dynamically changing world much faster, and they are a source of knowledge for older people at the same time²⁵. Moreover, D. Tapscott indicates that the network generation, which stays in a permanent connection with the world by means of new technologies, is the first global generation which shows higher intelligence and creativity, is open to problems of their society, and actively takes part in schools' and local communities' actions²⁶.

It ought to be noticed that a child's involvement which consists in their active participation in the social life, may result in the fact that the child will become a 'creator of cultural meanings'²⁷. It is observed that fields of culture, which have been open only to adults so far, are beginning to be accessible to the youngest consumers and they are offering new possibilities²⁸. Therefore, mechanisms illustrating co-figurative systems, or even pre-figurative ones together with an on-going debasement of post-figurative system are more and more visible. In Margaret Mead's opinion, facing the changes in many aspects in the social life, it is more and more difficult to talk about transmission of values and skills from older to younger generations, which were dominant in the post-figurative system. In times, when it is children and teenagers who much faster adapt to changes being made in the surrounding environment, the co-figurative or the pre-figurative system is becoming more adequate. The former relates to common learning, mutual exchange between a child and an adult, and the latter one to autonomy of the young generation in the process of settling into the contemporary culture. The younger generation is gaining an advantage over adult people in the area of technological and communications competence, they are becoming a guide to the digital world²⁹. The author underlines that 'nowhere in the world is there such a generation of adults who have the knowledge of their children [...]. In the past it was possible to find people who knew more than any other child [...]. Today there are no such adults'³⁰.

In the area of research into the influence of new media on a child, studies on transformations in the cognitive sphere of the network generation are of particular importance. This is because children's early experience with information and communications technologies determine the structure and functioning of their brains. As a consequence, they are different from the brain anatomies of adults who do not have such experience³¹. There is a long list of differences in the work of analog brains, which are typical of persons living before the digital era, as well as of technofluent digital minds of natives. The network generation people have perfectly developed visual and spatial competence together with low application of symbolic capabilities. Multitasking is natural for them and they can move freely in both

²⁵ Łaciak B, Wstęp, [in:] Łaciak B (Ed.), Nowe społeczne wymiary dzieciństwa. Warsaw: Wydawnictwo Akademickie Żak, 2011, p. 8.

²⁶ Tapscott D, Cyfrowa dorosłość..., *op. cit.*, p. 45.

²⁷ Łaciak B, Wstęp..., *op. cit.*, p. 7.

²⁸ *Ibid.*

²⁹ Mead M, Kultura i tożsamość: studium dystansu międzypokoleniowego. Warsaw: Wydawnictwo Naukowe PWN, 2001, pp. 106–145.

³⁰ *Ibid.*, p. 110.

³¹ Prensky M, Digital Natives..., *op. cit.*

dimensions, a real and a virtual one. No other generation is able to show their feelings using all possible communications channels and forms, however, young people have problems with expressing and controlling their emotions, they lack patience and they need immediate satisfaction of their own desires and needs³².

These consequences have a fundamental influence on the learning process. The previously quoted Prensky does not have any illusions: 'today's students are no more people for whom our educational system was created'³³, and that is because, schools still focus on equipping children with knowledge despite the unlimited access to new technologies. The knowledge acquired in schools is no longer the only source of the most important information. Similarly, gaining knowledge is not the only way of development and education. The unlimited access to the current and very different news from the most remote places of the world causes the school to lose its monopoly on the knowledge. The fundamental task of teachers is then developing 'skills of learning in an environment different from the natural one, skills of understanding complicated symbols on paper or on a computer screen and skills of reasoning in categories typical of basic scientific disciplines'³⁴. Moreover, also crucial is 'helping a pupil-citizen to become a 'well-informed' member of a community through making them acquainted with codes, categories, tools that are useful in active understanding of media broadcast'³⁵. Having in mind that the Internet is a life space for modern students nowadays, an effective use of the Internet potential in 'creating and maintaining a social context of learning'³⁶ also becomes a priority. Underestimating children's networking by the school, thereby ignoring their needs and expectations may cause that the school will become an enclave whose role and influence will be of symbolic character.

A Generation in the Web of Threats

Intensification of children's activity in the web space, apart from obvious possibilities, initiates many phenomena that raise doubts. It is emphasized however that although the competence of digital natives is developed continuously and their role is to be a specialist and an expert in the area of innovative applications and new Internet programmes, it is also noticeable that the line between them and the adults is blurred; 'children become more grown-up, the adults are getting more childish'³⁷. M. Bogunia-Borowska describes this phenomenon as *children's adolescence*, defining it as assigning children with cultural tasks of adults such as:

³² Cantelmi T, Technopłynność. Człowiek w epoce Internetu: technopłynny umysł. Trans. Laciuga A. Krakow: Wyd. Franciszkanów „Bratni Zew”, 2015, p. 75.

³³ Prensky M, *op. cit.*

³⁴ Gardner H, Zmiana poglądów. Sztuka kształtowania własnych i cudzych przekonań. Krakow: Wydawnictwo Uniwersytetu Jagiellońskiego, 2006, p. 123.

³⁵ Molek-Kozakowska M, W poszukiwaniu modelu krytycznej pedagogizacji medialnej, [in:] Chyła W and others (Eds), Kultura medialna zapośredniczona. Badania nad mediami w optyce kulturoznawczej. Poznań: Bogucki Wydawnictwo Naukowe, 2010, p. 374.

³⁶ Dylak S, Architektura wiedzy w szkole. Warsaw: Wydawnictwo Dyfin S.A., 2013, p. 70.

³⁷ Kurczewski J, Dziecko we współczesnej kulturze zachodu, [in:] Łaciak B (Ed.), Dziecko we współczesnej kulturze medialnej. Warsaw, 2003, p. 20.

taking sensible decisions, individualism and independence in initializing different actions, rivalry and competitiveness³⁸. This issue is also addressed by T. Cantelmi who states that today 'adults are almost as rare as children, and their characteristic status seems to be the one that is rather vague; youth and adolescence'³⁹. The adulthood is understood here as maturity and 'stability' is a vanishing category, displayed only by the elderly. Its place is taken by a hybrid called 'a young-adult' which becomes a symbol of postmodern life⁴⁰.

Moreover, voices have been raised that new technologies have 'remarkable great possibilities to shape children's consciousness, define their identity and dictate patterns that are often copied into their everyday life'⁴¹. Although copying those patterns may contribute to developing many valuable skills by children and encourage positive behaviours, it is also strictly connected with copying bad behaviours, whose escalation in the media is significant. The consequence of everyday exposition to violence and aggression displayed on a computer, TV or smartphone screen is 'a syndrome of the bad world'⁴² increasingly recognized among children, thereby an indifference to harm they witness in a real life⁴³, or aggressive behaviour in the web often copied also outside it. According to many Internet researchers, cyber violence or other types of electronic pathologies become a consequence of acquiring new features of virtual world inhabitants' personality since a virtual man has different moral principles, displays tendency to exaggerate their capabilities, places themselves in the centre showing disrespect to others and humiliating them, is impulsive and has difficulty in controlling their own emotions. Taking the above into consideration, one can claim that although such a personality feels fulfilled in the Internet space, its well-being in the real life may be disturbed⁴⁴.

Virtual reality influences consciousness and social behaviours especially of the young people, and can be a source of inspiration or a point of reference for criminal activity in a real world. It is proved by the cases of, among others, Anders Breivik, Adam Lanza, Tim Kretschmer, or Ali David Sonbol. Their contrary to social norms behaviour was influenced by, among other things, the web and computer games. Breivik carried out a terrorist attack on Utoya Island killing 77 people in total. The perpetrator's personality disorder and mental health problems were indicated among other things while analysing the causes of the Norwegian's attack. His activity in the web and addiction to computer games were highlighted due to the fact that they had had impact on him and what he did. It was determined that before the attack Breivik had spent one year in isolation playing a war-game

³⁸ *Ibid.*, p. 14.

³⁹ Cantelmi T, *Technopłynność...*, *op. cit.*, p. 99.

⁴⁰ *Ibid.*, p. 99ff.

⁴¹ Buckingham D, *Nowe media — nowe postaci dzieciństwa? Zmieniające się środowisko kulturowe dzieci w erze technologii cyfrowej*, [in:] Kehily M.J (Ed.), *Wprowadzenie do badań nad dzieciństwem*. Trans. Kościelniak M, Krakow: Wydawnictwo WAM, 2008, p. 151.

⁴² Tuszyńska-Bogucka W (Ed.), *Media — przyjaciel czy wróg dziecka?* Poznań: Wydawnictwo EMPI, 2006, p. 40.

⁴³ Kozak E, *Ekspresyjne sceny przemocy. Edukacja i dialog*, 2005, No. 4, p. 31.

⁴⁴ Aboujaoude E, *Wirtualna osobowość naszych czasów. Mroczna strona e-osobowości*. Krakow: Wydawnictwo Uniwersytetu Jagiellońskiego, 2012.

called 'Call of Duty Modern Warfare' and online strategic game called 'World of Warcraft'⁴⁵. During his trial the Norwegian admitted that he had been preparing for the attack this way — by simulating the Police reaction and elaborating his whole strategy of activities⁴⁶. Adam Lanza was also addicted to computer games and on 14th December 2012 killed 26 people at the school he had previously attended in Sandy Hook, Newton. During the investigation it was established that the 20-year-old American was fascinated with games full of violence, such as 'Call of Duty', 'Doom', 'Vice City', 'Grand Theft Auto'. Furthermore, it needs to be stressed that his collection also included a game unambiguously called 'School shooting'⁴⁷. Fondness for violent computer games was also evinced by Tim Kretschmer, who on 11th March gunned down 15 people in a primary school in Winnenden, Germany. On the other hand, 18-year-old Ali David Sonboly killed 9 and wounded 30 people in a shopping mall in Munich. It was established, that the teenage perpetrator had been treated psychiatrically and obsessively played computer games, so called 'shooters' (e.g. Counter Strike)⁴⁸. In the abovementioned examples characteristic features are the young age of the perpetrator, their mental and personality disorders and excessive interest in violent computer games. It proves the destructive influence of aggression and violence in cyberspace on functioning of a young man. It has also been confirmed by numerous authors on the basis of their scientific research.

M. Braun-Gałkowska noticed that computer games affect intellectual and emotional development of a person and determine their attitudes⁴⁹. Furthermore, computer games containing aggression and violence have influence on, visible in the macro scale, social behaviours⁵⁰. J. Condry stresses the fact that young people who often have contact with violence in electronic media (beating, killing, etc.) copy aggressive behaviour in reality and they are characterized by lower sensitivity to violence⁵¹. It has also been confirmed by J. Izdebska, who claimed that multimedia violence causes increase of the aggression levels against other people

⁴⁵ Marsh S, Życie wewnętrzne Andersa Breivika. Z chorych relacji z bliskimi zrodził się norweski potwór. *Electronic source*: <http://www.polskatimes.pl/artykul/3777269,zycie-wewnetrzne-andersa-breivika-z-chorych-relacji-z-bliskimi-zrodzil-sie-norweski-potwor,3,id,t,sa.html>, accessed: 14.04.2017.

⁴⁶ Czuderna P, Breivik: Do zamachu przygotowywałem się, grając w gry komputerowe. Czy strzelanki uczą zabijać? *Electronic source*: <http://natemat.pl/11085,breivik-do-zamachu-przygotowywalem-sie-grajac-w-gry-komputerowe-czy-strzelanki-uczazabijac>, accessed: 17.03.2017.

⁴⁷ Łachacz T, School Shooting — nowe oblicza terroryzmu, [in:] Wawrzusiszyn A, Grzyb J (Eds), Bezpieczeństwo i edukacja w zmieniającej się rzeczywistości. Ełk: Wydawnictwo Mazurski Ośrodek Doskonalenia Nauczycieli w Ełku, 2015, p. 153.

⁴⁸ Skobrtal M, Niemiecki koszmar. *Electronic source*: http://www.opoka.org.pl/biblioteka/P/PS/pk201631_zamachy.html?no_header=1&no=1, accessed: 18.03.2017.

⁴⁹ See: Braun- Gałkowska M, Mechanizmy psychologiczne wyjaśniające wpływ gier komputerowych na psychikę dzieci, [in:] Gała A, Ulfik I (Eds), Oddziaływanie „agresywnych” gier komputerowych na psychikę dzieci. Lublin: Wydawnictwo KUL, 2000.

⁵⁰ Nuttal C, Games sector reaches out to a wider Word. *Financial Times*, 6.10.2005.

⁵¹ See: Condry J, Złodziejka czasu, niewierna służebnica, [in:] Condry J, Popper K, Telewizja — zagrożenie dla demokracji. Warsaw: Wydawnictwo Sic!, 1996.

in children or desensitizes to aggression⁵². Similar conclusions have been formulated by M. Braun-Gałkowska, who pays attention to the phenomenon of desensitization, i.e. indifference to the scenes of violence because of their multiple watching or taking part in them (although only 'in pretence')⁵³. As a result, the unwanted stimuli must be more and more shocking in order to cause any reaction of the viewer.

One must also mention the mechanism of 'social learning', which leads to copying and identifying oneself with models watched on the screen. A. Bandura demonstrated in his research that children may learn new reactions on the basis of observation of others, regardless of the fact that they concern a real life model or their behaviour on the screen⁵⁴. The research conducted by A. Bałdynowicz, who analysed relations between aggression and violence presented in media and crime, is also worth mentioning. The author refers to the research of dr Centerwell from the University of Washington in Seattle which implies that showing violence on American TV contributed to around 50% of murders in the USA⁵⁵. In conclusion, it needs to be stressed that the influence of aggression and violence present in cyberspace applies particularly to children and youth, which has been confirmed by numerous authors in their studies⁵⁶.

When analysing threats related to the progressing digitisation of life we should notice that new technologies in information and communication are more and more often used by criminals, including terrorists. The Polish Police have indicated that organized criminal groups, as well as individual cyber-criminals are using the Internet and computer systems as a new tool for conducting their illegal activities⁵⁷. The range of on-line crimes involving the use of the web is becoming larger. It comes as no surprise to criminal lawyers who point out that "we are witnessing the birth of a new class of criminals who prefer the mind over the muscle."⁵⁸

In contemporary world new technologies have become more significant for terrorists because of their wide availability and potential. J. Pruski, president

⁵² See: Izdebska J, Dzieci „Globalnej wioski” — nowy wymiar dzieciństwa. Wyzwania pedagogiczne, [in:] Strykowski W, Skrzydlewski W (Eds), Media i edukacja w dobie integracji. Poznań: eMPI2, 2002.

⁵³ See: Braun-Gałkowska, *op. cit.*

⁵⁴ Sarzała D, Jędrzejko M, Od grania, przeglądania do... agresji w SIECI, [in:] Jędrzejko M, Taper A, Jak kształtować kontakt dziecka z multimediami? Warszawa: Oficyna Wydawnicza ASPRA-JR, 2010 s. 95.

⁵⁵ Jędrzejko M, Taper A, *op. cit.*, s. 97.

⁵⁶ See: Sarzała D, Elektroniczne multimedia jako źródło agresji, [in:] Rejzner A (Ed.), Agresja w szkole. Warsaw: Wydawnictwo Wyższej Szkoły Pedagogicznej TWP, 2004; Sarzała D, Przekaz medialny jako problem pedagogiczny, [in:] Siemieniecki B (Ed.), Manipulacja — Media — Edukacja. Toruń: Wydawnictwo Adam Marszałek, 2007; Eron L.D, Age trends in the development of aggression, sex typing and related television habits. *Developmental Psychology*, 1983, 19(1).

⁵⁷ *Electronic source:* <http://www.policja.pl/pol/zwalczaj-cyberprzestep/83643,Zwalczaj-cyberprzestepczosc.html>, accessed: 21.10.2016.

⁵⁸ Łukaszewicz A, Przestępczość komputerowa w Polsce — raport Komendy Głównej Policji. *Electronic source:* <http://www.rp.pl/Prawo-karne/308059965-Przestepczosc-komputerowa-w-Polsce---raport-Komendy-Glownej-Policji.html#ap-1>, accessed: 21.10.2016.

of the Institute of Community Security, notes that new technologies such as on-line messaging apps, pre-paid mobiles and electronic mail are eagerly used by terrorists. He also highlights the dangers caused by extremists who use social media services to radicalise young people.⁵⁹ Furthermore, social media services are used to spread the news about successful terrorist attacks, which makes it easy to intimidate a large social group while keeping the expenditures low. Internet resources can also be used to prepare a terrorist attack. J. Simon points out that “lone-wolves” have relied heavily on the Internet when searching for practical hints and instructions to prepare acts of terror.⁶⁰

Conclusions

To summarize the abovementioned reflections we could state that new technologies are an important element of the contemporary world and they prominently contribute to shaping the net-generation’s identity. Their impact, however, is tainted with a peculiar paradox which manifests itself on many levels of human activity. New technologies help to improve intelligence, creativity, they are also an important socialising factor and provide autonomy in creating one’s own cultures and societies. Due to his competence in new technologies the contemporary young man is treated like a partner and possesses greater consciousness and more freedom in controlling his self-improvement, satisfying his needs or taking crucial decisions. As a result the net-generation is shaping its own reality, handling “old problems” through an entirely new perspective and proving to be more open-minded when it comes to innovative solutions and showing initiative to the benefit of local communities. The abovementioned factors may contribute to facilitating social and civilisational development. On the other hand, new technologies are undoubtedly likely to spawn threats. Mental degradation, personality disorders, cyber-violence, cyber-addictions, to name a few, any of which may turn the world to ashes instead of turning it into a blossoming garden.⁶¹

The net-generation is altering the reality with the use of new technology whilst remaining considerate enough not to allow the digital lifestyle to take over real life. The borderline between these two dimensions is blurry, which may trigger serious socio-cultural and educational consequences and undermine the present society’s sense of safety.⁶²

⁵⁹ Brezko B, Internet i nowe technologie zmieniają sposób, w jaki działają terroryści oraz służby z nimi walczące. *Electronic source*: <http://tech.wp.pl/internet-i-nowe-technologie-zmieniaja-sposob-w-jaki-dzialaja-terrorysci-oraz-sluzby-z-nimi-walczace-6072630248551041a>, accessed: 18.03.2017.

⁶⁰ Simon J.D, Lone Wolf Terrorism: Understanding the Growing Threat. Amherst. New York: Prometheus Books, 2013, p. 25.

⁶¹ The reflections of Pope John Paul II quoted in: Bezpieczeństwo narodowe Polski w XXI wieku..., *op. cit.*, p. 99.

⁶² Łachacz T, Dziekońska J, Between autonomy and enslavement — challenges and risks of the functioning of the net generation, [in:] Vicen V (Ed.), *Međunarodni naučni zbornik Pravo Ekonomija Menadžment I. Srpsko razvojno udruženje. Bački Petrovac 2016*, pp. 155–165.

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Streszczenie. Nowe technologie informacyjno-komunikacyjne stanowią immanentną część przestrzeni życia współczesnego człowieka. Media od momentu pojawienia się zawsze w większym lub mniejszym stopniu determinowały funkcjonowanie jednostek. Dziś jednak za sprawą nieograniczonego dostępu, imponującego rozrostu rynku medialnego i ludzkiej kreatywności w zakresie wprowadzania nowych rozwiązań technologicznych partycypacja mediów w życiu ludzi przybiera inny, niespotykany dotąd wymiar. Taki stan rzeczy już w połowie minionego stulecia prognozowali m.in. M. McLuhan pisząc, iż nowe „media

przekształcą nas całkowicie: nic nie zostanie niezmienione, nietknięte⁶³, czy J. Baudrillard, który spekulował wówczas, iż media staną się samym życiem⁶⁴. Dziś przypuszczenia te zyskują wymierną postać, szczególnie w przypadku pokolenia sieci, które stanowi dziś grupę odbiorców silnie naznaczonych oddziaływaniem mediów, z racji iż jego przedstawiciele, a więc współczesne dzieci i młodzież, w odróżnieniu do dorosłych, urodzili się i wzrastali w cyfrowym świecie. W artykule została więc podjęta próba ukazania szans, wyzwań i zagrożeń związanych z powszechnym stosowaniem nowych technologii przez cyfrowych tubylców⁶⁵. Ukazano konsekwencje zjawiska w wymiarze społecznym, kulturowym, edukacyjnym oraz dla bezpieczeństwa. Odwołano się przy tym do literatury polskiej i zagranicznej, ukazując ambiwalentne implikacje zmian w sposobie myślenia pokolenia sieci, w sposobie komunikowania, zdobywania informacji, uczenia się. Przywołano przy tym przykłady młodocianych sprawców zamachów, którzy przed dokonaniem ich zbrodniami silnie związani byli z wirtualnym światem.

Резюме. Новые информационно-коммуникационные технологии являются составной, имманентной частью жизненного пространства современного человека. СМИ с момента возникновения всегда в большей или меньшей мере детерминировали существование личности. Однако сегодня, участие медиа в жизни отдельных людей в связи с ничем не ограниченным доступом, масштабным расширением медиарынка и человеческой креативности в сфере внедрения новых технологических решений, приобретает другие, невиданные до того размеры. Именно такое состояние вещей уже в половине прошедшего столетия объявлял например М. Маклюэн, который писал: «новые медиа полностью нас изменят, все будет подвергаться изменениям, все будет затронуто», или Ж. Бодрийяр, который в это время утверждал, что медиа окажутся самой жизнью. Сегодня данные мнения оказываются вполне реальными, особенно в отношении «сетевого поколения», которое включает группу пользователей, сильно подвергающихся воздействию медиа в связи с тем, что они, т.е. дети и молодежь, в отличие от сегодняшних взрослых родились и выросли в цифровом мире. В настоящей статье предпринята попытка представить возможности, вызовы и риски, связанные с широким использованием цифровых технологий «цифровыми туземцами». Представлены последствия данного явления с социальной, культурной и образовательной точки зрения, а также те, связанные с безопасностью. Авторы ссылаются на польские и зарубежные научные труды, указывая разного вида последствия изменений в способе мышления «сетевого поколения», его общения, получения информации, в сфере личного обучения. Кроме того, приведены примеры молодых виновников покушений, которые до совершения преступлений были сильно связаны с виртуальным миром.

Translation: Mariola Bil, Anna Jurczenko, Tomasz Różycki, Anna Kodzis, Tomasz Mazur, Olimpia Bogdalska, Aleksandra Lewicka (article, abstract), Małgorzata Jasińska (резюме)

⁶³ McLuhan M, Fiore Q, The Medium is the Massage. New York: Random House, 1967, p. 41.

⁶⁴ Szerzej: Baudrillard J, Symulakry i symulacja, trans. Królak S. Warsaw: Wydawnictwo Sic! 2005.

⁶⁵ Termin „cyfrowi tubylcy” został po raz pierwszy użyty przez M. Prensky’ego w artykule Digital Natives, Digital Immigrants w 2001 roku. *Electronic source:* <http://www.marcprensky.com/writing/Prensky%20-%20Digital%20Natives,%20Digital%20Immigrants%20-%20Part1.pdf>, accessed: 21.06.2016.