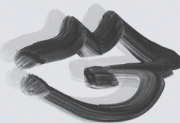


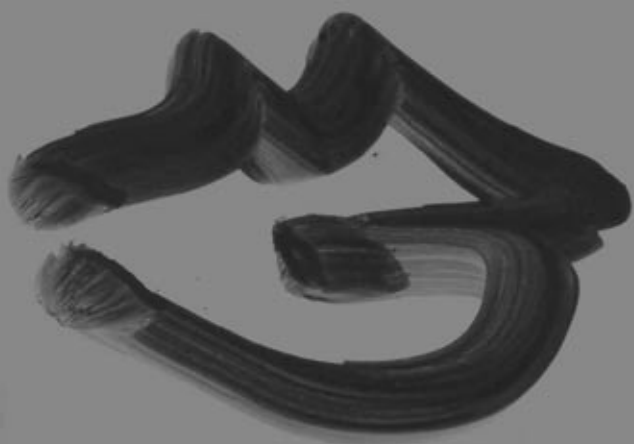
Media Education as a Challenge

edited by
Sławomir Ratajski



United Nations
Educational, Scientific and
Cultural Organization

Polish National
Commission
for UNESCO



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Introduction

1.

The issues of media education have long been present in the work of UNESCO. This global international forum has meticulously endeavoured to respond to those contemporary challenges that are the effects of the profound civilisational changes caused by the hitherto lightning-speed development of communication techniques and information flow. Media education is increasingly becoming an inseparable element of modern education, which, next to culture and science, is the domain of UNESCO's activities. The *2030 Agenda* adopted at the 2015 New York Sustainable Development Summit set new integrated, interrelated and indivisible seventeen Sustainable Development Goals for the world. Goal 4 proclaims the need to '[e]nsure inclusive and equitable quality education and promote lifelong learning opportunities for all', and Target 4.7 says, among other things, that the skills and knowledge needed for sustainable development are related to 'a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.' In Goal 16 concerning the building of peaceful and inclusive societies, Target 16.10 provides for 'access to information and [the protection of] fundamental freedoms in accordance with national law and international agreements' (United Nations, 2015).

It is not without reason that we speak of Goals 4 and 16 together, as they both complement each other and encompass the indispensable framework for man's awareness as a precondition for functioning in democratic societies. Education in the modern world doubtless conditions participation in social development, but as the recent dynamic expansion of new information and communication techniques and cyberculture has shown, media education is its inseparable element. An expert seminar organised with the participation of UNESCO in Grünwald, Germany, as early as 1982, represented a breakthrough in the formulation of the goals and principles of media education. The Grünwald Declaration, the final document of this event, paved the way for media education both in many individual countries and internationally, and is still cited today. This was the first document calling for a need to introduce media education into education systems – from kindergarten to adult education – and related teacher training, research and cooperation. The declaration stresses that: 'Political and educational systems need to recognize their obligations to promote in their citizens a critical understanding of the phenomena of communication.' It states that since '[w]e live in a world where media are omnipresent' and 'children already spend more time watching television than they do attending school' (back then it spoke only about the television screen), the gap between knowledge offered by educational institutions and the real experience of people is widening. After this first step, the debate on the role of media and digital techniques in the field of communication and information was repeatedly undertaken with the participation of UNESCO, specifying and adapting to the changing situation, and expanding the ideas adopted in Grünwald (Grünwald Declaration on Media Education, 1982).

The issues of media, communication and information is an area of special interest of the Polish National Commission for UNESCO and the Polish Committee for Information for All Programme (Polish IFAP Committee), operating since 2008, which, among experts in these fields, representing academic communities as well as government and non-government institutions, analysed a number of issues related to media literacy in Poland. The result was the development, in 2011, of the document 'Position on the issue of providing media education to all age and social groups', which was forwarded to relevant ministries in Poland responsible for

education, culture, digitalisation, higher education and science. This document emphasizes that media education is a necessary condition for the development of an information society in which participation in social communication processes via digital media is not only important in itself, but also a condition for the functioning of democracy, increasing the efficiency of the state and the effectiveness of state administration, and growing to the economy associated with the expansion of the information sector and lowering barriers to access to knowledge (Polish IFAP Committee, 2011).¹ It defines media education as ‘educating citizens to use media and information and communication technologies’, which results in ‘shaping media and information literacy, allowing them both consciously and critically to receive the content of communication, as well creating or co-creating it’ (ibid.).

Polish IFAP Committee observed that pedagogical faculties in many academic centres in Poland began to educate the future teachers of media education within full-time, extramural and post-graduate programmes as early as mid-1990s. This led to the emergence of a large group of qualified teachers prepared for media education; but for a variety of reasons, including the insufficient level of implementation of media education programmes, this potential was not fully used.

¹ The conclusions of this document indicate the need for: (1) taking coordinated actions to gather knowledge about initiatives in the field of media education in Poland and the development of a nationwide, systemic programme of media education (formal and informal), including all social and age groups, with particular emphasis on children and young people and people at risk of digital exclusion; (2) developing a national action plan on media education. To this end, it is recommended to set up an expert working group that would prepare a draft of this document. This project should be subject to public consultation; (3) following the ‘Action Plan’ – compiling a list of existing tools for the implementation of media education by the expert group and possible propositions to supplement them with respect to relevant age and social groups; (4) including all social and age groups in media education, with particular emphasis on children and adolescents (for this purpose, media education should first include librarians and the teachers of various subjects, who will be able to use the acquired knowledge and skills in working with children and youth) and people at risk of digital exclusion (to this end, correlating the programme on media education with the programme of digital education.); (5) promoting media education as a carrier of modern education of the 21st century, by designing and implementing a cyclic nationwide information and promotion campaign. (6) In order to implement the above conclusions, it seems necessary to appoint a national coordinator of the above-mentioned actions.

Polish IFAP Committee considered it right to follow the demands of the Fez Declaration of 2011,² which was the first universal document to propose a joint recognition of media and information literacy. It postulated, among others, conducting national research on the diagnosis of media and information literacy in order to shape creative attitudes, especially among young people, and including these competences in the framework of formal and informal education as an expression of modern civic education; as well as creating a network of universities and national and regional institutes / knowledge centres in this area.

Polish IFAP Committee also considered it necessary to adopt a systemic media education programme in Poland in order to strengthen this area both within formal (education system) and informal (family environment, non-government organisations, library networks and cultural institutions). It pointed out the special importance of fully including children and young people and people at risk of digital exclusion in this programme.

Many of the issues mentioned above were discussed in *O potrzebie edukacji medialnej w Polsce* [On the Need for Media Education in Poland], published by Polish National Commission for UNESCO and the National Broadcasting Council (KRRiT) in 2015. This book was a collection of reflections on media and information education, by eminent specialists in such fields as media studies, pedagogy, cultural knowledge, sociology, psychology and media management. It presented the state of media literacy in youth and the elderly, supported by a large number of empirical research results, and discussed the form of education developing media, information and digital competence that should be introduced to curricula in the modern school, and defining the role of extracurricular centres and media. It was observed that:

Actions for universal media education are more urgent as far as the sphere of media literacy is becoming a serious social problem despite the widespread use of electronic devices and mass participation in social networks. The point is that the acquisition of media literacy

² '[T]oday's digital age and convergence of communication technologies necessitate the combination of media literacy and information literacy in order to achieve sustainable human development, build participatory civic societies, and contribute to the consolidation of sustainable world peace, freedom, democracy, good governance and the fostering of constructive intercultural knowledge, dialogue and mutual understanding' (Fez Declaration on Media and Information Literacy, 2011).

should meet with system help, and not just remain the sphere of self-knowledge of their users and participants, and that these competences should be shaped professionally in an engaged and appropriately prepared school. It faces a changed reality, still burdened with a nineteenth-century model of the institution focused on providing knowledge, when external sources offer wider, electronically available resources from libraries and archives around the world, far beyond school capabilities (Ratajski, 2015, p. 27).

Although in recent years the use of new digital technologies in the classroom in various subjects (including knowledge about society, history, geography and foreign languages) has been dynamically growing, these postulates are, unfortunately, still valid. Some of them have been included in government documents as tasks in the field of media education, in particular the Act of 14 December 2016 – the Law on School Education; Regulation of the Minister of National Education of 14 February 2017 on the core curriculum for preschool education and the core curriculum for general education in primary schools, incl. for pupils with moderate and severe intellectual disability, and for general education in stage I sectoral vocational schools, general education in special schools preparing for employment, and general education in post-secondary schools; and the Regulation of the Minister of National Education of 30 January 2018 on the core curriculum for general education in general secondary schools, technical secondary schools and stage II sectoral vocational schools. According to Article 1 par. 18 of the the Law on School Education, one of the basic tasks of the education system is to shape students' entrepreneurial and creative attitudes that favour active participation in economic life, including through the use of innovative programme, organisational or methodological solutions in the education process. Attention was paid to increasing the safety of students on the Internet and, among other things, to developing the skills of efficiently using information and communication technologies. The development of core curricula doubtless is a mark of significant progress, but in the opinion of many participants of recent Polish IFAP Committee meetings, they have not yet fully covered the challenges posed by modern digital civilisation, and the basic problem is insufficient or limited awareness of the need to implement broadly understood media and digital education in every school.

Responding to challenges that have appeared on a massive scale in the sphere of media in recent years, such as fake news, automated messages, profiling for commercial or political use, 'post-truth' as an incentive to misinformation or, finally, ethical problems related to the development of artificial intelligence (AI), which is currently a priority in UNESCO activities, in November 2018 we organised an international conference *On the Need for Media Education*. Alongside Polish National Commission for UNESCO, the organizers of this debate of Polish and foreign experts were: FINA (National Film Archive – Audiovisual Institute) and the Faculty of Media Art of the Academy of Fine Arts in Warsaw. The organisation of the conference was co-funded by the Ministry of Culture and National Heritage.

Noteworthy is the fact that next to representatives of academic circles, a large part of the auditorium were teachers, including those from Polish schools participating in the UNESCO Associated Schools Network (ASPnet). Considerations about the education model and the model of the modern school were an important theme of discussion, raised by many speakers; a model that would be conducive to the development of media literacy, respect and strengthening of the students as subjects, and recognising the role of formal and informal education, developed by extramural centres and cooperation between them. The speakers repeatedly stressed the need for a school model focused on fostering interpersonal relationships through the joint experience of gaining knowledge and skills as well as group cooperation in achieving various goals. Neuropsychological aspects of media were considered, and the need to better define media education and develop methodologies, as well as to provide funds for the development of scientific research in this area were pointed out.

Importantly, the meeting devoted to the issues of the development of electronic media and some global phenomena in the field of social communication, and, among others, cyber and neuropsychological issues in the context of the needs of media education, was attended by artists and theoreticians working in or reflecting on the field of digital media. Involving them in discussion was prompted by the need to broaden its scope and include issues of the language of media as a language of visual art and issues of its understanding as barriers to decoding visual and audiovisual media messages. The issues were well

illustrated by the students' work presented at the accompanying exhibition entitled *Realities of Virtual Reality*, prepared by the Faculty of Media Art of the Warsaw Academy of Fine Arts. Both video projects illustrating the creation of fake news and materials presenting methods of creating post-truth, as well as works in VR technology and interactive art.

2.

Making some issues of the language of media art part of the subject matter of the already multifaceted 2018 conference provided a significant impetus to the idea of this publication: *Media Education as a Challenge*. Our book devotes more space to the issues of the language of visual communication, which is an almost absent topic in general education. It covers the issues of media education from different perspectives; in the context of considerations in the field of anthropology, sociology, psychology, education and media studies, pointing to the interdisciplinary nature of the discussed issue. However, we think that we have emphasised a challenging, yet underrated, aspect of visual and audiovisual communication as a social communication problem, to which I shall devote more attention in this introduction.

The significance of the image – the aesthetic impact and transmitted values of its elements and structures, and the way it happens – is difficult to determine, indeed to grasp. As Lev Manovich has observed:

Instagrammers worldwide [...] spend days editing single photos [for which] they would pose, and agonizing over literally single pixels. And understanding why exactly this rather than that image, or this rather than that filter moves us more than another may wait a long time until neuroscience progresses sufficiently. So, while we can now describe quantitatively the structures in art and media objects and situations with great detail, understanding how art 'means' and 'affects' remains unsolved (Manovich, 2017).

Studying the issue of the language of the media as a language of communication and expression in art remains an important need of modern times, especially visual arts and problems of their understanding, which is a barrier in the reception of media broadcasts. Especially that, as Mark Deuze has pointed out in *Media Life* (2011): '[W]e live *in* media, rather than *with* media' (p. 143)

and the mediatization of life is becoming the dominant experience of modern man:

As media become pervasive and ubiquitous, forming the building blocks for our constant remix of the categories of everyday life (the public and the private, the local and the global, the individual and the collective), they become invisible [...] (p. 137).

Although many researchers distinguish up to 11 media literacy components (Ptaszek, 2019), those that relate to a critical understanding of the message and its assessment remain the key. Media education in the broad sense should have long ceased to be an additional or complementary element of education. It is interdisciplinary knowledge necessary for the normal everyday functioning of modern man. Bringing up an active and thinking recipient who can wisely use the entire scope of modern media and communication and information technologies is a much larger task than a one-way transfer of knowledge. It requires specific habits of critical hypertext perception, and the evaluation and selection of communication tools consistent with the message, which include not only electronic media, but also a whole set of traditional means of non-verbal expression, including painting and sculpture. Art universities teach these skills, but the Arts Education programmes, still underestimated, could instruct in them as well, including practical classes at each school, which are an important part of the preparation for being a future informed user of the media. They teach people not only how to express themselves, but also shape the capacity for dialogue and an attitude of openness to the Other (Ricoeur, 1992). Following Ricoeur, we could say that determining one's subjectivity in relation to the Other is a condition of recognition and respect for cultural diversity. These issues were addressed in a 2011 publication of Polish National Commission for UNESCO: *Education Through Culture: Creativity and Innovation* (Ilczuk and Ratajski).

Art education, stimulating all forms of creativity, not only artistic, develops the ability to build and understand metaphor on a non-verbal level. This type of extensive association is closely related to cognitive skills and the development of critical thinking. The metaphor allows us to combine different

symbolic systems, understand reality at the level of transferring meanings – as is the case with art’s message.³

Paradoxically, modern graduates should theoretically be equipped with the ability to analyse a literary text. They learn the parsing of sentences, the interpreting of a poem, etc., while the skills of analysing visual and audio messages are usually almost at the level of illiteracy, or at most, intuition. And yet, in media and information reality that to a large extent uses the image, this occurs together with the text message, creating a comprehensive hypertext. Branched, and expanded with new messages and media, hypertext have become multimodal hypermedia, which ‘are considered to be a development of hypertext by supplementing its textual verbalism with other media,’ as Ryszard Kluszczyński has defined this category, recalling the definition proposed by Theodor Holm Nelson in 1965 (Kluszczyński, 2010, pp. 24-25).

Meanwhile, the image is still perceived at an insufficient level and far limited in comparison with language transmission. As Wiesław Godzic writes:

Like any old-time pioneer’s, my questions may sound naïve: aren’t we the slaves of the strategy of attribution, seeing only the things that culture makes privileged and reveals as predominant, contrary to what we actually see? (Godzic, 2019, p. 125)

Without a properly educated sense of perception and decryption, the image remains in the layer of the simplest mapping of reality – imitation, regardless of whether it concerns the real world, or idealised, utopian, or virtual. Travestying Zygmunt Bauman’s famous concept (2000), the ‘liquid postmodernity’ in which we live is devoid of the features of stability, predictability and constancy. This variability is evident in the images of real and created, constantly moving in our mind and in front of our eyes, always in motion and interpenetrating. The image is deeply inscribed in human nature and, as Belting has pointed out,

[a]n ‘image’ is more than a product of perception. It is created as the result of personal and collective knowledge and intervention. We live with images, we comprehend the world in images. And this living repertory of our internal images connects with the physical

³ This topic was raised by the participants of the 2nd National EDUART Conference on Art Education *Metaphor - Art - Creative Activity*, which took place in Toruń on 20-21 October 2005 (Limont and Didkowska, 2008).

production of external pictures that we stage in the social realm (Belting, 2011, p. 9).

I have watched students of art universities for a long time and it appears that the level of understanding of abstraction, symbolic ellipses, a metaphor opening the understanding of layers of reality contained in the image, is systematically falling, which can be associated with lack of education in the field of visual arts and culture, but also the invasive action of hypermedia. Even in the case of artistically-gifted students, there are difficulties in decoding double sense, hidden, and multi-layered meanings: the ever-popular Polish poster school, which flourished in the 1960s through the 1980s, or indeed film. The average recipient usually reads the image directly, anecdotally, in search of a familiar reality, commented on in a journalistic manner – with illustrations and text. This is reflected, for example, in the images of computer graphics, interactive games and illusionary films based on the mimetic imitation of nature, whereby the pursuit of the greatest perfection is understood as an illusion of similarity to humanly perceived reality. Crossing the border of the representation of reality, it becomes a presentation of virtual reality. The media object created in this way shortens the distance between what is real and unreal, erects barriers to the imagination and blocks memory. It replaces the real world, hindering the processes of cognition. As Piotr Francuz has observed: 'Every new cognition, including learning about the media and their impact, is filtered by previous experience with the media' (Francuz, 2019, p. 208). This process brings to mind the phenomenon of the 'hermeneutic circle' described by Hans Georg Gadamer (1975), a familiar concept used in the analysis of works of art as media creations that are carriers of messages created by the artist-sender. Today, Instagram users enter into the role of the creators of their own images – artists communicating themselves to the world. They shape reality according to their visions, but also, intentionally or not, are subjected to immersion in the world of representations, losing the sense of the border of the 'real' world. An association with the already classical Martin Heidegger's idea of 'world picture' comes to mind (Heidegger, 1977), whereby reality reveals itself as the image constituted by the subject's consciousness. The world as an image or a picture is identified with a representation in relation to the subject that is her/himself increasingly being constructed as well and, as a result, appearing on the stage of constructed images.

Contemporary societies immersed in the media are increasingly floating on the surface of reality and are increasingly using created, artificial, images. Tempted by virtual reality, they prefer 'artificial heavens', which Wolfgang Iser aptly described as an aesthetic way of thinking and cognition, i.e. experience and sensory experience preceding rational cognition that transforms itself into the 'anaesthetic' way in reaction to sensual overstimulation. The ongoing processes of aestheticization and anaesthetisation include forms of media communication: 'the media's pictures no longer offer a documentary guarantee of reality, but rather are largely arranged and artificial, and are being increasingly according to this virtuality' (Iser, 1997, p. 5).

Contemporary virtual reality is predominantly based on visual culture, which dominates the perception of reality and interpersonal relationships. It comprises social communication and intercultural dialogue. Its understanding and use of the language of visual communication require the development of appropriate competences, also those commonly associated with art, such as imagination, sensibility, creativity. However, it is the ability to associate an extensive set of signs and symbols that originate from the context (Derrida, 1978), a local iconosphere, a specific, local visual culture that is the most important skill for obtaining the right scale of message perception. Without understanding visual culture, the message can be completely misunderstood. Thus, instead of shaping sustainable social relations as a condition of development and inclusion in the field of global culture, the message can be destructive. Visual culture is much more than art; it is the area of all visuality available to us and as such is a field of interdisciplinary interest and research.

The role of the image in the process of social communication remains indisputable, which is why not only image research is important, but also teaching appropriate competences, i.e. tools that help in its critical, active cognition and understanding. Therefore, visual competences include cognitive, technical and social skills. We now have extensive literature on visuality and those studies describing the above-mentioned competences. Some fundamental reading, mentioned by Agnieszka Ogonowska, includes Hans Belting's *Anthropology of Images*, W.J.T. Mitchell's *What do Pictures Want?*, Luc Pauwels's *Taking*

the Visual Turn in Research and Scholarly Communication or Marquard Smith's *Visual Culture Studies* (Ogonowska, 2013).

The university, educating, as it does, contemporary creators of multimedia and intermedia, visual artists who become leaders in creating the world of media, and who can appropriate mass imagination, is a natural place for the development of all skills belonging to the three distinguished groups of visual competence. The use of media and information and communication technologies is one of their basic skills. Creativity, using a non-verbal language, solving communication problems, the ability to critically analyse socio-political phenomena and other components of cognitive skills are important elements of education. The exchange of experiences, collaboration and mutual activation shape social skills. Some of the authors of this publication – professors of the Academy of Fine Arts in Warsaw and other universities – write about specific and selected issues in this field. Based on the assumption that from the need to communicate, man has created various intermediary tools, including digital media. Therefore, we need to have appropriate skills to use such tools, and thus know their information capacity and impact on emotions, depending on the specifics of the message. Media 'pictures' are more than just what is seen. They perform various functions – and, above all, carry specific energy, 'move and stimulate, are moved and stimulated'; they act. Karl Sierek was one of the theoreticians addressing this topic, and his dialogue with images is based on the prompts given by the cultural anthropologist Aby Warburg (Sierek, 2007). Each tool has its own specifics and possible applications – 'our tools shape us,' wrote Father John M. Culkin, discussing Marshall McLuhan's theories (Culkin, 1967, p. 52). An approach characterised by an openness of choice and an understanding of the specificity of individual tools as carriers of meanings, an understanding of communication media, facilitates control over one's own message and, consequently, supports its reception. What remains to be done is the shaping of the skills for using electronic media by senders as the operators of intermediary tools in communication, and their awareness of the message. And in the world of media 'Every man is an artist' – that may be true, but the case of Joseph Beuys, one of the greatest artists of the 20th century, to whom we owe this thought, is instructive because his effort to engage in the world of politics ended in a fiasco.

3.

Since the publication of our first book, the scale of phenomena referred to as fake news has increased significantly, not only in a socially or politically dangerous form, but also in the form of games and entertainment. The possibilities of transmitting false information, playing with the recipient of this information, image manipulation, creation of a parallel reality - apparently true, but being completely false, and useful for commercial as well as political and ideological reasons - are contemporary kinds of pseudo-creation or 'creations' that are destructive to various aspects of the functioning of society. As early as 1981, Jean Baudrillard described these phenomena by means of the concept of simulacra, which he referred to the world of media:

There is [...] a plethora of truth, of secondary objectivity and authenticity. Escalation of the true, of lived experience, resurrection of the figurative where the object and substance have disappeared. Panic-stricken production of the real and of the referential, parallel to and greater than the panic of material production: this is how simulation appears in the phase that concerns us - a strategy of the real, of the neoreal and the hyperreal [...] (Baudrillard, 1994, pp. 6-7).

A few years later, the experience of mediatisation of modern societies prompted him to state:

Reality has fallen prey to Virtual Reality, the final consequence of the process begun with the abstraction of objective reality - the process that ends in Integral Reality. [...] We have moved, then, from objective reality to a later stage, a kind of ultra-reality that puts an end to both reality and illusion (rpt. 2013; Baudrillard, 2005, p. 21).

In '[t]he digital logorrhoea [that] never sleeps,' as Wojciech Burszta writes in his paper, '[whose] content is impossible to grasp' (Burszta, 2019, p. 31), there is a place for everyone. Just like in the Athenian Agora, where everyone could preach their truths, half-truths and lies depending on their intentions. Trying to convince others entails the adopting, more or less consciously, of a rhetorical stance and, at the same time, political behaviour. Human attitudes and desires have not changed much since antiquity, but thanks to the striking power of digital hyper tools, the scale of the repercussions of each expression is incomparably larger and more dangerous. Believing in one's own

arguments or simply calculating with a commercial or political aim; or simply, nurturing a desire to become visible for no apparent reason, sadly more often leads to submission to the temptation to infect the sea of cyberinformation with false data. Specially-crafted information appeals to the emotions of people expecting change in a particularly effective way; those who are often frustrated, attached to their truths or just feeling a mental community with fake content. They yield to it, as predicted by a well-used algorithm that strengthens the force of impact due to automatic multiplication. As Divina Frau-Meigs observes in her paper:

The disruptive nature of the social media, which returns in the shape of information disorders, with populism and radical Islamism and other extremisms where the contact with others becomes more of an obstacle than an opportunity, requires 'epistemic maturity', i.e. a kind of reflexive distance that focuses less on the nature of knowledge than on the circuits of validation of information (2019, p. 80).

New communication tools have become the bane of modern democracy, rather than being its greatest ally in creating a great, global village, where everyone may communicate with everyone, and shortening the intercultural distance. Marshall McLuhan probably did not suspect that the human tendency to herd behaviour, in the present-day world yearning for any identity – a truth – will bring about the creation of many global villages, often hostile to each other. The analysis of social change at the beginning of the 20th century, according to the great visionary Ortega y Gasset, is confirmed today: 'Others are a threat [...]. A mass becomes a mass precisely because of this need for security. But it must have an aim, a direction, an enemy' (Zaremba Bielawski, 2016). Radicalised internet communities founded on trusting only those information media that provide an image of the world consistent with their expectations and professed values, leave less and less space for dialogue. Without this basic tool for reaching a Habermasian consensus (Habermas, 1985) maintaining socio-political balance in democratic societies is difficult to imagine. And the growing mountain of distortions, hate, and swollen emotions will be difficult to overcome, and maybe... Meanwhile, the principles of democracy do not necessarily lead to agreement, which is confirmed, for example, by

Paulina Górską's report: *Political Polarisation in Poland: How Divided We Are* (2019).⁴

We can be hopeful of new generations, who will be familiar with diverse information and the play of images, the self-creation of online celebrities, and who will be able to distance themselves from the media game, equipped with the said 'epistemic maturity'. But, unfortunately, the school education system continues to focus primarily on technical skills in the field of software and the Net use, developing to a much lesser extent the skills of information discrimination and critical approaches, and shaping, among others, the abilities mentioned by Dorota Żelechowska:

Each type of the media develops one ability at the cost of the others, which also pertains to the Internet. Research has shown that the intensive use of this medium impacts negatively on the mechanism of divisible attention, whilst also weakening the mechanism of selection (2019, p. 239).

Although we can process more information, it happens at a rather superficial level, caused by information overload, and therefore it is often insufficiently understood, and thus lacking a broader context; for example, the person's structured knowledge. Together with its teaching methods, schools are a part of the comprehensive system of available knowledge in which students live. So it should perhaps focus more on building certain structural foundations, a framework that will allow young people to independently and deliberately complement it with knowledge coming from, among others, extensive resources in the digital world. In such an educational profile, the teacher can fulfil the role of not so much the one who provides knowledge, but rather of a mentor – an assistant, or a guide to this world. This role certainly requires appropriate, broader teacher training, including psychology. In her article, Divina Frau-Meigs concludes:

Skilling teachers and all sorts of intervention providers by empowering them with adequate resources and supportive networks is a key strategy that needs to be implemented by the public sector, and in

⁴ A report published by the Centre for Research on Prejudice at the Faculty of Psychology, University of Warsaw, as part of the research project *Causes and Consequences of Collective Action For and Against Foreign Groups*, financed by the National Science Centre (the study was conducted 24 September – 20 November 2018, and the sample was selected by drawing from the PESEL frame).

unison with all the other stakeholders. The current phase of information disorders points to the need for re-intermediation, a process that holds the potential of reconciling the information contract with the sharing contract, the mass media with the social media by calling for the mediation of all sorts of professionals that were once disaffected and disempowered. In this context, MIL should no longer be the solution by default but the solution by design (2019, p. 93).

But technology is developing faster than the adaptability of educational systems. Artificial Intelligence (AI), which is paving the way for the next revolution in the cyberworld, may get out of control if we do not take control of this phenomenon in time, even by way of the introduction of appropriate legal regulations, which is an extremely difficult task; but also through developing an awareness of the mechanisms by which it operates. UNESCO sees an urgent need to discuss the ethical dimension of artificial intelligence (AI), raise the level of public awareness of its mechanisms and its impact, both positive and negative, and start working on possible regulations in this area. This is a difficult problem, considering that the Internet is perceived socially as a forum of freedom, which to many people is indisputable. But how to defuse a ticking bomb - a deep fake, which is a good example of AI, and which could be produced with software that has been recently widely available and that allowed to put any words in the mouth of a global politician at any time, whose content could have unexpectedly disastrous effects. During the 2018 conference, Dr hab. Jakub Wróblewski of the Faculty of Media Arts of the Academy of Fine Arts in Warsaw demonstrated an attempt to use data generally available on the Internet in this way. Professor Ryszard Kluszczyński, also present at the conference, was very surprised to see himself on the screen speaking words he had never said. But the fabricated document had become a fact.

4.

In this introduction, I have only outlined the complex issues of media and digital education, which is the subject of this publication. It includes the considerations of authors representing various fields of science and art, which is a kind of novelty. Polish National Commission for UNESCO invited the Faculty of Media Art of the Academy of Fine Arts in Warsaw to collaborate assuming that the participation of artists who professionally use

the language of new media in a creative and analytical way, and above all critical, will give a significant perspective, helping us to understand the nature of media education and its practical application.

Papers in Part III describe teaching methods used at the Faculty of Media Art and their artistic effects, but this part also contains analyses and observations with regard to complex problems of visual information and its language, as developed in the field of media art. The creative and critical attitude inherent in art practice not only promises better control over the tools of creative expression, subordinating them to the intended message, but anticipates their development, which is of particular importance when dealing with the challenges we want to address in our considerations.

The most important of these is the correct shape and widespread implementation of media education in the formal education system with a significant share of non-formal education, considering all age groups of citizens and the education of the appropriate teaching staff. We devote the final part of our collection of texts (Part V) to educational solutions, which we present from various perspectives. In this part, we present the activities of the Polish Ministry of National Education and the progress as regards implementation of media education programmes in Poland in recent years and the role of libraries in this process. Part V also includes a noteworthy analysis of the challenges of media education in Slovenia, another country in our part of Europe. Part I of the present book contains an introductory paper that examines the digital condition of modern civilisation from an anthropological perspective. It is accompanied by a reflection presented by Dr Riel Miller, a UNESCO expert, on how anticipation of the challenges of the future would allow us to see current problems, which need to be tackled today. In Part II, we present a wide spectrum of challenges and threats brought about by changes in the world of media, presented by media experts and researchers in the field of media education from Poland, France and Kenya. Next to the diagnosis of the situation, there are conclusions regarding an urgent need to develop so-called algorithmic awareness, as well as proposals and examples of specific actions to counter misinformation. 'Entanglement in the media' and research on the media and their users in terms of neuroscience

and cyberpsychology are the subjects of a set of papers in Part IV. There, we also find suggestions for the use of psychological research in the process of raising teachers' competence.

Conclusions summarising our debate close the whole presentation, but we do not leave the reader without a practical guide. We append a recently elaborated Media, Information and Digital Education Model (MIDEM), edited by Alicja Pacewicz and Grzegorz Ptaszek. This was created thanks to the collaboration of experts from Polish National Commission for UNESCO, FINA (National Film Archive – Audiovisual Institute), Digital Dialogue Association, The School with Class Foundation / Centre for Citizenship Education, The Modern Poland Foundation, The Polish Association for Media Education / AGH in Krakow. In our opinion, its wide scope and open format inviting modifications on the one hand, and on the other – specific proposals to be used within the education system, mean that it can represent an excellent tool for teachers who understand the urgent need to implement media education.

(trans. PS)

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**The Digital Condition:
Mediatised Barbarity**

There is no doubt that the essence of culture is based on complex mechanisms of mediation, and that even the simplest societies were able to communicate according to rules which are typical for contemporary media logic (take for instance the famous African ‘talking drums’).¹ However, mediation is something different from mediatisation. The first refers to a presentation of the general characteristic of every communication process through the use of different media, whereas mediatisation describes that what is already based on the mediation of media communication – it is an attempt to understand the nature of the mutual relationship between historical changes in communication and other transformations. Mediatisation, then, implies prior media mediation. This naturally opens up enormous space for theoretical debates, especially in the context of new media and subsequent technological revolutions. These discussions clearly prove that there are many ways in which we can understand mediatisation. I wish to concentrate on only one of these understandings, one that seems most

¹ See J. Gleick (2011). In the chapter ‘Drums That Talk,’ pp. 13-27, the author discusses how much time it took the Europeans to understand the semantics of this particular medium.

interesting in the context of the following essay – that is, mediatisation perceived as the logic of media permeating other institutions, fields and social systems.

Winfried Schultz formulated a particularly interesting set of theoretical assumptions about this issue, arguing that the mentioned permeating is only one element of mediatisation, which has four aspects: (a) extension; (b) substitution (the media, partly or completely, substitute social activities and social institutions); (c) amalgamation (dissolution of boundaries between experience and activity – *Erlebnis* – and mediated experience and activity); (d) accommodation (a growing tendency on the part of different social spheres to become ‘oriented at media’, naturally initiated many years ago by television) (Schulz, 2004, pp. 95-101). Furthermore, following Nick Couldry’s and Andreas Hepp’s reflections (2018, pp. 5-6), I wish to show that the materialistic phenomenology, proposed by them, must take into account also the social dimension of ‘deep mediatisation,’ which involves the introduction of an anthropological perspective of what people – immersed in social reality influenced by deep mediatisation – really do in it, and why the dream about the emancipatory role of mass media should be seriously questioned.

From today’s perspective, George Steiner’s demand, so distant from us in time, that we engage in an ‘instant diagnostic sociology of the mass media’ sounds very innocent, as do his complaints about the derivative character and parasitic nature of participation in the sacred territory of symbolic culture (Steiner, 1971, p. 83). The great cultural pessimist wrote:

Literate humanity is solicited daily by millions of words, printed, broadcast, screened, about books which it will never open, music it will not hear, works of art it will never set eyes on (Steiner, 1989, p. 26).

If we consider that Steiner expressed his concerns about the rapidly emerging symptoms of oversaturation with information – creating a state of the world he characterised as post-culture – at a time when electronic media were barely existing, and it was indeed incomprehensible to think about their contemporary power and shape, then we will understand that digital culture is truly a milestone on this path. But Steiner already knew what he was warning about: he perceived post-culture as a habit of digesting an uninterrupted stream of information

while 'absorbing' only a minimal part of it. Referring to another eminent scholar, Neil Postman, we could say that from the hierarchical triad of information-knowledge-wisdom, technological post-culture promotes only the first, stripping it off any context (Postman, 1993). We can only guess what Steiner might think about today's 'digital condition'. However, was the beautiful idea of the Enlightenment not about maximally popularising and democratising people's access to culture? I believe that the elder philosopher would remain sceptic, while acknowledging that the contemporary culture of global logorrhoea is a state in which its 'epistemology and ethics of spurious temporality' can be fully realised in the form of a never-ending stream of communication and information, as well as constant access to knowledge about every subject (Burszta, 2015, p. 33). Everyone is talking about everything with everyone, constantly, without hierarchy, without considering authority, hating and analysing, loathing and loving, being either happy or sad, patiently searching for precise pieces of knowledge, or being satisfied with gossip and made-up facts. The digital logorrhoea never sleeps, and its content is impossible to grasp in its entirety – it is a mixture of word-images with an unending stream of accompanying meta-commentaries.

Felix Stalder argues that despite the astounding diversity of new media, the digital condition is characterised by three basic constitutive elements: the use of existing cultural materials for its own production, the way that meaning is determined as a joint venture, and the basic role that algorithms and automated decision-making processes play in the shaping of gigantic streams of data (2018). This new type of cultural reality is essentially tied to media. As Couldry and Hepp write, we cannot properly analyse the social world only relying on a simple division between 'pure', face-to-face communication and a separate presentation of the world 'through' media. Many communication practices which we use to build our social world are connected with media. Our everyday communication is something more than just a direct face-to-face interaction; indirect communication – through television, telephone, social platforms, apps etc. – interweaves in different ways with face-to-face communication. Direct interaction is coupled with media-related practices: during a conversation we can check something on our Smartphone, receive a text message, or refer to different multimedia content. However, the idea of

'mediating everything' must be understood correctly. Since the social world is not only a set of discrete elements organised in a specific order (first order complexity), but a network of connections interlinked on a large number of levels and in different scales, the notion that we are 'mediating everything' automatically generates new complexities, as each element that makes up this 'everything' is already mediated. The enormous complexity of the second order has to be considered, theorised and labelled as 'mediatisation', and it originates from the mediation of communication practices which enable us to construct the social world on every level (Couldry and Hepp, 2018, pp. 16-17). However, does it differ in any significant way from its previous historical variants?

Today we are aware – and we discover it every day – that the culture of 'access', like the entire Internet, including our digital condition, is ambiguous in nature:

One is egalitarian, open and liberating, the second – grotesque. There is no God, you are free to do whatever you want: lie, smear, hate, whatever you choose. There are two simultaneous processes that occur: the democratisation of knowledge and the normalisation of barbarity (Zaremba Bielawski, 2016).

Importantly, what is commonly described as 'multimedia' or 'new media' allows us to colonize reality through word-images that appropriate the visions of the past, the present and the possible future. In the end, it is a realisation – perhaps nightmarish – of a true people's democracy in the literal sense of expression and content, to put it in semiotic terms. The technologically-facilitated construction of *signifiants* creates a vast panorama of logorrhoea meanings of *signifiés*. Adopting another perspective, we can say that we are witness to a new, technologically-mediated phase of Ortega y Gasset's revolt of the masses, and the World Wide Web its arena. Let us now retrace how this state of the world came to be.

Jan van Dijk writes that the four information traffic patterns available today (interchangeably and jointly) help us to better understand why the history of culture is now seen primarily as a history of developing new structures of communication and making them more elastic – from traditional literary to the unfettered logorrhoea of modern electronic media. In the 20th

century, allocution remained the most important pattern in communication media. Radio, television and other forms of mediated performances were simultaneously distributing information 'to an audience of local units by a centre that serves as the source of, and decision agency for, the information (in respect of its subject matter, time and speed)' (Van Dijk, 2010, p. 12). These were the golden years when television was the dominating force, and so it was possible then to state that whoever controlled television or radio in fact possessed real power over society, having been able to construct a specific image of the world. This pattern of communication became less important in multimedia and is treated with understandable suspicion, despite various attempts at allowing local units to decide what type of information will be broadcasted. We distrust knowledge that is based on 'allocutive authority', communicating a source 'out there' but only in one direction, and that is why the role of allocution has been taken over by consultation understood as 'the selection of information by (primarily) local units, which decide upon the subject matter, time and speed, at a centre which remains its source' (ibid.). However, it is important to remember that there are both old and new consultative media. The former naturally consist of books, newspapers, magazines, audio and video; the latter are encyclopaedias on CD-ROM or DVD (long since put out of service), cable TV information services, interactive television and countless information sites on the internet.

New media are also the domain of registration, and thus old methods (surveys, exams, archives etc.) are supplemented by new types of increasingly dispersed media. Because of these new possibilities, our economic and social life, as well as consumption patterns, are directly linked with the electronic environment, and the freedom to decide is directly proportional to the degree of supervision of the invisible, 'disembodied' centre functioning above us all. We trust – because we are technologically provoked to do so – in cloud computing and cloud storage discs. According to many analysts, this trend will continue to dominate in the upcoming years and will definitely shape our future, including how we work, where we keep our data, and how technology will develop – both computers as well as infrastructure – in order to match the growing role of the cloud. I am referring not only to cloud computing which offers specialised and popular services,

but also to the highly popular public clouds or digital hosting services such as Dropbox, OneDrive or Google Drive. We will be forced to revise our understanding of privacy and independence. Recent scholarship that provides analysis of democratic societies in the 21st century very often focuses on the problems of fear and surveillance. They have replaced freedom; or, to put it differently – shifting the issue of freedom to the background is closely associated with the transformation of this concept in such a way that thinking about freedom is predicated on the notion of a prior ‘safe experience of freedom’ being guaranteed by a comprehensive surveillance system that will monitor everything and everyone who may oppose our freedom. And the more possibilities for surveillance there are, the more dangers seem to await us, in each case necessarily mediated through new technologies. In this way, neoliberal capitalism based on consumption, new technologies and anxieties work alongside growing populism, which persuades us to identify freedom only and exclusively with our reference group – a nation. It also persuades us to surrender some of our personal freedom for the sake of this same nation. A clear message is sent to anyone Other, especially to refugees or immigrants: we will not allow you to endanger our freedom. Above all, freedom is a privilege for those who deserve it, and the rest ‘can stay where they are’. Because of the growing capabilities for digital recording, we can see all of this happening on the Internet.

However, conversation is the pattern that creates the conditions necessary for the transformation of the media’s communication and information role into a global logorrhoea. New media have introduced a completely new quality, making it possible to connect speech, data and text in one message. The possibilities available for users are growing alongside the integration of speech, text, data and images, as well as the strengthening of our control over time and space, and new media show us the process of moving from allocution to consultation, registration and conversation. The result is a world of global communicative logorrhoea which is becoming a technologically-mediated way of life. It is a new version of the society of the spectacle, in which our need to express every type of cultural products through the screen becomes the new ideal. It is a 24/7 culture, or rather, a 24/7 world, since what was previously identified with culture

is now only a small fragment of the requirements imposed by global communication.

Éric Maigret convincingly argues that with each wave of new technologies, new hopes for perfecting democracy are born. This utopia is based on the belief in:

the use of powerful tools what would enable us to move beyond institutional barriers, the supposed appropriation of information by mass media, the alleged indifference of citizens towards living in a State (Maigret, 2012, p. 446).

After a period of belief in 'TV-democracy', a new utopia was born in the 1990s: the creation of an 'electronic democracy', fuelled by the explosion of the digital world. It was to become a realisation of the dream about an un-mediated society, in which:

'enlightened' citizens would be better informed and active, thanks to the access to internet sites, free in expressing themselves on electronic forums, in nominating and recalling chosen representatives and in defining political priorities within the frame of 'a strong democracy', direct and harmonious, as it was voiced by the American scholar Benjamin Barber (*ibid.*, p. 447).

But we must not forget that this is the 'better', more desired and dreamed-of side of the digital revolution, while its other dimension is much darker and – I am not afraid to say it – much more real from the anthropological perspective. As Zaremba Bielawski writes, the Facebook algorithm creates social, virtual ghettos, building today's 'masses', a side effect of the adopted business model. These masses, contrary to the noble slogans of democratisation and creation a cosmopolitan global community, are afraid of otherness and rejection, and think according to the universal 'us'-'them' principle. We like to be together, but it is founded on the existence of others who are foreign, hostile, who are essentially 'not-us'. As the author writes with acuteness, channelling Ortega y Gasset in the 21st century:

Others are a threat. Only one drug can soothe this fear – finding oneself part of a mass. Only when we surrender to it are we no longer afraid of its touch. In the best scenario everyone is equal in this mass – the stronger that people crowd each other, the more confident they feel that they are not afraid of one another. A mass

becomes a mass precisely because of this need for security. But it must have an aim, a direction, an enemy (Zaremba Bielawski, 2016).

The Internet is also a great archive of imagination and a 'storage for memories'. In the second decade of the 21st century the accumulated cultural memory grew exponentially as a result of the technological revolution and the possibilities offered by new media. From this point of view, the internet can be perceived as the largest, ever-growing digital mega-archive of global culture. However, this archive has a paradoxical nature – the more multimedia data is potentially available, the bigger the threat of cultural amnesia. This happens for a simple reason. Information and knowledge, archived and always available for potential users, represents 'dead' information that can be 'brought to life' only in a moment when it becomes a function of memory, which requires the making of a decision – what should be remembered, what to choose from the sea of possibilities, how to distinguish between fundamental data and the everyday 'litter' of the news cycle. The culture of global media, therefore, also called a meta-culture of novelty, plays the most significant role, both as an expression as well as a driving force of the modern 'memory boom'. Feature films simulating documentaries, historical photographs, cinematic reconstructions of wars, constant references to ancient myths, TV documentaries, interviews with 'witnesses of history', literature (e.g. about the Holocaust), computer games, comic books and other types of quasi-historical media evocations are typical examples of the mutual cannibalism of media and 'memory industries'. In this way, the history of memory becomes intrinsically linked with the history of media, a field of scholarship on memory that has become quite popular today (Erll, 2011). And it is also a domain of conflict over what kind of memory is 'correct', and what kind of memory is deemed bad and wrong. Thanks to the media, everyone, at any given moment, can be remembered, or join a conversation, or remember. Search for – and find – an Enemy. The domination of electronically-mediated cultural memory, coupled with metonymically-understood 'places of memory', meticulously created by official state-national discourses, does not happen in a social vacuum, but in a situation that is commonly regarded as a time of crisis for our identity, tradition, and linear narrative about the past. Régis Debray writes that every media of historicity (writing, school, cultural institution)

is in crisis, and ‘taming space’ becomes much more important than ‘taming time’. As a consequence:

As common access to information becomes more easily accessible, co-participating in a shared past becomes more difficult. It results with a broadening of the spheres of mobility and a restricting of the field of historical awareness, a strengthening of technical connections and a lessening of symbolic bonds (Debray, 2010, p. 9).

It is said that matter moves faster than spirit. In the context of a new technological order of communications this means that the world of technical synthesis based on digital technology does not lead to any spiritual unification of people, but to the creation of a ‘planetary mega-ethnos’. However, I believe that the contrary is true, as the answer to the growing unification of the modern techno-economical environment has resulted with, as many visionaries agree, a rapid political and cultural balkanisation (ibid.). This produces a new version of *homo barbarus* on a massive scale, as I will attempt to demonstrate. A new, radical idea of society is born – a mass of people engaged in never-ending cultural wars. Tribalism within a shared technological ecumene.

Let us return once more to Régis Debray, who proposed the following argument: is it not that every ‘leap forward’ in the technological sphere is countered by a ‘step backwards’ in the mental sphere? Debray calls this the hypothesis of ‘backward development’ or, in an ironic manner, compares its effect to jogging:

In the beginning of the century [20th – WJB] some futurists envisioned that the use of cars by city dwellers will lead to a rapid atrophy of their lower limbs, since a motorized two-legged creature will no longer be accustomed to walking. What happened in reality? Precisely this: since the time city residents stopped walking, they started running. Fanatically. In parks or, when there are none available, in a gym, on a treadmill (ibid.).

In other words, we are witnessing an archaic modernisation in social consciousness – ‘a rebirth of a past flame,’ as Debrey writes – which demonstrates, in many dimensions, that ‘a greater presence of machines need not correspond with a reduction of the sphere of “superstitions” (the reverse cannot be proven either)’ (ibid.).

Homo barbarus, by means of digital universality, popularises particularisms on a massive scale, cultivates native histories,

nationalisms, separatisms and various forms of fundamentalism, typical for cultural wars. understood in the broadest anthropological sense. As I have written many times before, these cultural wars are a permanent state of tensions between a traditional and a postmodern way of dealing with moral problems; in short, cultural wars take place in the register of morality and relate not to material issues (wages, labour, the role of the state), but rather to conflicts surrounding the normative order of social life and the issue of collective identities. This has been labelled as a sphere of post-material values. In the end, what is at stake here is a choice between a particular vision of society and its moral obligations. It is therefore not difficult to guess that the frontlines of these morally-fuelled conflicts about values indeed relate to almost every aspect of collective life and individual axiological choices. Since the area of conflict is so wide, anything can become a subject of conflict, required that it is linked with what James Hunter called 'systems of moral reasoning' (Hunter, 1991).² The debate is therefore about abortion and human life in general, family values, feminism and the rights of minorities, attitude towards emigration, racism and xenophobia, the safety of individuals and the limits of state interference in privacy, war on terror, teaching about 'the intelligent project' together with the theory of evolution, permissivism, attitudes toward the counter-culture, the role of media, transhumanism, stem cell research... Indeed, the normative conflict that has swept post-traditional societies permeates every sphere of life, both private and public.

What connects these different issues is the fact that the conflict is always about cultural ideology and values, that is, spheres that are identified as 'moral'. And it is not a small-scale conflict, but a great war on the definitive and irrevocable nature of culture and morality – that is: identity. The war is about the past (war about memory), the present and the future. The internet has become the arena for fighting, a special place that favours evocations of people's digital democracy and being part of a mass of people. We might even risk stating that, as a common form of communication, online 'hating' is a useful symbolic domain not only because it is used to communicate, but also to manifest, mark and exclude. Such an utterance does not function as a sign,

² I write about this in my book *Kotwice pewności. Wojny kulturowe z popnacionalizmem w tle* (Warszawa: Iskry, 2013).

but as a natural symptom – ‘hate’ is a symptom of cultural wars similarly as smoke is a symptom of fire.

The logorrhoeic world of multimedia becomes the perfect environment for post-truth. The boundary between truth and falsehood is not only fluid, sometimes it is even impossible to recognize. The technologically-assisted construction of different sets of stories creates a wide panorama of apparent ‘facts’ and ‘truths’. We may either emotionally identify with the latter, or try to oppose them with equal force. ‘Cretans always lie,’ a famous sentence ascribed to Epimenides of Crete, could be rewritten today to state: ‘In the multimedia era, everybody lies.’ In *The Post-Truth Era: Dishonesty and Deception in Contemporary Life*, Ralph Keyes goes as far as to say that honesty is no longer considered a value in today’s world:

On another level it refers to ‘I never had sexual relations with that woman’ or ‘We found the weapons of mass destruction’. High-profile dissemblers vie for headlines: fabulist college professors, fabricating journalists, stonewalling bishops, book-cooking executives and their friends the creative accountants. They are the most visible face of a far broader phenomenon: the routinization of dishonesty (2004, p. 5).

Each of us, and without much effort, can add something to this list of lies told in the name of a ‘broader, more important truth’, and various other tricks which have nothing to do with honesty and sticking to facts. Indeed, what has become the norm is a constant ‘tweaking’ of one’s own image, presenting oneself as someone who must necessarily be authentic, original and one-of-a-kind. It is a narcissistic regime that forces us to form exaggerated statements which grant us popularity and many ‘likes’.

This is the idea of the post-truth era – the creative manipulating of facts, or even making them up, essentially the construction of ‘narrative truths’. As Keyes writes, ‘lies can portray truth better than truth itself’ (ibid., p. 143). Dishonesty, once called out for what it is, is practiced by everyone today: beginning with politicians, through celebrities, and ending with how we present ourselves in social media – however, it has consequences for the world in which we live as it gradually eradicates any feeling of mutual trust. The ever-sagacious George Bernard Shaw wrote prophetically that: ‘the liar’s punishment is not in the least that

he is not believed, but that he cannot believe anyone else' (1891, p. 2). But he wrote it at a time when at least the British middle class lived according to the idea that if you lie once, you will not be believed even when you say the truth. I wonder if some contemporary politicians would have anything to say about that. Whereas Thomas Jefferson, the third President of the United States, could state in 1807 that if anyone adopts a public position, he must consider himself the property of society, today, alas, most people who are in power strongly believe that they can shape public opinion according to their needs and wishes.

It should not come as a surprise that numerous 'truth agendas' have been springing to life in recent years – that is, fact-checking institutions, which see their mission as improving the quality of public debate by limiting the presence of lies and fake information distributed by politicians and other public figures. The main objective of these organisations is the checking of facts – verifying information on the basis of first-hand and reliable sources. It proves much more difficult when the original source is gossip and rumour. It's almost as if we have already forgotten that post-truth is nothing other than mega-gossip attacking us without any spatial or temporal limitations, both globally and locally. It is a battle between the alluring rumour and the always less attractive disclaimer. Gossip is the effect of prejudice, which, contrary to the myths surrounding the birth of the internet, is more ubiquitous today than ever before. Prejudices are a result of one's relation to an issue that is not shaped on the basis of personal experience and findings, but picked up from others without checking their credibility, either because of convenience, or self-consciously. Today we would say that they are mediated by media. The internet is a gigantic medium of such prejudices, directed against particular individuals as well as against entire groups of people.

Jonathan Crary (2013) has noted that the 'backwards development' in the mental sphere was supplemented by forms of control–accompanying the development of neoliberalism in the 1990s – that were much more aggressive, especially if we consider their consequences, including the fact that they destroyed collective relations in our communities. Today's 24/7 logorhoea is an illusion of time without waiting, immediate access on a wish, having and receiving regardless of other people.

Responsibility for others, which is imposed by closeness, can be easily ignored today, thanks to the electronic management of one's own calendar of everyday tasks and contacts. And what is most important – the 24/7 reality has produced an atrophy of patience and respect for others, values that were essential in direct democracy based on listening and waiting for your turn to speak. The phenomenon of blogging best captures the triumph of a one-direction talking model in which you never have to wait to hear someone speak. It is almost a return to allocution, but the centre is now occupied by a narcissistic subject. Crary argues that, regardless of intentions, blogging has become one of the many indications that what we are now witnessing is essentially the end of politics.

The people's democracy and the populist mind are both attempts at contradicting the direction in which the electronic world is moving, as well as an attempt at negating its 'rationality', and so the growing resonance of the various demons of ethnocentric identifications and the adoption of the language of 'the people'. The emerging fundamentalist attitudes are calling for a return to tradition and want us to once again trust in the institutions which are seen as guarantees of social order. However, fundamentalism is not the same as traditionalism. Only in the latter is tradition understood as something obvious and indisputable, and fundamentalism is always born when this obviousness is challenged or simply lost for good. I completely agree with Berger's and Zijderveld's opinion that traditionalists can afford themselves freedom in their worldview and in their tolerance toward those whom they see as other; however, it is different for fundamentalists: everyone must be converted in the name of the restored order, either excluded or, in the most radical option, eliminated. This is the function of online hate. Always in the name of the moral majority which feels threatened by subversive lifestyles. Therefore: 'Fundamentalism is an attempt at bringing back the obviousness of tradition, often understood as a return to a (real or imaginary) pristine past of this tradition' (Berger and Zijderveld, 2010, p. 77). The weapon of fundamentalism is the *homo barbarus* and the linguistic semantics of excluding alternatives.

I find myself writing once again that what we are currently witnessing is the cultural scene of symbolic wars, possible only

because of the simultaneous adoption and enjoyment of the eudaimonia of new technologies as well as the social and cultural balkanisation that accompanies it. Within this new facet of agonistics, signs and symbols function as natural, and rhetorical logic feeds on the zero-one formula – a source for digital communication. Nothing is better suited to fuelling social polarisation and the brutalisation of discourse. Google algorithms help us to feel good in our own digital tribe, a mass that shares our beliefs and clearly distances itself from others. This is also the face of Cassirer's *animal symbolicum* – a *homo barbarus* of the Internet.

We can also examine all of these related phenomena from a different perspective, referring to Heidegger's concept of mood (*die Stimmung*). Heidegger's *Dasein* reveals itself in moods. We can experience fear and a feeling of danger as long as we are susceptible to destruction, and feel a threat from an inter-world being. A mood can always be called upon: 'A mood assails us. It comes neither from "outside" nor from "inside", but arises out of Being-in-the-world, as a way of such Being' (Heidegger, 2001, p. 176). A mood emerges from a situation in which you find yourself, and from impressions, requirements and connections, and forces us to ask ourselves: what is the aim of my existence and the life I wish to live? From a biographical perspective, our lives are a 'procession of moods' linked to formative moments in each subjective identity. By existing, we discover our 'I' in moods, we are thrown into them; we have no control over various situations in life, they simply happen to us. Fear, love, hate, indifference, anxiety, openness etc. carry much more meaning than these states seem to tell us, since they are evidence of our different types of sensitivities.

But how can we connect this understanding of mood with our present socio-historical situation? Heidegger proposes a methodology of revealing the world (*Welterschließung*), in which we ask how the world in its entirety is revealed in time. The world may seem vulnerable, exposed to harm, undergoing changes, or as a domain of vanity and poverty. We can trace moods dominating in a given time, or those which, often in secret, only signal their emergence, but are only but a potential possibility.

Heinz Bude follows this trope when he writes about 'the moods of the world', especially about the collective, pessimistic *Stimmung* permeating Western culture today. Bude, referring

to Heidegger – perfectly aware of the metaphorical richness of the concept of mood, reflected also by its semantic ambiguity – at the same time rehabilitates Gabriel Tarde’s scholarship on public opinion and the contagious nature of collective opinions. Where Tarde analysed how masses of people liked to track news published in newspapers which would successively shape social moods, Bude has focused on contemporary ‘cycles of contagion and spirals of silence’, as he calls it, which create spaces for the dominating mood of the world (2018, p. 31).

Various social groups create the spaces of moods. These are upheld by the constant flow of important information and mutual stimulants, intensifying the chosen experiences of society, seen as dominating, pervasive, contagious, and which in turn means that any other mood (in Heidegger’s sense) becomes marginalised, silenced and ‘distanced’. Bude writes:

The power of mood is thus expressed through its articulation in people’s opinion. No one is behind it, pulling the strings. Instead, it emerges through exchange and stabilizes itself through repetition. We return to it automatically, surprised that a feeling of finality, change, inertia has again come over us (ibid.).

A mood puts pressure on us and forces us to adapt to the world we have been thrown into, as we become attuned to our Being-in-the-world.

Today’s societies, increasingly convinced that they are facing a permanent threat, are in some sense forced to experience various traumas, on an everyday basis, connected with the media’s exposition of every terrorist act, mass shooting, hostage crisis, or the ‘squeezing’ of some larger group through a wall or a sea. Technology enables us to live 24/7, which we often boast about and consider as something positive, perceiving it as a realisation of the ideal of digital democracy, one that does not need intermediaries. In the epoch of deep mediatisation it is all one big illusion. The great African thinker Achille Mbembe writes that the modern psychological order promotes radical affectivity, which is perfectly aided by technology, science and digitalisation. However, affects are also closely aligned with our desire for mythology, our hunger for mystery. The algorithmic mind is accompanied by a growing wave of mythical, religious and communal thinking, which always relies on proven formulas and matrixes to

explain the world (Mbembe, 2017). So how does this affective life look like in our current condition? Heinz Bude, Achille Mbembe and Byung-Chul Han all agree on this particular issue: today's masses, among whom the mood of excessive presence and the need to expel the Other has been born, are no longer masses in the traditional sense. Mbembe calls this phenomenon an epoch of virtual hordes, Han – 'an anthill' (2018, pp.10-12), and Bude – 'a digital crowd'. The digital algorithm creates social, virtual ghettos. The basic aporia that accompanies every sensible reflection on the condition of digital society is the question of how to find a way out of them.

As it seems, every reasonable program of democratic media education is entangled in a paradox already in its initial idea. It must consider what is 'wrong' in the Internet, what is divisive, tribal, anti-democratic. But in order to point to these disturbing phenomena which have been the subject of this text, and to present an argument about 'common pastures of understanding', it must in part do so from a perspective that is external to the internet, in a way moving beyond this digital, mediated reality and judging them from this point of view, and then moving on and trying to implement the newly proposed values precisely in accord with this environment. Such a program, then, necessarily requires traditional educational institutions, beginning with primary schools, and ending with universities. In short, Henry Jenkins's, Sam Ford's and Joshua Green's idea of spreadable media must be accompanied by the parallel idea of spreadable education. An important role in this type of education, one that promotes the idea of understanding each other, should be played by an anthropological perspective which teaches us about both the possibilities and the limitations of what we call humanity, regardless of where we end up meeting with the other.

(trans. JB)

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Futures Literacy, Media Literacy and the Capability Approach to Freedom

Right now, all around the world, people are pre-occupied with the future. In universities, corporate boardrooms, government conference rooms and media outlets, conversations buzz with forecasts and predictions. Efforts to imagine what will happen consume emotional and intellectual energy. Inventing images of tomorrow's astounding applications of new technologies, like the current infatuation with Artificial Intelligence, is at the forefront of public discourse. Not surprisingly, topics that become the subject of household conversations also begin to pervade public policy debates and agendas. Yet these varied and often detailed images of the future all belong to only one kind of future. The kind of future imagined when the intention is to arrive at ways to influence, in one way or another, what will happen in the future. Generally, such efforts to 'use-the-future' in order to plan what will happen involve techniques meant to generate 'credible' predictions – descriptions of tomorrow derived from probabilistic reasoning. As a result, the prolific and potentially liberated human imagination is confined to attempts to predict future events (Poli, 2001).

There are however moments when another kind of future enters into people's thinking, offering another vantage point,

shaking off the constraints of projecting the past into the future; or seeking to define a destination in advance. Such futures are as imaginary as all others, the difference is that what is imagined is not defined in terms of a 'later-than-now' goal or objective. Relaxing the imperative that the future serves to set inter-temporal targets does not stop the future from being useful. On the contrary, enlarging the teleology of using-the-future beyond planning-to-influence-tomorrow opens up distinctive, otherwise inaccessible, perspectives on the present. Here, the interest in describing imaginary futures is not 'for the future' but 'for the present'. This is 'anticipation-for-emergence' (AfE) as opposed to 'anticipation-for-the-future' (AfF) (Miller, 2018b, p. 20). Both AfF and AfE harness the human power to imagine in order to bring the non-existent future into the present. But in the case of AfF the aim of using-the-future is to influence the future, in one way or another. While in the case of anticipation-for-emergence (AfE) the purpose of imagining the future is to detect and invent elements of the present that usually cannot be sensed or made sense-of when the future is a goal. AfE uses the future to reveal otherwise invisible, previously unknowable, and typically un-nameable emergent phenomena, aspects of the world that express its creative complexity and do not yet belong to either extrapolated or previously desired or feared futures.

Before moving on to discuss what this still relatively unfamiliar distinction between AfF and AfE means for 'media literacy' (ML),¹ please allow me to bring one more concept to the analysis: Futures Literacy (FL).² This term designates a competency or capability, specifically the ability to distinguish different reasons for using the future (AfF vs AfE) along with the corollary methods and contexts that shape the descriptions of the futures we imagine. There is of course a parallel between FL and 'media literacy' (ML). Both are competencies that enhance what people can sense, make-sense-of, and create. Both can be learned.

¹ 'Media literacy seeks to empower citizens and transform their passive relationship to media into an active, critical engagement – capable of challenging the traditions and structures of a privatized, commercial media culture, and finding new avenues of citizen speech and discourse' (Bowen, 1996, p. 180).

² Futures literacy can be defined as a 'disposition' or a combination of an innate characteristic of all living things – the ability to anticipate – with the learned capability to distinguish different reasons, methods and contexts for 'using-the-future' (Miller, 2018a, p. 2).

Both can be seen, in myriad of different ways, as contributing to the quality of the collective and reflexive processes that enable humans to both discover and negotiate meaning. So, both are policy relevant – from two distinct points of view: first, as instrumental perspectives that designate and identify affordances for human agency (our capacity to act), and second, as conditions that can be described in terms of historical contexts that change over time. The latter involve ascertaining the nature and extent or degree or level of futures or media literacy at a particular moment in time: is it higher or lower, is it composed of the same elements, and how does a particular state of these capabilities alter the functioning of daily life? The former draws attention to the ‘why’ and ‘how’ of what can be done to change personal and communal levels of futures or media literacy. Here the assumption is typically that being more FL or ML, ‘makes-a-difference’. And then, taking this reasoning one step further and providing one of the justifications for an interest in FL or ML, we get the proposition that if someone is more or less media or futures literate it will make a difference for making a difference (assuming given collective and relational conditions).³

That said, it is worth keeping in mind that being more futures literate depends on acquiring a better understanding of anticipatory systems and processes.⁴ This means that being futures literate entails a greater understanding of how temporality enters into both perception and choice. The same is not necessarily the case when it comes to media literacy. Being more media literate does not necessarily involve explicit consideration of temporality, of the later-than-now or the challenge of choosing a specific relationship between agency and the future. The same cannot be said when the aim is to formulate policy, with respect to ML or any other policy area. This is because policy is inherently about the future. Policy formation and implementation are about ‘making-a-difference’ in the future. Hence analytical frameworks for describing a topic, such as ML or education or xyz, are not enough. Strategic choices that involve engagement in systemically distinct, often contradictory dimensions, and tactical choices that remain within a given system, both call for an

³ The variable MD (make a difference) is, in part, a function of the coefficients for quality associated with these other variables: ML and FL. $MD = f(qFL, qML)$.

⁴ See The Futures Literacy Framework (Miller, 2018b, p. 23).

understanding of why and how the future is being used. The consequence of all this is that we need to keep in mind that the anticipatory systems theory underlying FL incorporates a temporal dimension that other theoretical frameworks, even dynamic ones, have not as yet taken on board. This means that FL is relevant to the formulation and implementation of policy agendas, including those for ML (Miller, Poli and Rossel, 2013, p. 5).

Finally, by way of preamble, it is also useful to point out that FL, or an understanding of the diversity of anticipatory systems, offers insights into the attributes of ML. The case for the relevance of anticipatory systems for understanding ML rests on a number of common-sense observations, in particular the inter-acting and dynamic terrains of hopes and fears. ML encompasses the vast world of human communication, covering a huge range of tools, systems and relationships. ML involves everything from knowing how to use an emergency phone number to call for help, to being able to navigate and co-create deeply personal meanings wielding everything from a pen to an Instagram account. Yet as we formulate, send and receive in relationally situated construction, striking harmonies and dissonances, consolidating or dissipating credibility, the future typically remains implicit, taken for granted as speculative goal, expectation projected from the past. Introducing the ability to distinguish different reasons, tools and contexts for imagining the future has wide and diverse implications for what it means to be ML. This means that the study of ML and the efforts to influence ML need to be able to take on board FL. Not least because a better grasp of our hopes and fears alters the means and ends of ML. But, as we move to the policy side, trying to ascertain why, when and where agency fits in, it becomes clear that FL invites a different, complexity compatible view of collective action.⁵

From the point of view of complex emergence, our collective conditions, composed of repetition and difference, pop into existence with ex-ante uncertain traces of causality and creativity, mashed-up expressions of combinatorial, inadvertent and intentional speculation. The role of human agency in this context is not that of the all-knowing engineer, able to determine what will

⁵ About experimentation with collective intelligence knowledge creation processes (CIKC) see: Scharmer, O. (2007); Inayatullah, S. (2004), and Inayatullah, S. (2008).

happen, but rather the carrier of a quirky evolutionary accident that here and there introduces a strange artefact of consciousness – imagination. Succinctly, we need to fundamentally change the way we approach the question of collective action. For many reasons it is time to re-examine and challenge the way we understand the relationships that create the world around us, particularly the roles and power of humans with respect to collective conditions and choices.⁶ One negative but fairly obvious reason is that many aspects of existing systems for collective action and collective choice, such as specific institutions like the nation state, are ever more clearly inadequate to today's context and aspirations. Yet, as self-evident as the decline of yesterday's norms and operational power structures may seem, such observations do not appear to get us any closer to inventing the alternatives. Is there an alternative to having government do things, like raising taxes to fund collective infrastructures, including armies, highways, carbon emission mitigation, etc.? Is there an alternative to being a citizen of a nation? No, there are no alternatives. What is worse, there does not appear to be any way to imagine alternatives. Which, from my personal perspective, suggests that we are using the wrong means. Imagining alternatives in the current context is not a question of being more creative or 'radical' from within the existing paradigms, it is a question of finding paradigmatically different reasons and methods to imagine.

In 2015, in a paper entitled 'Learning, the Future, and Complexity: An Essay on the Emergence of Futures Literacy', I explored the distinction between Push and Pull learning. Push is the kind of learning that is based on the proposition that it is possible to know in advance what one needs to know. Push learning prepares the student so that they know what they will need to know in the future. Push is justified by the assumption that it is possible to know what someone will need to know. Pull, on the other hand, makes no such assumption. When we need to know, we pull the learning to us – it is not 'ex-ante' but spontaneous, driven by context and need. In addition to the fact that pull learning is more efficient, from cognitive and motivational perspectives, it invites a fundamentally different relationship to the future. Again, FL comes to the forefront, underscoring that diversifying why and

⁶ For 'discontinuity' as the third of the basic categories of conscious anticipation see Miller, R. (2015), pp. 514-515.

how (Aff AND Afe) the imaginary future enters into what we see and do is essential for embracing pull learning. Pull learning, in turn, has powerful implications for the nature, functioning and enabling of ML. Bringing into focus the potential for discontinuity in systemic functioning that arises out of one of the major intellectual breakthroughs of the twentieth century: the capability perspective to thinking about development and freedom pioneered by Amartya Sen (1999 and 2009) and Martha Nussbaum (2011).

From the 'capacity-to-be-free' vantage point, the centrality and discontinuity entailed by the move from push to pull learning, and the role of FL, becomes even more evident. Think about it for a moment. What capability would be required to make push viable? Prescience! If we were capable of predicting the future then we could know exactly which lesson to study beforehand, study now the exact skills needed for that specific future job. Breaking out of this constantly disappointing and frightening effort to know the future with certainty opens up another way of deploying the human capacity to imagine and engage with complex emergence in the present. In the context of ML it offers a discontinuous model, backward incompatible, of the operational, functional, and power relationships that generate sensing and sense-making in symbiosis with media and context. Here the antidote to fake news is not some brilliant campaign that warns people of threats or even a program meant to equip people with filters and methods for detecting 'fakeness'. The antidote is not ex-ante, it is 'live'. The capability to formulate and test hypotheses, not from within the closed epistemic terrain of absolute truths, but as an active participant in continuous experimentation, bet-making with an open mind, welcoming both failure and success as contexts for learning.

Fake news is not a novel phenomenon. Nor is the challenge of finding and perpetuating ways to generate trust, legitimacy, and authority. Certainly, power can assert the veracity of its claims, to an either gullible or cowed audience. This only pushes the problem of fakeness up the ladder of authority. Which is presumably why the term Media Literacy, like Futures Literacy evokes the need for competencies that enable people to make-up their own minds (Bulger and Davison, 2018, p. 5). Once again calling attention to the question of capability, its characteristics and roles.

On this point there is one broad and fruitful direction to search for an answer, and that is science. Obviously not narrowly understood as a source of Truth or as only valid if it provides predictive certainty. Rather science is defined, on the one hand, by a deep comfort with fundamental uncertainty, the ontological status of a creative universe, and on the other hand, as a process of constant exploration, testing and experimentation, the epistemology of learning. Sometimes science may offer grounds for accepting the assumption of a temporally delimited probability of repetition, although such descriptions of the world rarely pertain to the non-physical world, characterised by constant complex emergence. For the most part it is this complex emergent world that surrounds, defines and enables meaning for humans. Science as an effort to understand through learning becomes a way of being, providing a very different foundation for establishing 'truth' and discerning what is 'fake' and what is not.

Moving to what might be called 'science literacy' or the capacity to embrace complexity entails a fundamental transformation of the power relationships that currently characterise knowledge and media systems. In academic communities and in the institutions that mediate the status of knowledge, we are still using nineteenth century categories. We use notions such as education, culture and science. We are meant to trust the formal authorities, the professors, the 'leaders' to be the carriers of legitimate knowledge. This is how industrial society, with its technocratic elitism, maintains power over the creation and use of knowledge (Bergheim, Miller and Tuomi, 2011, p. 4). A power that is being undermined today, largely by the struggle over control of information. As more players make claims to information the old dominant authorities lose clout and previously robust mechanisms for asserting authority begin to fail. Perhaps there is a scenario in which power is returned to the old authorities or discipline is restored, allowing sanctions and censure to control the creation and use, the stocks and flows of information and the knowing it enables. Or, perhaps another scenario is worth contemplating, one in which humans cultivate the capacity to take a scientific approach to understanding the open, creative, and continuous evolution of the world (Miller, 2010, p. 23).

We are often prompted to think outside the box. Let us then think outside the box regarding media literacy. What is the

relationship of people to the creation and use of information and the knowledge that arises, things that they come to know? If the society is changing fundamentally in its relationship to the production and use of knowledge, then it is not surprising that there are signs of different systems emerging. In the context of media literacy, what is the relationship of existing practices to novel ones, those systems and processes we do not yet have names for? Assuming the possibility that the conditions of change are changing (transformational transition), the challenge at hand is to get better at sensing and making sense of complexity.⁷

ML, integrating FL, would then become the capacity to sense and make-sense of information and knowledge systems and processes in different ways, depending on why and how the future is used. Both in the detection and creation of the information that feeds and starves knowledge, it would become possible to integrate uncertainty, the creativity of complex emergence, into media related analysis and policy. Turning uncertainty into an asset rather than an enemy in the process of information intake, knowledge creation and the resulting transformative action, points to a broader view of human agency. Making it easier to get beyond statements like 'I want to be able to plan the future and anything that disturbs my plan is very upsetting and frightens me' to a point-of-view that explains that 'our ability to not lock in our thinking on the basis of extrapolated futures, futures with nation states, with jobs, with enterprises, with products, physical products, makes it possible to detect and invent aspects of the present that would otherwise be invisible. It enlarges our capacity to see and to do now.' That is what futures literacy is about, and in the context of media literacy, it emphasises an open and resilient approach to the complexity of the info-sphere, rather than a selective and protective stance towards media.

The significance of all this is primarily about hope. The way in which we construct hope is central to sustaining peace, to motivating people to learn, to finding the generosity to negotiate meanings together and to agree to disagree. Today's disappointments and failures are, in part, a sign of an inadequate capability, an underlying poverty of the imagination (Popper, 2002, pp. 8-9) that makes it difficult for us to create and sustain hope. Efforts to fix old systems and the prospect of finding

⁷ About the challenge of complexity see Morin, E. (1990).

brilliant solutions to restoring yesterday's glories fail to address the underlying challenge – inventing and acting on new reasons and methods for seeing and doing. Using FL might enable us to invent and detect current aspects of ML that are very different from ML of the past. This is why anticipation matters, it changes the present (Miller, Poli and Rossel, 2013, p. 4).

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II

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**From Algorithmic Surveillance to
Algorithmic Awareness:
Media Education in the Context
of New Media Economics and
Invisible Technologies**

**Democratisation of the Web and the beginnings
of data-driven capitalism**

At the root of the technological revolution associated with the spread of the Internet – the first global medium on a mass scale – was a desire to create a space free from the dominance of the mass media industry, which imposed specific values, mindsets and interpretations of reality, and provided a centralised control of the production and distribution of content. The Internet, which founding was based on the concept of freedom,¹ especially personal, was supposed not only to democratise the social space on a global scale, plugging people separated by a technological barrier into a network, but above all to enable free communication between users connected in one network. It was also meant to make possible information exchange between everyone who was connected to the same, they being ordinary users, companies, media corporations, etc.

The democratisation of the Internet was favoured by the creation of the first search engines in the late 1990s that sorted out content

¹ Alexander R. Galloway disagrees and states that the founding principle of the Internet is not freedom, but control that has existed since its inception. He adds, however, that it is not the type of control we have been accustomed to, because it is based on openness, inclusion, universalism and flexibility. It is control borne of high degrees of technical organization (protocol), not limitation on individual freedom (Galloway, 2004, pp. 142-143).

available on the Web, filtering out what did not meet certain conditions. At the same time, it was search engines that enabled both professional and amateur content creators to reach wide audiences (the 'many-to-many' model) on a global scale, while users gained easy access to various resources scattered over the network.

Over time, however, the liberal and libertarian space of the Internet as an environment in which its various actors communicated as equals, began to become increasingly commercialised. At the end of the 1990s, companies that offered new technological services on the web: search engines, websites, free e-mail accounts, and blogs, grew dynamically. Overeagerness associated with the development of the Internet and its possibilities, and overinvestment in Internet companies (the so-called 'dotcom bubble') led to the collapse of the Internet industry in the international market in 2000 (Piech, 2003). Some analysts saw the causes of this crisis in a phenomenon called the 'productivity crisis' (Bruque and Medina, 2002), described in the late 1980s by Robert Merton Solow, a Nobel Prize laureate in economics. According to these same analysts, the increase in investment in new technologies did not entail an increase in productivity in other areas of the economy, that would have brought actual and not only virtual profits. However, shortly after the burst of the 'dotcom bubble', technology companies found a new, productive space for their investments, related to the social nature of the Internet and consumer engagement – then the second wave of Internet development called Web 2.0 or 'app economics and mobile revolution' began (Case, 2016, pp. 3-4).

With the advent of the second wave of the Internet, high hopes were raised for an even greater democratisation of the network, which was to become a tool enabling global cooperation, an exchange of experience and knowledge, and through the use of 'alternative media' and undermining of the dominant social, cultural or political order imposed by institutions and governments (Lievrouw, 2011). With time, however, it turned out that it brought many companies real profits not only in the area of new technologies, but also in other areas of the economy, which was largely associated with the foundation of their activity on digital data and the techniques of collecting, analysing, processing and selling them. With the advent of the Web 2.0 era, which had its inception in 2004, data became a form of capital for commercial

entities, including tech companies, that ensured their sustainability and growth, because, as Jathan Sadowski notes, ‘as capitalism faces crises of accumulation, there is a need to find new sources of value and new places to offload goods’ (Sadowski, 2019). And this intangible resource, which can be extracted in an uncontrolled manner and used for various purposes, has gained in the status of such a source of value for the digital capitalist, who is more concerned with the flow of data than its use. This situation is well illustrated by the statement of Andrew Ng, co-founder and former director of Google Brain, former vice president at Baidu, as well as co-founder of the educational platform Coursera, who in a public speech, given in 2017, said: ‘At large companies, we sometimes launch products not for the revenue, but for the data. We actually do that quite often [...] and we monetise the data through a different product’ (Stanford Graduate School of Business).

Data as a form of capital. Surveillance capitalism and its social consequences

In the social world, human-processed and analysed data allows people to exist, interact with or avoid others, or anticipate specific phenomena and make decisions. Data is generally defined as raw, unprocessed and symbolic information related to individual elements of reality (Kitchin, 2014, p. 1), although according to Lisa Gitelman and Virginia Jackson in the Introduction to the book *‘Raw Data’ Is an Oxymoron*, raw data is a myth and in fact they do not exist, because their value is always dependent on the context (2012, pp. 2-3).

Data can take various forms, such as characters, numbers, symbols, images, etc. Even though people since the ancient times have collected various types of data for analysis or comparison (the motion of the Sun, moon phases, river floods, censuses), it was not until the 21st century that thanks to advanced computer calculation methods, the processing of large amounts of data became more effective. Digitisation has played a significant role in this field (Mayer-Schonberger and Cukier, 2017, p. 115).

When combined, data makes information (understood as processed data), which in turn can be transformed into knowledge. Andreas Hepp and Nick Couldry note that today a data-driven mediated communications infrastructure plays a key role in social interaction and may eventually change the way we acquire

social knowledge (2016, pp. 122-123). In order for digital data to be transformed into knowledge, it must first be collected and processed. As long as their analysis does not reveal the meaning, specific links or relationships between them and the already known, they remain only a collection of insignificant bits of information with hidden potential. Once used digital data can be used again, this does not reduce their value, on the contrary, it allows them to be used for various purposes (Mayer-Schonberger and Cukier, 2017, p. 137).

Digital data can be generated in two ways: as a result of a measurement focused on its collection (e.g. recording connections, fingerprint scanning, image recording), or as the by-product of a device, system or human operation. There are several types of data. For example, index data enables the identification and linking of data to a specific object (device, person, manufacturer, etc.), including unique identifiers, such as document numbers, credit card numbers, device serial numbers, digital object identifiers, IP and MAC addresses, order and shipment numbers, as well as addresses and postal codes. Attribute data represents features of specific phenomena, although it is not identifying, in relation to humans it includes information, such as age, gender, eye colour, weight, blood type etc. In turn, metadata, i.e. data about data, may refer to the content of data or a data set, e.g. containing information about the time and place of the creation of a file, or describing an information resource or object. A special type of digital data is residual data that contains information about users' behaviour on the Web or the use of devices, e.g. what they click, how long they browse pages, what they enter in specific input fields, how long the purchasing process takes, etc. Residual data is one of the more common data collected online because it is used to train algorithms that learn user behaviour (*ibid.*, p. 152).

As already mentioned, the value of data results from its processability and usability. Oscar H. Gandy perceives data processing as a 'differentiating technology', operating on the basis of three interrelated processes: identification (collecting data for management), classification (assigning individual data to predefined groups), assessment (assigning individual data to specific results of the action based on previous classification) (Gandy, 1993). Then the same data can provide information for analysis,

thanks to which better understanding of the surrounding world and its relationships is possible. This phenomenon is called datafication and consists of collecting various types of data, processing them into the correct format and quantifying them for further use (Mayer-Schonberger and Cukier, 2017, p. 31).

Datafication is a common phenomenon nowadays, covering various spheres of human life: relationships, location, emotions, interactions, behaviours, political, religious, cultural, sexual preferences, etc. It is one of the important features of deep mediatisation, i.e. the process of infinite media penetration into our life and social life (Hepp and Couldry, 2016, p. 122-142), on which many business companies and start-ups operating in the field of sharing economy base their business model. In treating data as a specific field of technological colonisation, they contribute to the 'capitalisation of life without limit' (Couldry and Mejias, 2019). Therefore, according to many researchers, digital data should be treated as a new form of capital today (Zuboff, 2015; Moore, 2015; Poon, 2016; Fuchs, 2014). For many companies, it is at the same time raw material (capital necessary to produce goods, e.g. products, services) and a product (produced by human digital work using products and services) (Sadowski, 2019). In digital capitalism, as Sadowski emphasises, data does not replace money, but is treated in the same way as financial capital, so it is necessary to 'constantly collect and circulate data by producing commodities that create more data and building infrastructure to manage data. The stream of data must keep flowing and growing' (ibid.). A term for this type of capital accumulation was coined by Shoshana Zuboff, a celebrated American information systems researcher, who called it 'surveillance capitalism' and defined it as:

1. A new economic order that claims human experience as free raw material for hidden commercial practices of extraction, prediction, and sales;
2. A parasitic economic logic in which the production of goods and services is subordinated to a new global architecture of behavioral modification;
3. A rogue mutation of capitalism marked by concentrations of wealth, knowledge, and power unprecedented in human history;
4. The foundational framework of a surveillance economy;
5. As significant a threat to human nature in the twenty-first century as industrial capitalism was to the natural world in the

nineteenth and twentieth; 6. The origin of a new instrumentarian power that asserts dominance over society and presents startling challenges to market democracy; 7. A movement that aims to impose a new collective order based on total certainty; 8. An expropriation of critical human rights that is best understood as a coup from above: an overthrow of the people's sovereignty (Zuboff, 2019).

Surveillance capitalists operating according to data logic are also some of the world's largest 'data colonizers' (Thatcher et al., 2016) that collect it in exchange for free products or services.² Five US technology companies count among the largest surveillance capitalists. They operate based on two complementary business models, in which the collected data plays an important role:

- You are the Consumer
- You are the Product (Desjardins, 2019).

For the first model, the main source of revenue is derived from the sale of products and services. This group includes Apple, Amazon and Microsoft. In 2018, Apple generated as much as 62.8% of its revenues in iPhone sales, while 52.8% of Amazon's revenues came from selling goods in online stores. In the case of companies basing their business model on the treatment of the user as a product, which includes Alphabet and Facebook, most of the revenue came from a wide range of advertising services. In the case of Facebook, as much as 98.5% of revenues for 2018 came from advertising, while for Alphabet this figure totalled 85% (generated by entities such as Google, You Tube, Google Maps and Google Ads).

Invisible technologies and content personalisation

In surveillance capitalism, more and more aspects of our lives are mediated, regulated or strengthened by invisible technologies based on algorithmic data processing (Balkin et al., 2014). Algorithms cannot work without data, while data functions in the broad context of the entire complex socio-technological system used to generate them, which Rob Kitchin called the 'data assemblage' (2014, p. 24-26). In the social sense, the algorithm

² For example, the Facebook project Internet.org aims to provide free internet access in underdeveloped countries. Importantly, Facebook decides what websites will be available as part of the project (<https://info.internet.org/en/>).

does not mean an encrypted procedure that is used to solve the problem by transforming the input data into the desired output, but includes a number of elements: infrastructure and computing networks, of which algorithms are a part; public API, people who design and operate the algorithms; data (and users) on which they operate; institutions that provide these services; and finally user behaviour, business models and policies. In the concept of data assemblage, all this is part of the authoritarian governance. Therefore, a critical understanding of technology based on the operation of data processing algorithms, including those using artificial intelligence mechanisms, should be regarded today as key to understanding our social functioning.

Processes based on data processing and data mining in many cases decide not only about what and when the same will be displayed to users, but also what they will not see. These same processes also suggest the context in which users should interpret the information. The socio-technological system, of which users are a part, decides which content may be of interest to them. Jeremy Wade Morris calls this type of management 'curation by code' (2015). According to Morris, algorithms are a new form of cultural intermediaries and are responsible for the way users encounter cultural content and how they experience it.

The technological infrastructure used to collect data and direct personalised content based on it is in turn called, by Anthony Nadler, Matthew Crain and Joan Donovan, the Digital Influence Machine (Nadler et al., 2018). It consists of several technologies used to track, target, optimise and automate the message in order to increase the effectiveness and efficiency of commercial and political advertising. The Digital Influence Machine operates just under a specific 'visibility regime' conceptualised as a power system composed of three dimensions: architectural (allowing structure), interactive (the type of interaction that the structure allows) and political (the power actions that the interaction allows) (Brighenti, 2010, p. 3). Visibility is one of the more important concepts in communication and media science, and as a social field it determines how relationship structures are visible. It also assigns individuals and their activities internally relational and ambivalent social positions (Mateus, 2017).

Today, one of the forms of this regime is *algorithmic visibility* (Magalhães and Yu, 2017), understood as a technological structure

along with data creation and probabilistic analysis procedures, the goal of which is to gain the attention of users by dynamically increasing the visibility of any digital content considered 'relevant' for a specific user, making some content either more or less visible. Algorithmic visibility in the architectural dimension affects the mode and type of interaction with the available content. If users are shown content that they are interested in because it relates to their worldview or corresponds to their political preferences, they will interact more often with it. Thus, a specific vision of the world (values, social relations) is imposed or prompted by the technology (software), reflecting either the interests of its creators and other social actors who benefit along them, or those who use it for this purpose. This can also be called 'algorithmic ideology', which results from designing a system based on algorithmic data processing that verifies data according to predetermined conditions in such a way as to achieve specific benefits.

The algorithmising of content on the one hand was the result of both an online infoglut and the freedom of consumption allowed by the network. It should be understood as a way for the media industry to address audience fragmentation, which, with the advent of the Internet, was the result of the transition from the 'one-to-many' mass communication model to the 'many-to-many' media communication model. The fragmentation of media recipients into various groups due to the tastes, interests and needs, among others, in the long run has proved to be a challenge for the media industry, which has had to solicit user attention in what is an era of content overproduction. By collecting various data about users, especially their online behaviour, choices, tastes or interests, it was possible to adapt the offer to their preferences at a low cost.

Media education in the face of datafication and algorithmisation. Developing algorithmic awareness

In the context of the phenomena discussed and their significance for various media practices, it is necessary to include in the area of media education the issues that significantly modify the process of accessing information and content today, have an impact on how users embrace the Internet and what is available to them there. Invisible technologies, such as data and algorithms and their commensurate processing together

with related elements, have been omitted in the field of media education. In order to redress this oversight, these invisible technologies should be included in the research area of media education and considerations on their role in the entire complex process of information circulation and creating meanings, values, and knowledge production and communication power. Researchers of *software studies* (Chun, 2011) and *critical data studies* (Iliadis and Russo, 2016) have already pointed to these issues as being important for functioning in today's world that is saturated with media.

For these reasons I have proposed the concept of media education 3.0 (Ptaszek, 2019; Ptaszek, 2020) which extends the area of interest to the entire technological realm that is invisible to users: digital data and algorithms constituting hidden, intelligent mechanisms for managing their activity, behaviour, attention, content, information and knowledge when using media and new digital technologies, as well as practices related to this sphere. They affect the functioning of users in many different dimensions in a deeply mediated world, e.g. distribution, sharing and consumption of content and various practices associated with them (e.g. social, media, cultural). These elements are an integral part of the wider phenomenon earlier mentioned as an algorithmic ideology. Media education 3.0, referring to the classic media education described by Len Masterman in *Teaching the Media* (1985), emphasises that production, ideology and representation play an important role in the reception of information and content mediated by digital media, and in our understanding of the entire contemporary media ecosystem. Referring to the new context – the digital media environment managed by algorithms – they allow understanding of the mechanism of operation (not in a technical but discursive sense) of both media platforms and various devices connected to the network, the operation of which is based on the analysis of collected data based on information on the user and their activity. They can both create, disseminate, recommend, filter information/content, and influence their shape (e.g. bots, robojournalism). They are ideological (e.g. discriminate, strengthen biased opinions, influence how we think about reality), and the logic of their actions is not objective but subordinated to both a specific vision of the world and certain values.

Just as mass media has exercised social control by closely supervising the process of creating and distributing content, becoming tools of 'narrative transmission', so now companies selling products or services can do so thanks to data collected about users, gaining access to a very large amount of information not only about consumer, political, religious preferences, but also to WHAT, WHERE, WHEN, HOW and WHO WITH users consume digital content. On the one hand, this knowledge facilitates the management of Internet resources in such a way that the user receives content tailored best to their own preferences and needs, on the other, it allows for manipulation of content depending on the goals that companies or entities related to them want to achieve, e.g. displaying prices in response to the demand for a service at any given moment or following an analysis purchasing behaviour.

Therefore, developing and testing algorithmic awareness should become one of the key tasks for media education. Algorithmic awareness can be defined as a mental state in which individuals notice the occurrence of invisible technological processes regulated by algorithms and their impact on how the same users consume and experience content. This does not have to be based on knowledge of how technically algorithms work, but on the users' internal belief that 'something's wrong'; which drives them to seek an explanation for this particular state of affairs (Rader and Gray, 2015, p. 176). Taina Bucher, analysing the operation of Facebook algorithms, describes situations in which subjects become aware of the algorithms. Bucher's research shows that people notice an algorithm when it makes a mistake in predicting what they would like to see (e.g. suggests content that is not compatible with their interests or offers products that do not match their needs) (2016). Detection of error entails an impulse to undertake the practices of 'repairing' the algorithm or 'deceiving' it.

Algorithmic awareness is associated with the concepts of 'data assemblage' and 'algorithmic visibility' discussed earlier, and is focused on understanding:

- (1) how individual elements of the technological and social system affect the production, circulation and experience of content;
- (2) what determines the visibility of content on the internet;
- (3) how the visible depends on the designed system, what factors determine this design;

- (4) what user activities are regulated by algorithms;
- (5) what actions the user can take to make something visible to algorithms and systems.

The development of and research into of algorithmic awareness is therefore intended to give greater autonomy to the user and to support the critical use of digital media and understanding pertaining to how different elements of the technological and social system affect and shape the public sphere. This is of great importance not only for individuals, but also for societies, because due to the lack of transparency in the functioning of algorithms, they can be designed to highlight specific threads in public debate, leading to a polarisation and tension between specific political groups and the promotion of hatred or violence (Caplan and Reed, 2016, p. 85). This problem does not only apply to popular social media platforms or search engines, but also increasingly to the editorial staff of online news sites and news aggregators (Bucher, 2016).

Research shows that Internet users, especially of social media platforms, are aware of algorithmic content management processes that affect their online activity to varying degrees (Rader and Gray, 2016; Rader, 2017). In a study conducted at the end of 2018 by the Pew Research Center (Hitlin and Rainie, 2019) as many as 74% of Americans stated that they did not know that Facebook creates a list of interests of each user based on their activity and tailors ads feeds as based on these lists. However, whilst the majority of users (59%) found the categories assigned by Facebook in the preferences of ads to reflect their real interests, 27% of respondents stated that they were incorrect or incomplete. 51% of respondents also said that they felt uncomfortable with the idea of automatic categorisation, while 31% said that it was in some sense convenient.

Algorithm designers should be aware that even though the impact of the algorithm is not clearly visible to users, they can still adapt their behaviour in terms of how they believe the system is working to achieve their system usage goals. This means that there exist user beliefs about individual interactions with the system, and also – due to the feedback loop – about the overall behaviour of the system. Algorithmic selection is effective (and invisible) when it satisfies the user – and it commensurately also drives consumption. However,

when system hints are missed, the user sees the system and begins to play it.

Noticing the operation of the algorithm can not only help broaden the user's horizons, but also change the impact of the algorithm. An awareness of content management by the algorithm and various attempts to interact with it, such as changes in data, can cause the algorithm to read and categorise the user differently. The algorithms are based on data, and therefore knowledge of how they work does not necessarily have to be based on computer programming skills and knowing code. One can understand their operation through the ways in which we use them. Algorithmic awareness allows the user to analyse specific scenarios that have led to specific algorithm behaviour. In this way we will learn how network traffic is read by the algorithm and based on which movements the algorithm can offer us specific content.

Algorithmic awareness can therefore influence how users will manage their data and how they will behave and react to content. Such awareness also plays a key role in shaping the algorithm itself, because its operation is based on machine learning, and as a result of errors and an increasing data set, it will have to change, improve, and adapt. The beliefs of users who do not allow the algorithm to operate by default are an important element in the shaping of the system. Being aware of the presence of an algorithm, regardless of whether it is correct, can affect their behaviour, and can lead to more active involvement in content control or the manipulation of the algorithm via specific actions. We can interact with the algorithm by predicting its results, giving ourselves the opportunity to improve information channels, and facilitating oversight over that which the algorithms will see.

(trans. MW)

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**Disinformation, Radicalisation
and Other Information Disorders:
Lessons Learnt for Media
and Information Literacy**

Introduction

'Fake news', radicalisation, disinformation, hate speech... These phenomena have caught politicians and public opinion off guard and have led to democratic 'accidents', such as the *Charlie Hebdo* terrorist attack (2015) and the Cambridge Analytica scandal (2018), that called into question the role of the Internet and social media in democratic societies, as lives had been taken violently and elections had been tampered with. The dominant paradigm up until then had been the vision of the 'Information Society', which had its inception with the World Summit on Information Society (WSIS) that lasted from 2003 to 2005 with yearly meetings in the UN in Geneva. In the wake of a new international framework towards building 'Knowledge Societies' – as defined by UNESCO and civil society actors during and after WSIS – worldwide initiatives were taken, such as the Alexandria Proclamation on Information Literacy and Lifelong Learning (2005), the Paris Agenda for Media Education (2007) and the Fez Declaration on Media and Information Literacy (2011), that promoted MIL for the first time.

But this positive construct of the early 21st century has been challenged since that time. After the 'social turn', i.e. the creation

of social media platforms, such as Facebook, Twitter and YouTube in 2005-07, after the Facebook and Twitter ‘revolutions’ of the 2011 ‘Arab Spring’ and its attendant movements of the squares, 2012 saw a series of events that signalled the emergence of information disorders of different kinds. In 2012, these same social media platforms floated on the New York Stock Exchange and found at last a sustainable business model, based on advertising. They also started placing advertisements in their newsfeeds and made mass media depend more and more on them, thus modifying the status quo, whereby they were just supposed to be information providers, and not the mainstream media themselves. 2012 also showed an unprecedented rise in terrorist attacks, first in the Middle East (Iraq, Afghanistan, Syria...) and then in the Western world, with several religious solo attacks (France, Belgium, Bulgaria...), in which the Internet and its social media were incriminated for their role in providing a tool for recruitment and facilitating access to a worldwide audience (Europol, 2013).

In this dual context of Information affordances and Information disorders, the MIL community of researchers and practitioners is also being challenged: it has to reassess the role of MIL in the current situation and see how to balance the opportunities and the risks of the digital world, so as to harness the digital augmentation of the Web 2.0, its social media and its big data flows. This implies taking stock of the ‘social turn’ and the new information contracts it offers as data impact media and then considering the specificities of the information disorders with their ‘not-so-social’ social media. The balancing act then consists in providing the strategies and tools for enabling MIL and for fostering a resilient citizenry that can maintain its online freedoms while juggling with issues of security, surveillance and privacy.

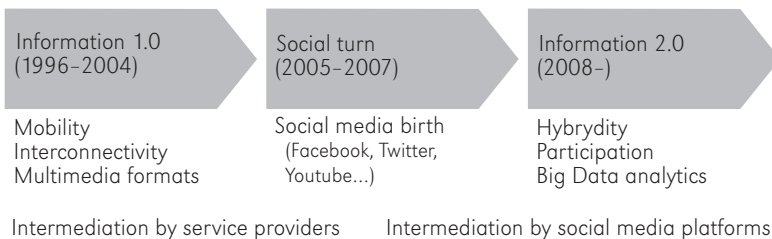


Fig. 1. The Social Turn

1. From mass media to social media: the convergence of information cultures

1.1 Understanding the social turn

The Web 1.0 was characterised by groups, lists and forums in which individuals were loosely connected by interconnectivity and with the intermediation of Internet Service Providers (ISPs). Pre-digital mass media went online as a perfunctory obligation in order to occupy the virtual territory, but without changing much to their offline processes. With the advent of the Web 2.0, a conceptual and technical leap took place, as growing computing power and Internet bandwidth as well as smaller mobile devices, user-friendly interfaces and ready-to-mediatise platforms empowered these individuals via connected networks and communities, in a decentralised and horizontal manner, with intermediation by social media platforms (Fig. 1). Pre-digital mass media lost their information monopoly and had to measure up to and comply with the pure player strategies, especially in terms of advertising strategies and revenues. The same media also had to register the emancipatory power of the communities talking back to them.

The social turn can be defined by this move away from an information contract held by professionals and experts, which defined ‘the social’ and its agenda, to a sharing contract that encouraged users of all sorts to expose their experiences and emotions, to address and respond to the media without an entailed delegation to a selected few. The old notion of ‘the public’ mutates from audiences to communities, from viewers to users. Collections of contacts reorganise families and friendships. Exposure to information is comingled with exposure to others. Facts are juxtaposed with ‘social facts’ as they are mined by social network analysis and its data visualisations.

1.2 The shuttle screen situation

This evolution has led to an augmentation of the notion of ‘information’, enriched by several cultures: information as news coexists with information as documents (files in all formats like word, jpeg, ppt, excel...) and information as data (code, algorithms...). These three information cultures have shaped media, be it media 1.0 (mass media online) or media 2.0 (pure player social media). The two types of media coexist in a shuttle screen situation, where contents and comments coevolve, where audiences and

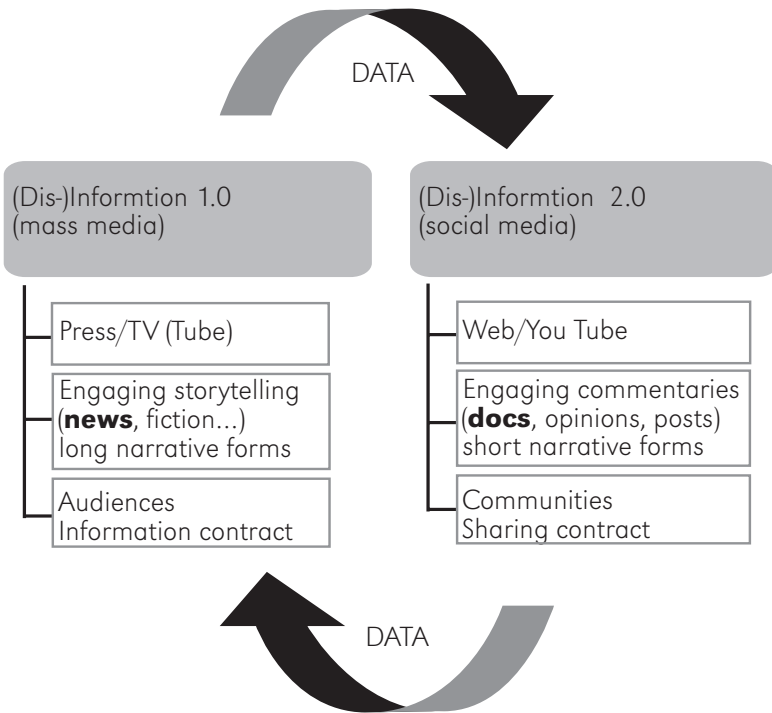


Fig. 2. The Shuttle Screen Situation

communities cohabit, where data mining and its social profiling affect the communication processes of exchanging news and docs (Fig. 2).

More importantly, the information contract established by pre-digital media coexists with the sharing contract established by digital media. The information contract remains based on the investigative 'story' told by professionals (journalists, experts) who identify a problem, analyse it and propose solutions with reasoned arguments. By contrast, the sharing contract is based on short 'stories' (as in Snapchat live snaps or Instagram shorts), created out of the experience of online participants who are surprised or angered by a scandal, a call for change and a desire to alter the agenda and the frame, and to finally propose reasoned arguments. So both contracts aim at a similar end, i.e. reasoned arguments, but the validation process and the ratio between empathy/reason, proximity/distance, investigation/experience differs (Fig. 3).

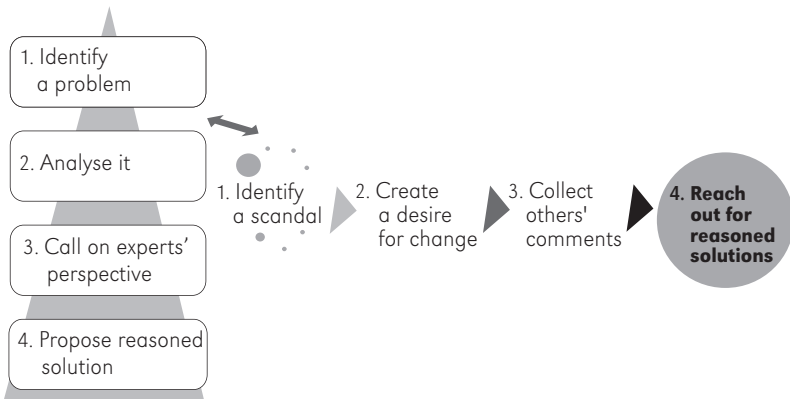


Fig. 3. Information Contract vs Sharing Contract

The current conflation of these two contracts is what yields way to information disorders, as the main characteristics of the three information cultures turn out to be reversible and usable by disinformation, as they can coexist in the same spaces (Merzeau, 2017). The whole value chain of information is shaken: news can be tampered with without detection; docs can be altered in a seamless manner; data can be distorted by bots and malware pushing some contents to the detriment of others. Stories can take the guise of rumours, satires, urban legends, or downright propaganda, all of which pour doubt on institutions and value systems. And users have access to both information and disinformation, which enables all kinds of allegations, opinions and ‘alternative’ facts to compete with verified and core facts.

Because it applies critical thinking to the political, cultural and societal sphere, MIL has also developed its own critical view of ‘the social’ as it is being constructed and disrupted by the shuttle screen situation and the two competing contracts. The true nature of social media and social life online needs to be scrutinised and examined as much for its emancipatory virtues as for its dangerous disruptions, as they spread electronically and virally (Lovink, 2012; Keen, 2012). The erasure of real-virtual dichotomies is looming as the online world has offline consequences, as evinced in particular by ‘fake news’, with the attendant shift from a discourse of trust to that of distrust in social media and media at large. Network practices shape the social and oscillate between information/disinformation as growing tensions appear

worldwide, with religious strife and the race for scarcer resources, which can explain the current instability, even explosiveness, of some online echo chambers where the once reciprocal spaces of expression have become polarised.

The disruptive nature of the social media, which returns in the shape of information disorders, with populism and radical Islamism and other extremisms where the contact with others becomes more of an obstacle than an opportunity, requires 'epistemic maturity' (Frau-Meigs and Bossu, 2018), i.e. a kind of reflexive distance that focuses less on the nature of knowledge than on the circuits of validation of information. Epistemic maturity is most needed to understand and counteract information disorders and it can be activated by adopting a MIL mindset.

2. Information disorders and social awareness in times of crisis

2.1 Radicalisation

Online radicalisation began to grab public attention, especially in relation to young people, with the war in Syria and the linked series of ISIS terrorist attacks against the Western world from 2012 onwards. Terrorists were early adopters of social media as well as the 'dark net'. They used them for their own purposes in organising and training; they used encryption to be under the cover of anonymity while taking advantage of the decentralised nature of the Internet (Alava et al., 2017). They also used them for external purposes, for recruitment, propaganda and disinformation. They operated with young disaffected people as their main target and worked with professional quality tools (viral videos, modified video games...). They adjusted their storytelling according to different purposes: to convey victimhood, to create a sense of belonging, to call for hatred and incite to terrorism.

Research shows that social media do not radicalise young people on their own but can facilitate the actions of the terrorists in their strategies of radicalisation post-recruitment: they rely on the confirmation biases of young people and reinforce their feelings and their acceptance of plot theories and disinformation; they allow for crucial data gathering; they can tactically facilitate the planning of mediated events and attacks. Social media can isolate young people from their real-life friends and family and induct them into a sense of belonging to a 'cause' (Weimann, 2015),

and to a new brotherhood that values them and shares a common ideology (Alava et al., 2017).

Research also demonstrates that social media are part of a wider media ecosystem, where the shuttle screen situation plays an important role (Hassan et al., 2018). Mass media also have their share of responsibility, as they propagate sensationalist images and videos, raise alarms in the larger public as to the social media, broadcast 'fake news', and spread rumours without all necessary verifications, etc. Mass media as well as social media tend to focus on violent representations and actions, and are weaker at proposing contextualised, historical and geo-strategic explanations that could root radicalisation in structural and societal reasons, such as religious conflicts, discrimination or unemployment (Alava et al., 2017).

2.2 Disinformation

Disinformation started catching the public eye in the form of 'fake news' in 2016 (US Elections, Brexit referendum), but in fact it can be traced back, in a large scale, to the Obama election of 2012. Here too, the role of social media as major propagators and amplifiers of disinformation was called into question. They were perceived as a threat to the integrity of information. Social media were seen as a facilitating environment that created echo chambers (Quattrociocchi et al., 2016) and isolated people in filter bubbles (Pariser, 2011; Flaxman et al., 2016). They were perceived as creating polarised social spaces online and offline (Weimann, 2015). They were considered as spaces where all sorts of cognitive biases are reinforced, in particular confirmation bias and bias of continued influence, that resists refutation; and contrariwise produces a 'boomerang effect' that reinforces the belief in the 'alternative fact' (Frau-Meigs, 2019).

Disinformation was also perceived as a threat to the integrity of elections, with suspicions of foreign meddling. It was not so much referred then to as 'fake news' but rather as 'hybrid threats', that is to say the subversive uses of information with war-like objectives for destabilisation, in a coordinated yet hidden manner (High level expert group report, 2018). Cyber hybrid threats were spread through social media only to be re-amplified by users and white-washed by main stream media, via trolls and bots, so as to create the illusion of an important support for the polarising of minority ideas (Flaxman et al., 2016; Vosoughi, 2018).

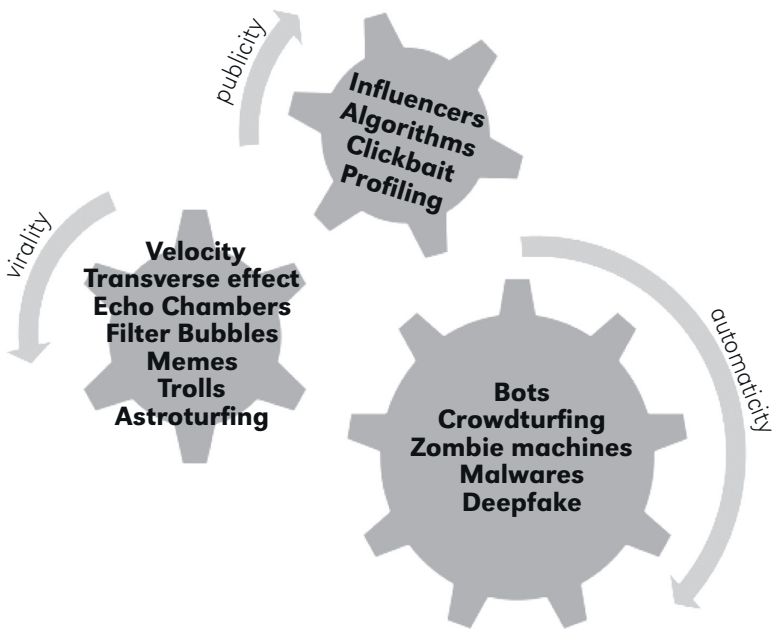


Fig. 4. Mechanisms of Disinformation

As with radicalisation, research shows that social media are part of a wider media ecosystem, and points to the shuttle screen situation where mass media also contribute to propagation and amplification. They can create and produce ‘fake news’ and propagate them while also calling attention to the damaging role of social media. Both mass and social media are engaged in a race for traffic and profits, and use clickbait to attract audiences and communities, especially since 2012, when Facebook and Twitter floated on the stock exchange and became beholden to the pressure of shareholders. They both use mechanisms of virality (memes, trolls, echo chambers), publicity (clickbait) and automaticity (social bots) (Fig. 4). This eventually can create damages to trust, opinion-making and democratic societies (Frau-Meigs, 2019).

2.3 The difficulties of active debunking and effective rebuttal

The direct and indirect impacts of radicalisation and disinformation may lead to long-term chilling effects on freedom of expression and freedom to receive and impart information, with attendant damages on democratic processes. The overall

democratic cost boils down to a lack of trust in institutions and media and to a sense of disengagement and disempowerment for most people, and in particular young people. Which explains that most of the responses proposed, be they about radicalisation or disinformation, point to: i) the need to develop resilience in the population, ii) the necessity to equip young people to be mindful of their rights and responsibilities online, iii) the importance of developing counter narratives, and iv) the urgency to resort to multi-stakeholder alliances.

The analysis of existing responses points to the development of counter-narratives that build resilience among the population. In the case of radicalisation, Countering Violent Extremism (CVE) is on the rise to address policy-makers and to empower ‘intervention providers’ (social workers, former extremists, youth mentors, counsellors...). It extols counter-narrative strategies to raise awareness of the problem and to promote responses to hate speech and incitement to terrorism. For instance, *The Counter-narrative Handbook* defines counter narratives as ‘a message that offers a positive alternative to extremist propaganda, or alternatively aims to deconstruct or delegitimise extremist narratives’ (ISD, 4). The authors propose various strategies for refutation:

- Focusing on what we are for (rather than against) by offering positive stories about shared values, open-mindedness, freedom and democracy;
- Highlighting how extremist activities negatively impact on the people they claim to represent;
- Demonstrating the hypocrisy of extremist groups and how their actions are often inconsistent with their own stated beliefs;
- Emphasising factual inaccuracies used in extremist propaganda and setting the record straight;
- Mocking or satirising extremist propaganda to undermine its credibility (p. 4).

The RAND Corporation suggests supporting online voices that counter violent extremism (Helmus and Klein, 2018). The Institute for Strategic Dialogue lays the focus on the role of former extremists for counter messaging (Silverman et al, 2016). The Radicalisation Awareness Network (RAN) posits that a presence in and proximity to communities prone to producing radicalised

individuals can help. The Anti-Defamation League has been working on 'confronting hate online' with its own 'toolkit for action'. Campaigns like 'Say no to terror online' or 'Walk away from violent terrorism' have been launched and evaluated, with moderate results (Davey et al., 2018).

In the case of disinformation, it is the rise of fact-checking that is most notable. Being able to separate fact from opinion and legitimate sources from disreputable sources appears as necessary for a preparedness to anticipate any forthcoming issues or events. Here too, the strategies deal with refutation, showing 'credulous' people that their actions are inconsistent, that their beliefs are unsubstantiated, that their reasoning is flawed, and that their values are not democratic. They try to deal with cognitive biases, i.e. distortions in the perception of information that make individuals very hard to persuade in terms of changing their mind. Cognitive biases are mechanisms that modify logical thinking, and favour non-rational but highly emotional decisions in the treatment of information, with incidences on choices to publish and replicate fake news. They tend to resist refutation because, in the face of incomplete or contradictory information, the brain will choose the path of least resistance and of habit.

In their *Debunking Handbook*, Cook and Lewandowsky (2011) recommend not trying to replace a piece of disinformation with the appropriate verified information, because of the 'backfire effect'. For effective rebuttal, they suggest not to address the 'myth' directly, but to subsume it in a larger narrative that is focused on 'core facts' and to avoid overly complicated explanations and corrections. They point to the necessity of paying attention to people's worldview and sense of place and identity. So information has to be framed in a way that doesn't threaten directly a person's worldview; so that they may preserve a sense of self-worth. They suggest various strategies:

- Core facts - a refutation should emphasise the facts, not the myth. Present only key facts to avoid an Overkill Backfire Effect;
- Explicit warnings - before any mention of a myth, text or visual cues should warn that the upcoming information is false;
- Alternative explanation - any gaps left by the debunking need to be filled. This may be achieved by providing an

alternative causal explanation for why the myth is wrong and optionally, why the misinformers promoted the myth in the first place;

- Graphics – core facts should be displayed graphically if possible (p. 6).

In both cases, the strategies and solutions have issues with engagement. CVE tends to mimic extremist groups strategies for recruiting young people online: marketing ideas via a mix of plot theory, propaganda, rumours and gamification to then engage interested individuals in one-to-one conversations. And currently, direct engagement of young people by ‘intervention providers’ is a component of offline counter-terrorism programmes while online intervention tends to focus on the removal of content or the competition against extremist propaganda with online campaigns. The same obtains for fact-checkers and their apps and plug-ins: they tend to debunk fake news and provide counter-narratives while signalling the social media platforms to remove fake content and to demonetise spurious websites.

In both cases, the strategies and solutions tend to show a heavy component of Media and Information Literacy. CVE trains people in an understanding of online advertising, on engaging audiences, providing tutorials and apps for interesting and efficient content creation online (www.counternarratives.org). Fact-checking has taken to going into schools and train teachers and students in source analysis, citation evaluation, and online safety. They all point to the data dimension of the social media, bringing attention to analytics such as awareness metrics (impressions, views, clicks) and engagement metrics (likes, shares, comments).

In both cases, two major shortcomings need to be pointed out: the difficulty of dealing with cognitive biases at an individual level; the lack of engagement at scale at collective level. In the case of cognitive biases, mechanisms that develop critical thinking and increase basic knowledge and students’ heuristics for checking need to be put in place as early as possible. As for engagement at scale, the only really scalable strategy is to turn schools and libraries into platforms for civil refutation and counter conversations. This brings about the need to define Information disorders and place them within the MIL epistemology and eco-system in a holistic manner. MIL stimulates critical thinking, to elicit effective counter-narratives, to provide new engagement models and

to rely on multi-stakeholder involvement (including private/public/civic partnerships). MIL also presents itself as a democratic solution of choice, as it entails neither censorship nor hard legislation but rather soft strategies that deal with self-regulation and, most importantly, with prevention much more than remediation.

2.4 Defining information disorders

It is the conjugated thrust of radicalisation and disinformation that first triggered social awareness to the information crisis. However, the notion of 'Information disorder' has made its appearance in research and in MIL circles only in 2017, supported by researchers in the field of journalism and data. It has been defined around three types of warped information: 'disinformation, misinformation and malinformation [...] with various degrees of deliberation and of intention to harm' (Wardle and Derakhshan, 2017; Marwick and Lewis, 2017). But the plural 'information disorders' (Frau-Meigs, 2019) seems necessary for considering their interconnectedness with the three cultures of information (news, docs, data), as well as their concatenated contracts (information vs sharing) with their effect on public discourse and behaviour, with the rise of hate speech, incitement to terror and downright attacks on the notions of truth and trust.

In the past, MIL has dealt with 'harmful content and harmful behaviour' (Millwood-Hargrave, 2006), that is issues of violence, pornography and harassment, with incidences on protection of minors (Livingstone et al., 2012; Hobbs, 2011; Frau-Meigs, 2011b). Such issues have been the early pre-digital 'information disorders' and probably the most researched area in the field, on the reception side (effects of televised violence on young people, addictive dimensions of video games...). They relate to this 'grey zone' of harms that are not illegal or illegitimate in most countries, except within the EU where they can be sanctioned if related to hate speech, racism or incitement to terror.

Extending risks of harm to information disorders because they comingle with hate speech and other inappropriate discourses and behaviours needs some careful framing in order to avoid the temptation of substituting education by regulation. This would be tantamount to a form of censorship. Hence the need for a careful mapping of such information disorders (Fig. 5) and a consideration of the societal stakes to which they relate.

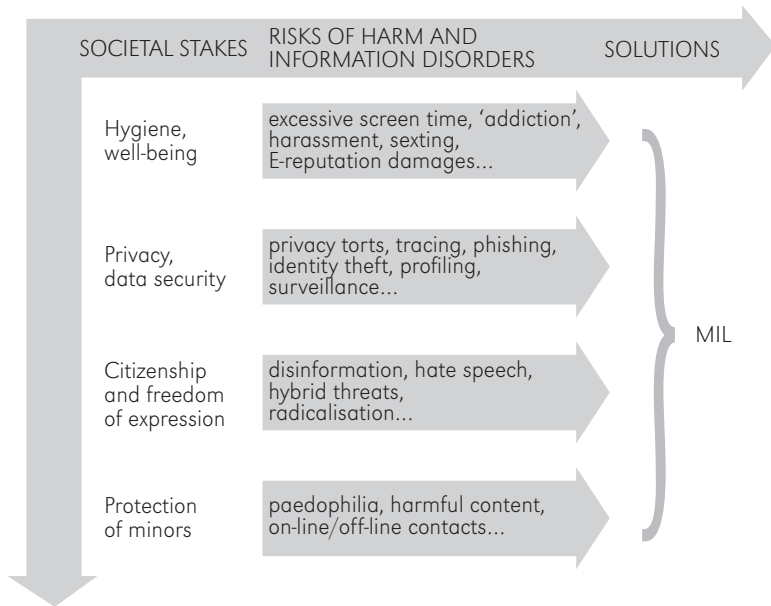


Fig. 5. Classification of Information Disorders

3. Enabling MIL: policies, curricula and training

MIL makes it possible to investigate societal stakes and to focus on 'the social' and its logic inside the digital world, because it promotes critical thinking and self-reflexivity while upholding human rights values. It is the kind of field that can engage with computing and informatics from the perspective of interpersonal and distributed communication, with the three cultures of information at the core.

3.1 Augmented MIL epistemology

Historically, MIL is embedded in such debates, because it recombines an active pedagogical posture with a political project that is increasingly becoming a socio-economic right, as evinced in its core notions matrix (Fig. 6). As a pedagogy, MIL occupies all the entire range from citizenship to creativity, as a hands-on form of learning, including an engagement in the politics of the world. As a political project, MIL is connected to democracy and empowerment resulting from the protection and preparation of young minds to safely participate in citizenship actions.

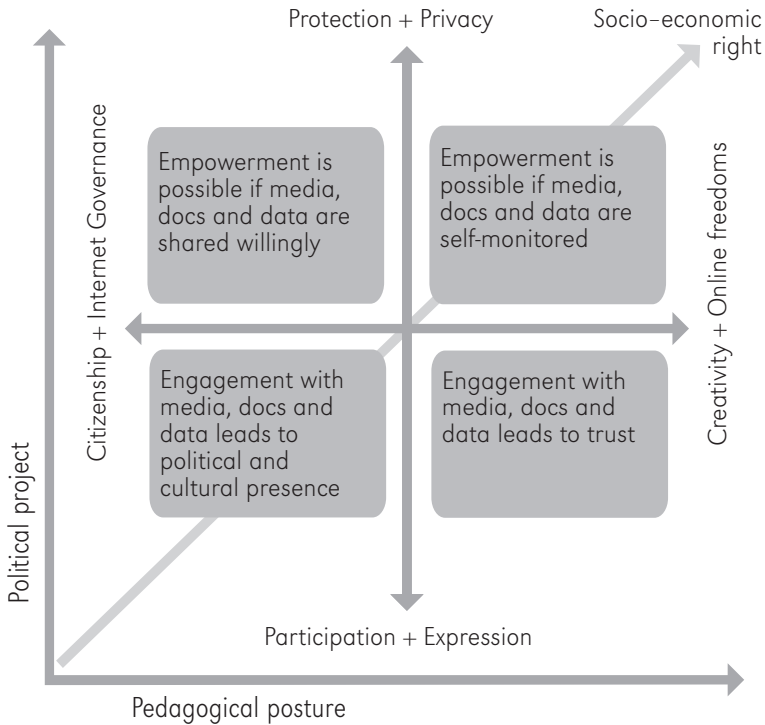


Fig. 6. Core Matrix of the Epistemology of MIL

This combination of pedagogy, politics and rights defines the epistemology of MIL and anchors its core subjects that provide the guidelines for any balanced curriculum on the matter. The advent of digital media have put a lot of emphasis on the right lower part of the core matrix quadrant (creativity and participation) because of the low barriers of entry into innovative educational tools such as 'The artist in you', in the Council of Europe Handbook *Web We Want* (<http://www.webwewant.eu>) or the gamification options of web services Quia (www.quia.com/web), or the simulation options of Active Worlds and Sim City. But with the emergence of information disorders, it is the left higher part of the core matrix quadrant (citizenship and protection) that is solicited as well.

As it has increasingly been embedded in legal instruments, such as the Directive on Audiovisual Media Services of 2018, MIL is also a socio-economic right in the EU. The Directive makes Media Education mandatory in the member states (article 33a).

Additionally, video-sharing platforms have an obligation to provide for effective media literacy measures and tools and raise users' awareness of these measures and tools (article 28b(j)). The Directive needs to be harmonised into national laws in each member state, required as they are to take measures for the development of media literacy for all their citizens. This is an opportunity for MIL to become a part of the core curriculum and to help turn schools and libraries into fully-fledged platforms.

3.2 Legitimising MIL competences

MIL has traditionally been constructed as a transversal element of the curriculum due to the resistance of other core subjects. But it has evolved into a complex set of notions and strategies that propose pedagogical solutions for creating resilience among young people and fostering diversified refutation techniques and counter-narratives to information disorders. In so doing, MIL places information as part of the political process and the basis for democratic societies where truth and trust are achieved via many mediations. And as such MIL needs to be a component of basic education, as recommended by the High Level Expert Group on Fake News and Online Disinformation of the EU (2018), which also suggested making it one of the PISA measurements. By being given a full place in the curriculum, MIL can benefit from a legitimate position and can be evaluated per se, one of its chronic problems – as it can never fully prove its effectiveness and sustainability beyond 'sensible practices' (Frau-Meigs et al., 2017a).

Another chronic problem has been addressed since WSIS: teacher training and curriculum development. UNESCO's *Media Education: A Kit for Teachers, Students, Parents and Professionals* (2006) and UNESCO's *Media and Information Literacy Curriculum for Teachers* (2011) have pioneered the task of delineating basic competences for MIL, as a 21st-century literacy. They addressed the need to identify the social skills for dealing with participatory social media, such as empathy and respect, an increasingly complex task as the mediation of digital screens can lead to information disorders.

In recent times UNESCO has developed the programme, *Global Citizenship Education: topics and learning objectives* (2015) that includes key learning outcomes, such as communication and participation. In its framework for *Education 2030* (2015-19), the

OECD includes soft skills, such as agency, openness, respect and empathy, as part of its Global Competences. The Council of Europe has developed its *Framework for Democratic Citizenship*

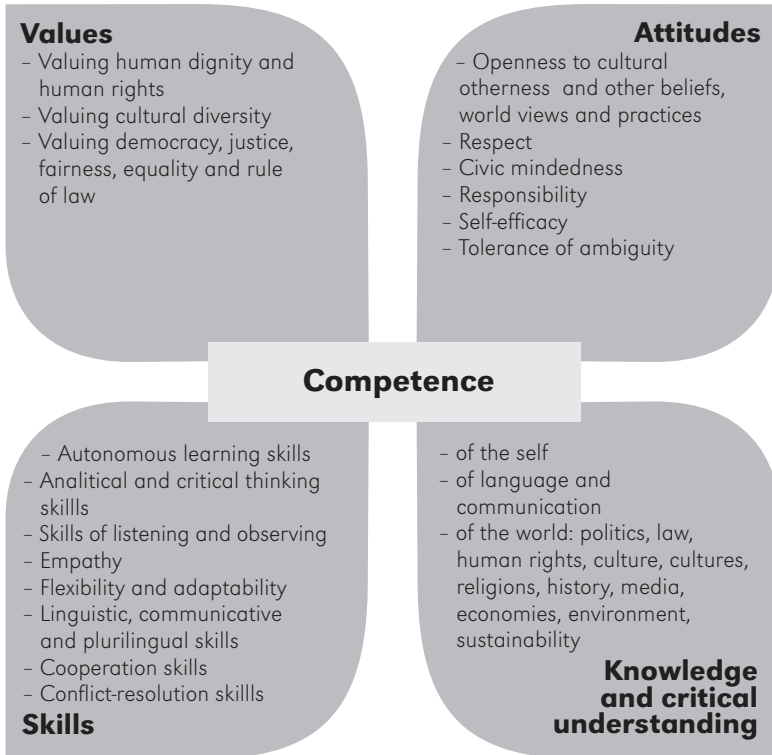


Fig. 7. The DGE Butterfly of Competences

Source: *Competences for Democratic Culture. Living together as equals in culturally diverse democratic societies* (a model for participation in democratic culture). DGII/EDU/CDCID, 2016.

(2016) and inserted MIL in its dimensions for learning, clearly emphasising that competences cannot be reduced to skills but have to include attitudes, values and knowledge (Fig. 7) (Frau-Meigs et al., 2017b).

3.3 Moving to MIL Platforms

However, MIL is a lifelong literacy, as people, at all ages, need to upgrade constantly their knowledge of the digital world that is so heavily mediated. In the face of increasing information disorders, basic digital culture has to be suffused in various spheres in

and outside schools. To do so, a solution could be to create identifiable MIL platforms. This is the proposal of the project SMILE (Synergies for Media and Information Literacy in Education).

This project has been proposed by the Association Savoir* Devenir and is funded by the French Agency for Development, with a pilot centre being tested in Tunisia (www.savoirdevenir.net). It purports to implement the MIL epistemology and competences in a distributed and collaborative form. Hence it focuses on the governance of MIL in a multi-stakeholder manner, that is coordinated so as to bring together several actors that do not often have an opportunity to work together, such as platforms and local authorities, academics and media authorities. Such a centre could be coordinated and networked with other centres of the same type and benefit from the trans-border facilitations of the Internet. It could also mostly have an online presence, with lots of materials and tutorials offered for teacher training, and for the public at large.

Other projects could place MIL at their core and offer platforms. Such is the case of YouCheck!, a project funded by the DG-CONNECT and carried by Savoir*Devenir. It aims at putting the InVID plug-in, used by professionals to debunk fake videos, at the disposal of the teaching body and the public at large, with lesson plans and tutorials available online.

MIL can thus help build more than digital resilience and coping; it can put the initiative back into the hands of educators and practitioners. Seeing it at as a platform, fully equipped with tools, tutorials, apps and human presence can help build long lasting and sustainable strategies, especially for refutation and counter-discourses. MIL is ideally placed to propose plans for action, for de-radicalisation and re-engagement, with methods influenced less from the fields of public health and social work than the fields of the digital humanities and the information and communication sciences. Hence it can propose direct engagement and empowerment by activating its strong holistic strategies that call on all actors around young people and grown adults, be it family, school or social media platforms. Any refutation plan to combat information disorders can include several steps that can evolve in an agile manner, to upgrade to new issues (Fig. 8).

MIL can provide tools and training for practitioners who need to recognise strong and weak signals of information disorders

E = Embryonic					E
D = Developed in rudimentary manner				D	
C = Comprehensible but with some gaps			C		
B = Balanced		B			
A = Acceptable	A				
	A	B	C	D	E
<p>– Step 1: create a climate of trust around a MIL project share the refutation and debunking stakes; establish the purpose and protocol of project; consider the legal implications (risks, sanctions...) ...</p>					
<p>– Step 2: associate the neighbouring actors (families, youth...) establish contacts with families; establish contacts with youth groups; ensure co-design of project with them; provide training in debunking and rebuttal strategies ...</p>					
<p>– Step 3: incorporate the external actors (social media platforms, local media...) obtain specific codes of access for experimentation; verify tools for signalling; inform about the upcoming events in relation to projects ...</p>					
<p>– Step 4: facilitate young people’s agency and production train them in MIL competences (skills, attitudes, knowledge and values); help them evaluate all sides of arguments; provide access and digital tools and devices for their action ...</p>					
<p>– Step 5: develop a team strategy valorise the experiences and differences of all; foster a culture of trust and respect; make the circuits of information sharing visible and transparent; designate resources and contact points ...</p>					
<p>– Step 6: evaluate and valorise show the deliverables produced; publish and broadcast the results; demonstrate the values of ethical behaviour and online citizenship; gather the comments from experience and consider attitude changes; review and prepare an agile version for the year to come ...</p>					

Fig. 8. Refutation Plan (DIYMode for Schools, Libraries, Third Spaces)

and their effects on users and citizens (incipient radicalisation, early signs of bullying, inordinate use of hate speech...). And it can prepare access to various agencies for referral, from the police to the mental health psychologist, including the social media platforms and a whole range of support systems, including peer-to-peer mentoring, as young people should not be left out of the equation.

The idea is not to approach information disorders from the perspective of the vulnerabilities of people and societies but from their strengths, with holistic assessments around school or community projects that can bring together various groups of actors. Pre-existing infrastructure is key, in particular spaces that welcome people of all sorts, like libraries and third spaces that are increasingly connected and networked. These spaces are easily accessible and combine online and offline presence, leaving a latitude for intervention; from prevention to remediation.

Conclusion

MIL holds the potential to help citizens and institutions such as school and libraries fight information disorders while making a smooth transition to the 21st-century soft skills required for digital citizenship. Activating this potential necessitates the building of MIL as a stand-alone subject, with its own epistemology (engagement, empowerment, creativity...) and its own concepts (shuttle screen situation, information contract, sharing contract...). It is the only way of embracing at once the mediation and datafication of culture and retaining and harnessing it in a sense-making whole. Skilling teachers and all sorts of intervention providers by empowering them with adequate resources and supportive networks is a key strategy that needs to be implemented by the public sector, and in unison with all the other stakeholders. The current phase of information disorders points to the need for re-intermediation, a process that holds the potential of reconciling the information contract with the sharing contract, the mass media with the social media by calling for the mediation of all sorts of professionals that were once disaffected and disempowered. In this context, MIL should no longer be the solution by default but the solution by design.

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Countering Fake News and Hate Speech in Kenya: A Case for Sustained Media Literacy Programmes

Introduction

The transformation from industrial-powered societies to knowledge-oriented societies is becoming a reality every day. The third revolution entails transforming the way human beings interact – the means of knowledge production, its dissemination and consumption. Today so much is happening on various technological-powered platforms that what has for many years been considered as ‘traditional’ is faced with a plethora of challenges. At the heart of this is social media.

To a great extent, media consumption is now online and therefore the mainstream media has had to transform itself in order to compete with the fast, internet-powered social media which has few rules and limitations, if any. Its liberal nature cannot be gainsaid. As such, the 21st-century traditional media is operating Twitter handles, Instagram profiles and WhatsApp and Facebook accounts, which have to be kept active and relevant in order to compete with the ever wide-ranging and evolving social media which is now a critical source of breaking news. Certainly, editors are combing Facebook, Twitter and Google for new sources day and night.

But the same editors are faced with the challenge of dealing with ‘mistruths’ commonly known as fake news, a menace that

is impacting on many communities across the globe. Together with this form of misinformation is hate speech, which is also widely purveyed via media. These challenges are affecting both developed economies and developing ones, giving rise to diverse experiences and thus provoking unique responses.

In Kenya, for example, mainstream media, which is traditionally held in high esteem, has been especially affected – twitter handles getting hijacked, fake news being manufactured and shared on WhatsApp and other platforms employing the genuine logos of reputable media. What is worse, journalists are falling prey to fake news, as too are radio presenters during live discussions. The entire issue has become a thorny issue, and the solution will require more than legislative framework policies and fact-checking desks. This is especially pertinent given that traditional media remains the most reliable source of factual information for Kenyans, with most Kenyans utilising this media as their ultimate tool of verification.

This paper looks to explore the experience of the Media Council of Kenya with combating fake news and hate speech through media and information literacy (MIL). By drawing on the pilot project *Countering Fake News in Social and Mainstream Media in Post 2017 Election Kenya*, which was implemented for a period of six months across Kenya, this paper argues for sustained media and information literacy programmes as a way of addressing fake news and hate speech. As we shall see though, such efforts should not only be targeted at misinformation and hate discourse but also a plethora of other subjects to bring about a comprehensive understanding of the functioning of media in Kenya itself.

From this project, it became clear that disinformation had penetrated every section of society and impacted its functionality and relations among various actors and sectors. For example, as a result of false information, journalists had been attacked and their equipment destroyed. To some extent, the MIL forums implemented under this pilot project restored public confidence. This was all however too little as it only reached a small part of the country (i.e. 791 participants directly).

This paper, therefore, will forward a case for media and information literacy programmes. By drawing from the results of this pilot project the study goes beyond to argue for sustained efforts

targeting especially the public, which is the primary consumer of media. A public that understands the media is better placed to make objective decisions pertaining to its consumption of the same. The paper foregrounds a media education that brings together journalists, civil society, government and the general public. It makes the assumption that a media literate public is capable of acting rationally, thus making the promotion of media freedom and professionalism achievable; and by extension, creating what may prove to be a stronger functioning democracy.

A much briefer version of this paper was presented in Warsaw, Poland, in November 2018 at the invitation of the Polish National Commission for UNESCO and National Film Archive – Audiovisual Institute in Warsaw.

Section I: Defining key terms

(i) Media and information literacy (MIL)

While Deutsche Welle Akademie links media and information literacy to access to information, free expression and education, UNESCO sees MIL as a way of empowering citizens by providing them with the competencies (knowledge, skills and attitudes) necessary to engage with traditional media and new technologies.

DW defines the term more succinctly on two levels:

- as the ability to access, analyse and create media,
- as a prerequisite for citizens to realise their rights to freedom of information and expression.

DW therefore puts a lot of emphasis on content creation and engagement, therefore focusing on the individual as the key actor, their capacities and ability to employ cognitive skills (seen within various rights and freedoms) to access, analyse and create.

Moreover, UNESCO's focus is explored in two main outcomes or elements as (1) understanding the role and functions of media in democratic societies, and (2) understanding conditions under which media can fulfil their functions. Interestingly, UNESCO has been promoting MIL since the Grünwald Declaration on Media Education (1982).

Remarkably, both of these definitions and the application of their approaches put a lot of emphasis on the civic role of media. Such as it is, a training session of MIL in Kenya will go beyond considering the 'what' of media to how media can promote various rights and freedoms in terms of the governance of societies.

There are however notable country-specific adaptations. For Canada, for example, media education is defined as 'the process through which individuals become media literate – able to critically understand the nature, techniques and impacts of media messages and productions' (Lee and So, 2014).

All these definitions are interconnected as they possess characteristics that cut across and are therefore adopted for the purposes of this paper.

(ii) Media

In this paper, media will be understood as the main means of mass communication, including radio, TV, print and the Internet. It will also extend to social media which forms a critical aspect of this paper. The mandate of the Media Council of Kenya is majorly by *de jure* restricted to mainstream media. The third industrial revolution has not made it easy for traditional media to operate traditionally and therefore much of it has been forced to compete with social media and the Internet in general. As such, local mainstream media today is aggressively available online and in social media. Even community radio stations, in order to reach audiences without their airwaves, have registered online frequencies, and with this come websites and social media profiles, where most of the reportage is published. As a result radio in Kenya no longer relies solely on the soundbite but on in-depth online reportage as well.

(iii) Laws governing the media in Kenya

The Association of Media Women in Kenya (AMWIK) identifies two key laws that guide media operations in the country, i.e. the Media Council Act, and the Kenya Information and Communications (Amendment) Act. Both were passed by the National Assembly on 5 December 2013.

While the Kenya Information and Communications Act created the Communications Authority (CA), the Media Council Act led to the establishment of the Media Council of Kenya (MCK) and subsequent repeal of the 2007 Media Act. The aim of these changes was chiefly to align the two entities with the then 'new' Constitution of 2010.

The Constitution of Kenya is considered relatively progressive, and is said to have the second most progressive Bill of Rights in Africa, only behind that of South Africa. Articles 33, 34 and 35 provide for freedom of expression, freedom of the media and right to

information, respectively. However, Article 33 limits freedom of expression in cases when propaganda for war, incitement to violence, hate speech, discrimination or ethnic incitement are concerned.

MCK remains one of the custodians of these provisions as the MCK Act draws inspiration there. The Act also establishes an autonomous body, though within the Council – the Complaints Commission which is bequeathed with the responsibility of ‘[mediating and adjudicating] in disputes between government and the media and between public and the media and intra media on ethical issues’ (Kenya National Assembly, 2013, p. 1215). Subsequently, Schedule II of the MCK Act provides for a Code of Conduct for the Practice of Journalism. This is a unique set of ethical guidelines written by the media industry and provides for a total of 26 guidelines. The MCK Act therefore promotes a co-regulation model.

(iv) Statistics in media and internet usage in Kenya

Kenya is considered to be a mobile innovation hub, with innovations like mobile money transfer and app-powered taxi businesses considered to be the norm.

According to a report by the Communications Authority (CA), the number of mobile subscribers stood at 49.5 million (Oct. – Dec. 2018) denoting an increase of 6.2% users from the previous quarter (Jul. – Sep.). The increase is equivalent to 2.8 million net addition in mobile subscriptions. The CA attributes the 100% penetration level to ‘multiple SIM card ownership in the country’. These stats are supported by a Kenya Integrated Household Survey (KIHBS), conducted by the Kenya National Bureau of Statistics (KNBS) in 2018, that ‘at least 30% of Kenyans owed more than one SIM card’. The subscription is also attributable to the competitive campaigns of the leading mobile companies in Kenya, i.e. Safaricom and Airtel.

Furthermore, during the same period, the report indicates ‘a vibrant data/internet market’ with subscriptions standing at 45.7 million. Mobile data subscriptions remained the highest, totalling 45.3 million.

The authenticity of this data has however not been without its critics as it differs radically from other data sources on internet consumption. First, the CA criteria assumes that for every fibre subscription there are more than 100 internet users. What this means, according to Muthoka Mumo, is that a nuclear family

of three (father, mother and one child) might end up producing 100 internet users for their single subscription based on CA data. Secondly, 'For every mobile data subscription CA counts one Internet user, which does not take into account multiple SIM card ownership or even tethering devices in the same household' (2018). Clearly, this is a misnomer.

This compared to the World Bank's (2016) estimates of a 26% internet penetration, which is considered by pundits as being quite radical.¹ Furthermore, the UN's International Telecommunications Union (ITU) estimated that 33.6% of households had internet access in 2018, but only 17.8% were using the Internet. Unlike the CA, the ITU uses a different criteria that measures mobile penetration by only accounting for active subscribers (Sunday, 2018). This gets interesting when stats from internetworldstats.com are considered. The Internet World Stats records 43.3 million internet subscribers, equivalent to 83% of the estimated Kenyan population. There are other different perspectives ranging from over 20 million to between 8 and 13 million Kenyans (Nendo, 2019).

All in all, the liberalisation of ICT in Kenya has led to an exponential growth in the sector, opening up spaces that had never previously existed. Even then, time is nigh when the Authority must separate mobile subscribers from internet users. Obviously, it is not every SIM card holder that uses the Internet. One just needs to look at some of the phones among Kenyans or being sold around – not all are smart phones rather internet friendly. Double counting is a key challenge.

Regarding broadcasting, statistics indicate that the number of free to air TV stations increased from 68 to 75. Moreover, there are 131 radio stations under the commercial free to air (FTA) while the community FTA recorded 42 stations bringing the total to 173 radio stations in Kenya in the last quarter of 2018. The liberalisation of airwaves makes Kenya arguably one of the most pluralistic media contexts in Eastern Africa.

(v) Newspapers (print media)

Kenya has four main daily newspapers, namely the *Daily Nation*, *The Standard*, *The Star* and *People Daily*. *People Daily* is distributed freely along various highways and offices presenting

¹ This stood at 17.8% of the estimated total population in 2017 per the report (cf. Sunday, 2018).

an interesting case for media viability studies. The other newspapers are sold at 0.6 dollars a copy. *Daily Nation* leads the rest of the field by far in terms of circulation. Most magazines are produced on a weekly and monthly basis. This paper concerns itself with the four dailies.

(vi) Mixed results for social media

Social media remains a critical aspect of Kenya's society as it keeps on increasing in popularity. A survey report released by the MCK during the 2019 World Press Freedom Day indicates 54% of those surveyed affirmed to using social media. A substantial number, 46%, answered in the negative. Subsequently, Facebook led as being the foremost social media used for receiving news at 32%, followed by WhatsApp at 31% and then YouTube at 12%. Twitter shared the 4th place with Instagram at 10%. However, when the question was flipped to refer to social media platforms the respondents were seen to disseminate news via Twitter more frequently, with Twitter leaping to the 3rd place.

Generally speaking, WhatsApp, Facebook and Twitter remain the critical social media platforms. The Internet World Stats in their internet penetration for Africa report, March 2019, show that there were 7 million FB users in Kenya (Internet World Stats, 2019). Fascinatingly, according to GlobalStats, FB retains the market share on social media at 60.64% followed by Pinterest at 20.12%. Twitter ranks third followed by Instagram and YouTube (2019). What does this mean?

Social media, according to Kenya Bloggers Association (BAKE), has 12 million WhatsApp users, 7.1 million Facebook accounts, 8 million YouTube users and 4 million in Instagram. Remarkably, the most prolific and influential platform in Kenya, Twitter, has only over a million users.

Regarding other terms, this paper employs the terms 'fake news', 'misinformation' and 'disinformation' interchangeably. 'Hate speech' is interchanged with 'hate crime' or 'hate discourses' where necessary. However, this paper has a strong bias towards media information on fake news.

Section II: The Media Council Project

(a) Background

The Media Council Project was implemented as a pilot project by the Media Council of Kenya. Its main aim was to enhance

media's capacity to identify and counter fake news and hate speech in the media.² The project was informed by the events of the 2017 General Elections as discussed below, and was therefore contextualised within the post-election period. The post-election periods in Kenya have seen heightened political tensions since the elections of 2007/8 and therefore they have been a unique time for media (traditional and new) in the country.

At the project's conceptualisation stage, the Council was concerned with rapidly transforming trends in the media sector in the face of advancing technology and the ever present threat of social media. Mainstream journalism was therefore rattled – the emergency of social media, its liberal nature and with it the fake news phenomenon and user-generated content, was regarded as a major challenge to journalism in Kenya.

This power of social media in the country is exemplified by the events leading to and following the 2017 General Elections.³ A study by researchers from the communications consulting firms Portland Africa and GeoPoll, released in June 2017, revealed that 90% of Kenyans had been exposed to false news about the 2017 general elections. The report noted that most Kenyans trusted the media as their primary source of credible news. As a result, it was concerned that fake news had seriously influenced news consumed in the country. These findings would be corroborated by another survey carried out by Quartz Africa in late 2018, which published a report denoting that 'Africans are being exposed to 'fake news' at a higher rate than Americans' (Wasserman and Madrid-Morales, 2018).

In a survey that attracted 755 respondents, the authors concluded that 'media consumers in Kenya and Nigeria and South Africa perceive that they are exposed to 'fake news' about politics on fairly regular basis'. And that 'almost half of Kenyan respondents said they often encounter news stories about politics that they think are completely made up' (ibid.).

The reality of the impact of fake news was best exemplified by the fake front page of the *Daily Nation* newspaper, below. This

² The project was funded by USAID via Internews.

³ The Republic of Kenya held its General Elections in 2017. These are held every five years as enshrined in the Constitution. Six elective positions are voted for across the country producing one of the globe's tedious electoral management. The 2017 elections remained as competitive as the previous two, the unique thing about the recent ones being a repeat election for the presidential vote. The Supreme Court, in a historical ruling, declared the original vote unconstitutional, thus lacking in integrity.

**Fig. 1.**

The fake front page of *Daily Nation* circulated in Busia in 2017. Source: *The Star* online

fake version of the paper was circulated in Busia County on the eve of primaries held by the opposition party, Orange Democratic Movement (ODM). The two main candidates – the incumbent governor and an immediate former minister, were vying for the gubernatorial position. The contest was hot. The campaign of Mr. Otuoma was doomed for being associated with the ruling party; and as a result of this smear, he was resoundingly defeated at the ballot. The newspaper issued a disclaimer. Also shared on the eve of the primaries were jubilee posters bearing Mr. Otuoma’s image and campaign slogan, all proven later to have been fake.

Further, reports emerged during and after the 2017 elections relating how fake news had influenced the electoral outcome. Companies like Cambridge Analytica were mentioned as having had a role in this manipulation, in what one author referred to as ‘data neo-colonialism’ (Madowo, 2018). Reportedly, the company had used data gathered from Facebook users through third party apps to influence voters across various countries including the US. In Kenya (which it describes as the largest political research project ever conducted in East Africa) [it crafted] a campaign based on the electorate’s real needs (jobs) and fears (tribal violence) (Crabtree, 2018). The company’s work in the country started with the 2013 elections, culminating in its successful ‘influencing’ of the 2017 outcome. The 2017 elections are important for this study since it was during this process that a critical mass of voter population was exposed to internet and social media, which according to some pundits changed the game significantly with regard to the misinformation landscape (ibid.). And social

media was thus the most prominent conduit. This disinformation continued unabated in the post-election period, which was partly marred with violence as the opposition called for demonstrations and boycotts so as to pressure for 'change'.

The successful spread of fake news during this period has been explained against the expanding population of internet users which was ranked at 69% against the rest of Africa's 18%, according to Jumia in April 2017. The current stats are demonstrated elsewhere in this paper. Another reason given for increased usage of internet remains the burgeoning middle class (Nendo, 2017), which has financial muscle and whose culture is increasingly techno-powered.

During the same period especially during the campaigns and the presidential repeat elections, various incidences of hate speech were reported. The Elections Observation Group (ELOG) (Elections Observation Group, 2017) monitored hate speech transmitted through mainstream media and shared findings widely (Hourel and Golla, 2017) and with the Media Council. Additionally, the National Cohesion and Integration Commission (NCIC) sent out warnings and caused the arrest and interrogation of various politicians due to its hate campaign (Cherono, 2017).

It is based on this background that the MCK embarked on this project in order to counter fake news and hate speech and thereby empower journalists and civil society as a way of promoting accurate, and relevant, news devoid of disinformation and defamatory content.

(b) Project methodology

The project adopted a multifaceted approach combining rapid response initiative on demystifying fake news with media information and literacy engagements, publication and data dissemination via local media.

The first critical step was the establishment of a fact-checking desk at the Council, which was the primary entry point for the success of the project. It was involved in performing critical roles, such as independently⁴ monitoring and debunking online

⁴ The fact-checking desk is run within the media monitoring and research department of the Council. In its daily operations, it is guided by the code of conduct for the practice of journalism. The desk therefore produces and disseminates reports to the public via *The Media Observer* and through other forms. Moreover, the project under review was guided by an agreement signed with the donor – to monitor all media and to disseminate all outcomes.

fake news; secondly, contributing fake news materials for *The Media Observer* newsletter and for the literacy engagements with journalists and civil society in the counties, and monitoring mainstream media and carrying out media reviews for publication in the *Observer*. The desk was composed of a team of 4 monitors coordinated by the project team leader and overseen by a programme manager. It utilised various strategies and methods including the manual scanning of various media platforms and materials based on preconceived indicators. Generally, the tool sought to interrogate various pointers of a fake news item like the author, carrier website, Twitter handle or Facebook page, among others. Data was captured using an open data kit (ODK) and analysed using advanced excel. Furthermore, the Google reverse imaging was employed to de-mystify suspicious images.

The media information and literacy engagement was carried out in the counties mixing professional trainers with the above team. It majorly involved training on key terms related to fake news and hate speech, experiential sharing from the fact-checking desk and a feedback session where journalists shared their experiences with fake news and hate speech. The final session involved the finding of solutions for difficult scenarios caused by fake news, e.g. when a journalist was caught off-guard by fake news purveyors. Generally, the literacy sessions aimed at educating the participants on how fake news was manufactured, its intention and impact among societies. The journalists were also trained on the need for their online presence and how to sustain it.

The fact-checking desk, with support from other Council staff implemented the rapid response initiative. This was a strategy that aimed at confirming reportage from sources or from victims. It focused on verifying data or reportage from mainstream media, deemed fake or suspiciously misleading, but which could not be corroborated from the desktop. This paper shares two case studies in this regard.

The weekly *Media Observer* helped in disseminating media review findings through witty, sarcasm-interlaced articles, and published reports from the fact-checking desk concerning fake news, hate speech or areas that the team deemed the media to have broken the code of conduct for the practice of journalism.

Finally, the project also engaged in media appearances, either in terms of press briefings or appearances on radio or TV, with the aim of raising awareness and thus galvanising a critical mass on disinformation, propaganda and hate speech in media. In most cases, the team would appear on community FM radio stations in the morning of an event (RRI or a literacy engagement).

The entire project was run within the purview of the structures (Admin and Finance) of the MCK.

(c) Some findings and arguments

The desk contributed material to *The Media Observer* (the online weekly newsletter) in the form of fake news and analyses on articles relating to the media. It helped highlight poor journalistic practices and commentaries on quality journalism. Above all, it (the desk) helped put together an average of 300 incidences of fake news drawn from the internet and traditional media. This meant an average of 20 incidences per week.

The first issue of the *Observer* newsletter was shared on January 8, 2018. Since then and up to end of June 2018 more than 23 weekly issues of it were effectively published and shared widely. The newsletter is currently available in both PDF and online versions and receives critic from a wide range of critics.

The Media Observer majorly amplifies the work of the Council. Between January and July 2018 it published sample debunked 'disinformation' for journalists and Kenyans in general to beware, as a way of 'watching the watchdog'. For example, depicted below is a page from the pdf version of the very first issue of *The Media Observer* highlighting two versions of fake news – the first one from a blogger targets the immediate former Chief Justice with death. He is still alive. The second article is a report from social media conversations spreading fake news that the Secretary General of the ruling party Jubilee, Mr Raphael Tuju et al are in jail in Tanzania. The contextual background for this was that the Secretary General had been quite in a period of heightened political contestations at the time.

In other cases mainstream media was also caught purveying the kind of fake news, depicted below. The screenshot features a published article by a leading TV5 outlet in Kenya purporting to

⁵ Citizen TV is a privately owned station (by Royal Media Services). Research has shown again and again that it remains the leading TV station (in terms of viewership) in the country.



Fig. 2. A screenshot of *The Media Observer* published online and as pdf by the Media Council of Kenya

report NASA MPs had signed an affidavit to appear in a mock swearing in by the opposition leader. One wonders how many Kenyans were misled by this. Basically, this was meant to galvanise opposition supporters to attend the mock swearing in of Raila Odinga. The supporters eventually turned out in big numbers for the swearing in ceremony although not a single affidavit had been signed by any MP.

In another controversial example, *Daily Nation* was caught unaware when someone conspicuously had a fake obituary placed within their pages. The obituary bore the picture of a leading (reportedly) financier of the opposition coalition, NASA ‘announcing his death and funeral’. Even though the obituary twisted the details (James Richard Wanjagi as opposed to Jimmy Wanjigi), the image utilised was real and the advert went ahead and correctly named his wife and children, providing private details like where they had attended school in Switzerland and so forth. Jimmy Wanjigi had been reported dead on a National newspaper probably as an act of intimidation by government supporters. The Council wrote a complaint immediately and an apology was



Figs. 3 and 4. Screenshots from *The Media Observer*, Issues 1 and 2.



Fig. 5. Screenshot, *The Media Observer*, Issue 3.

issued in form of a letter and in a publication the following day. The apology was also aired on their sister TV channel. This is a clear indicator as to the extent to which disinformation can be used to intimidate those who oppose the status quo. It is also a warning that the mainstream media is not immune from such machinations.

Some of the main characteristics of fake news as picked by the fact-checking desk are illustrated *inter alia*. The diagram below represents an analysis of incidences that were recorded via the ODK totalling 290.

Out of the platforms that were monitored for fake news, 'website(s)' emerged as the biggest platform utilised to spread disinformation. Purveyors created websites where they posted information that was debunked as false. 144 (50% of the total 290) incidences were selected from website sources. In most cases, these websites were purported newsletters, had no forwarding address, and had been recently established. Some examples were 'DailyPost', 'eazymoneytips.com', 'hivisasa.com' and 'Kahawatungu'. Some,

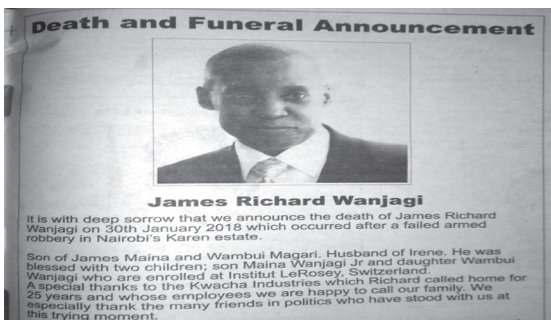


Fig. 6. Fake obituary on the *Daily Nation*, photo taken at the MCK office

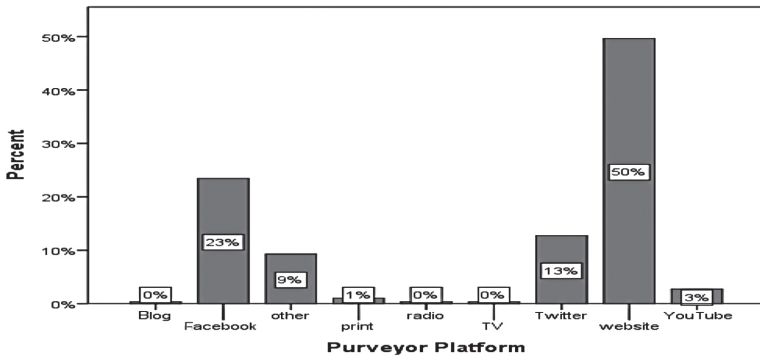


Fig. 7. Purveyor Platform. Source: Media Council of Kenya project reports

such as ‘eazymoneytips’, no longer exist while others, such as ‘Kahawatungu’, transformed into genuine news sources, based on further monitoring reports. Moreover, Facebook produced 23% of the incidences followed by Twitter with 13%. Radio and TV produced 1 count each, while print had 3 counts.

Figure 8 illustrates the gender counts for the purveyors of fake news. It is clear that most news purveyors had no gender (NA) simply because they were websites or it was just difficult to annotate gender to an ambiguous crafty user name. Even then, there were more males spreading disinformation compared to their female counterparts. There were however cases where the purveyors included ‘both’ because they featured in a group.

As Figure 9 clearly indicates, most of the target victims were politicians and state officers. In essence, as observed previously here, politicians were the major targets of fake news across the country mostly orchestrated by opposition supporters. State officers (also known as public officers) were also targeted partly because of their association with the political elite and the role they play in executing public policy. Institutions like the Judiciary also came under attack probably for their role in determining the 2017 elections where a historic repeat presidential election was sanctioned by the Supreme Court. It was not uncommon to come across letters purportedly issued by the Judiciary bearing the authentic signature of the Chief Justice. Public institutions were mostly targeted compared to their private counterparts, some with fake job adverts. Policing institutions were majorly targeted with declarations of purported curfews. A number of letters emerged with the signature of the Cabinet Secretary for

Gender

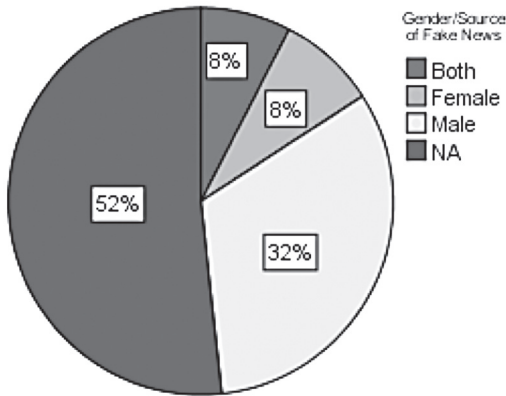


Fig. 8. Gender/Source of Fake News. Source: Media Council of Kenya project reports

Interior, either warning the opposition or permitting a demonstration. In response, the Judiciary issued a statement decrying negative impact to its image arising from these misinformation campaigns. The Chief Justice subsequently wrote a letter to the Director of Criminal Investigations (DCI) over the forgery of his signature (Ndunda, 2018). This confirms fears that fake news remains a threat not just to journalism but to public institutions as well.

Journalists aired concerns on how such information gives rise to general confusion – ‘it is a dilemma when you want to break news but are not sure. You wait for those up there [in Nairobi] to confirm,’ one journalist observed.

Media and information literacy forums

Based on programme documents from the Council 20 Media Literacy forums were held across the country during the project period. The project reached journalists, civil society representatives, faith-based organisations, and in some cases government employees. The participants were equipped with theoretical and practical skills on fake news and hate speech, and on combating misinformation in the media. Further, journalists were taken through opportunities provided by new media and best practices while online. Also covered in every forum was the code of conduct for the practice of journalism in Kenya which is a very elaborate ethical guideline for journalists.

During the engagements, participants would share their experiences with handling misinformation received while on air.

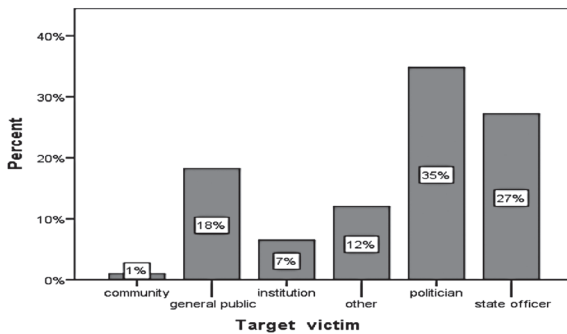


Fig. 9. Target Victims of Fake News (Jan.–Jun. 2018). Source: Media Council of Kenya project reports

Following this, best practices in debunking false information were brought to the fore. One of the key challenges which seemed to cut across all cases was that of the limited fact-checking efforts in the local media, especially for correspondents and county-based journalists.

Furthermore, utilising the UNESCO model, the civic role of media was emphasised and discussed during the engagements especially for the benefit of non-media practitioners. As part of the engagement, the participants were taken through various points of legislation governing media and online practice. These were close productive engagements with the participants which took the model of adult learning.

Rapid Response Initiative (RRI)

Under this approach, this paper presents two cases from among the many that required immediate responses from the fact-checking desk. The two cases are presented mostly as evidence so as to showcase the necessity of action and as serious incidences indicating that mainstream media are in need of strong fact-checking tools. These are actual cases that took place in the country and have been documented by the Council for learning and reference. They are among those stories passed off as genuine by the media but later found to have been fake.

Case I: The Burning Probox of Kitui

On 28 February 2018 most of the country was treated to news from various mainstream channels that a Probox vehicle in Kitui County had been set ablaze. Citizen TV shared a clip on its official YouTube Channel that a Probox vehicle was ‘set ablaze’ by Mwingi⁶ residents for ferrying charcoal. Other outlets including

⁶ Mwingi is a town located in Kitui County, Eastern Kenya.



Fig. 10. Participants enjoying some of the discussions in Voi, Taita Taveta County. 16 March 2018. Source: Media Council of Kenya reports

the *Daily Nation* and *The Star* shared similar stories. *The Star* for example, screamed the title: ‘two escape death as car ferrying charcoal is burned in Mwingi’. *The Standard* also carried an attention-grabbing headline: ‘A charcoal trader today escaped death by a whisker after an irate gang of youths flushed him out of his Toyota Probox car and set it ablaze’ (Muasya, 2018).

The team adjudged this to have been ‘copycat journalism’ (news from one source but reported differently) that needed further investigation. Questions were raised – based on various clips shared online, there had been no clear altercation involving members of the public. Also, there had been no indication of aggression from the police. Equally some conversations on social media pointed to a different sequence of events. Contradictions were observed and therefore the Council sent officers to investigate on the ground.

It was established that the vehicle had not been set on fire but that its engine had caught fire – the driver noted smoke emanating from the bonnet and as he tried to put it out it spread to the rest of the vehicle. The blaze was made worse by the charcoal that the driver had been ferrying. Unfortunately, nearly all mainstream media chose to report that the vehicle was set ablaze for ferrying charcoal illegally.

The team also confirmed the absence of effective corroboration in the articles as originally published. Upon speaking with

the officer commanding the police division (OCPD) in Mwingi, it was confirmed that no journalist had approached him or any of his officers for information on what truly happened. Also established was that the County government had not been consulted. How then could the media have made such baseless arguments and circulated them so widely?

Case II: The Witch Doctor of Busia Town

On 20 March and 10 April 2018 the country was exposed to yet another incident of disinformation. Leading TV stations including NTV and K24, respectively, aired video clips that bore questionable content. One of the storylines was about a witch doctor who had been broadcast when ‘bewitching’ a night runner. She is then brought before the cameras in order to explain the circumstances behind her magic power. All that in free airtime.

The second storyline concerned itself with a farm boy also reportedly charmed by the ‘strong medicine’ of the witch doctor and he was observed with maggots slithering from his body crying for help. The medicine woman was heard claiming how she had ‘captured’ the farm boy at the behest of the owner for cuckolding him with his wife. The owner, present in the clip, had reportedly paid for the charm.

The fact checkers became suspicious for various reasons: First, the witch was shown wearing a T-shirt with her name and mobile phone number printed in big letters; secondly, the two events seemed deliberately fenced off from onlookers and curious passers-by, thirdly, there were no cameramen pictured in the clip to indicate media coverage; and finally, the local maxim that any showcasing of witchcraft in media must be treated with suspicion. So the team chose to visit the county.

When the fact checkers arrived they confirmed that no local journalist had covered the incidents. Those who tried upon receiving invitations arrived when the incidence was closing. These reports were confirmed by local civil society present in a meeting convened by the fact checkers. Incidentally, the small number of journalists who had managed to appear on the scene were not given the opportunity to interview anyone as the victims were whisked away in waiting vehicles. The medicine woman seemed to have security around her. It was also confirmed that she had a media team which would record the events and convey them to the media as being genuine. When asked, the

TV stations that aired the incidences could not produce records of either the cameramen or women sent to cover the incidences. This is another case where mainstream media was seen to have been gullible in the extreme.

Through literacy forums and rapid response initiatives, a total of 791 participants were directly reached from the sections of the societies identified above. As mentioned, the project lasted six months running up to June 2018.

Section III: Conclusion

As was observed by most civil society participants across the country, the need to promote media information and literacy is pressing. The public needs to comprehend and understand how the media functions, and to discern legal and political discourses. This will promote better relations among a plurality of players; and by extension it will provide foundations for securing and promoting the freedoms of media, expression and information. Unfortunately, this project targeted more journalists as opposed to members of the public, restricting its reach, and therefore its impact.

As such, there remains a need to expand and sustain media and information literacy in Kenya to tackle not only the 'new challenges' (misinformation and hate crime) wrought by social media. However, such expansion should also focus on targeting different levels of the society with tailored information that can make decision making processes easy.

Indeed, training not just journalists but also public officers, the members and staff of civil society organisations, religious leaders, farmers and members of the public on content production and opportunities presented by social media and the internet in general should be a priority for invested organisations. As such, and in the long term, it rests upon the Council to take up the mantle and mobilise a multitude of efforts to enact sustainable programmes. In this arrangement, the Council's duty will be that of accreditation, oversight, monitoring and training so as to promote quality execution.

Another long-term observation is that of the Council working with various governments and institutions of higher learning to promote the inclusion of MIL in the general curriculum and the curricula of universities and colleges. In this way, the burden will

be halved as responsibility will be transferred to the implementing institutions and governments.

Furthermore, the Council should strive to make media and information literacy a major component of its functioning by domestically reconfiguring⁷ its own modules from those provided by UNESCO, Deutsche Welle Akademie and other invested parties. However, the success of an extensive (or even intensive) media information and literacy programme (be it on fake news or any other relevant topic) will require adequate funding from public coffers, so as to ensure operation processes free of erratic donor funding and unpredictable donor politics and dictates.

In order to achieve this, the MCK needs clarity in terms of its statutory functions. Indeed, it remains vague whether it is in their mandate to deliver on MIL despite the evidence in practice.

Meanwhile, fact-checking remains critical as the best responsive effort for day-to-day campaigns when it comes to combating misinformation especially the misinformation targeted at mainstream journalism. But it cannot deliver the desired results on its own. It should be complemented by other strategies. This paper champions the need for the kind of rapid response initiative strategy which was successfully applied by the Media Council. The aim of the rapid response was to verify from the point of origin that which has proven difficult to ascertain from the desktop.

Furthermore, local journalists and correspondents require not just timely access to information but also the means of verifying and cross-checking information accessed via social media, particularly given that social media is radically becoming the main platform of breaking news. The fact-checking strategy is not the preserve of a media council but the requirement of all journalism. In order to counter fake news in mainstream media, media institutions should invest robustly in fact-checking desks not only at their main city-based studios, but also in the regions.

⁷ This has been witnessed in various trainings where MCK trainers adopted different approaches to fit different contexts for more impacting results. But the practice is generally not documented.

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III

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Media Semiotic Guerrilla Warfare Versus Image Warfare

0.

Recently, during a scholarly debate, I was given to understand that I am one of the seniors and pioneers in Polish media education. Seemingly, there is nothing wrong with being a senior: although it is sad to realise that we are unable to make time stand still, we can be happy (or pretend to be happy) that we have contributed to some process which has taken hold in the world. The latter category – being a pioneer – does more credit to someone as individual achievements are articulated lucidly: being a pioneer means being innovative, means the exploration of untrammelled (or overgrown) paths. I would be very pleased if my efforts, beginning from 2000, were assessed in this way. Indeed, it was at the beginning of this century when along with Elżbieta Ostrowska and Andrzej Pitrus I produced a report entitled *Media Education*, commissioned by Juliusz Braun, then President of the National Broadcasting Council.

We managed to convince him that – in our view – a principal task of this institution was to establish a framework facilitating the improvement of knowledge and skills which would build up the competences of a media audience. It was not easy since the commissioning institution was not at all convinced that this issue was significant. Instead, they thought that a TV viewer or radio

listener could in some way be made an ideal construct; and that what mattered most were audience ratings. In 2000, we did not dream that attention would ever turn to the quality of thought, where the stress is not put on any 'hypothetical viewer' but that viewers are seen as extremely different and diversified; and thus, they may perceive media images in a range of ways that we had never expected before. In short, those who participate in cultural processes also create them and are as immersed in them as the audience themselves.

In the beginning of our report, we highlighted the need to introduce 'film classes' into school syllabuses as we were convinced this was the right way to go at that stage of development (we should also remember about long-time initiatives launched by Prof. Ewelina Nurczyńska-Fidelska). Moreover, we asserted that there was no system approach, which had resulted in a communication breakdown and, consequently, a lack of knowledge about what others were doing. Yet we also met a lot of supporters. The situation has evolved over the past 19 years but media education nowadays seems to be more dependent on politicians. Obviously, politicians may decide what kind of research is commissioned, who will do the research, what conclusions and suggestions will be made, how the research findings will be interpreted and, finally, what will be the social impact of the civic organisations (in other words, any respective councils).

A meticulous chronicler would remind us of the turbulence caused by the expert opinion authored by me and Zbyszek Bauer, where we assessed the news programmes in Poland's largest TV station. We did our job very fast and the document was submitted to the programme council. This turned out to be not just a black hole but rather a hole full of twists and turns. I know about its fate from the oral accounts only. Certainly, as our opinion was unwelcome to the President of the TV station, it sparked a violent reaction: 'I am not going to pay for the review unfavourable to the company', he allegedly said. This attracted media attention and one of the tabloids offered a quite high remuneration for the making of our analysis available. The situations calmed down after a few days, but an absurd question remained: what would be the condition of science and critics (artistic or scientific) if commissioning parties paid for only favourable opinions?!

1.

The aim of this paper is to analyse the contemporary stage of media education. Film is no longer its essence, although a number of critics, including Jerzy Płażewski, are right to say that ignorance about film is like illiteracy today. Płażewski was referring to the 1960s. That reflection will have a strictly practical dimension. I shall propose the proved methods of studying the media meanings, but also try to define, possibly precisely, the research area that requires the application of other methods, including, primarily, those less known, while others, more popular, in a limited scope. To be 'against' specific methods means that they are either improperly implemented or ineffective in specific media and cultural practices. I mean a few rather accidentally chosen posters from 2018, diversified in their form, pertaining to the local government election campaign in Poland which took place that year. The method derives from the old reliable semiotic school proposed by Umberto Eco and other advocates of visual rhetoric. I shall ask about the strategies applied by any media user in perception of the still images, seemingly the simplest form of media. Like any old-time pioneer's, my questions may sound naïve: aren't we the slaves of the strategy of attribution, seeing only the things that culture makes privileged and reveals as predominant, contrary to what we actually see?

1.1 Umberto Eco, the Italian semiotician, warned against self-righteousness: as the media centre we use to send our messages is ours, the content of their reception will also be 'ours'. There is nothing more misleading since – as Eco argued in 1967:

What must be occupied, in every part of the world, is the first chair in front of every TV set (and naturally, the chair of the group leader in front of every movie screen, every transistor, every page of newspaper). If you want a less paradoxical formulation, I will put it like this: The battle for the survival of man as a responsible being in the Communications Era is not to be won where the communication originates, but where it arrives (Eco, 1986, p. 142).

In my view, this observation should be recognised as the essence of media education.

1.2 On the other hand, in his famous essay 'Photography and Electoral Appeal', written in 1957, Roland Barthes introduced a bit of creative scruffiness in this field, contending that

photography is an ellipse of language and a condensation of an 'ineffable' social whole, it constitutes an anti-intellectual weapon and

tends to spirit away 'politics' (that is to say a body of problems and solutions) to the advantage of a 'manner of being', a socio-moral status (Barthes, 1972, p. 91).

Yet he also claims that an election campaign photograph provides no information about the candidate's principles and programme as it is nothing but 'the acknowledgment of something deep and irrational co-extensive with politics' (ibid.). A photo says nothing about what you do and how you behave because its purpose is not to seek future. Yet a photo says much about the real human traits of an individual from the photo – about style, methods of attracting audience, social background, compliance with political, religious and social norms and rules. A photograph provides information about one's attitude to the bourgeois virtues they profess ('Mass, xenophobia, cuckold jokes'; ibid.). To put it shortly, a photo features an ideology of the photographed individual.

A photograph is a mirror that makes it possible to perceive and build a community. The voter (including the one created by Eco) feels clarified and elevated – it is his image that the poster features. Barthes is certain that

[t]his glorification is in fact the very definition of the photogenic: the voter is at once expressed and heroized, he is invited to elect himself, to weigh the mandate which he is about to give with a veritable physical transference: he is delegating his 'race' (ibid., pp. 91-92).

Barthes is convinced of the diversity of these messages: you apply different means to produce a portrait of reliability and honesty, a portrait of intellectualism, or the good-looking man. Barthes displays real genius when he proposes simple semiotic equivalents to define ideology of the photographed individual. This is how, for example, a certain type of honesty and intellectualism would be made up:

the slightly narrowed eyes allow a sharp look to filter through, which seems to find its strength in a beautiful inner dream without however ceasing to alight on real obstacles, as if the ideal candidate had in this case magnificently to unite social idealism with bourgeois empiricism (ibid., p. 92).

The conventions of photography are full of strong signs; they constitute 'a veritable blackmail by means of moral values:

country, army, family, honour, reckless heroism' (ibid., p. 93). And that is not all since Barthes confirms that the very way of photographing, particularly the way the camera is set up, is significant. Let us look at an example that resembles the kind of advice given in photography books or rules of poetic reference:

Almost all three-quarter photos are ascensional, the face is lifted towards a supernatural light which draws it up and elevates it to the realm of a higher humanity; the candidate reaches the Olympus of elevated feelings, where all political contradictions are solved (ibid.).

Barthes suggests that full and proper understanding of the image requires excellent technical knowledge (why the message was framed in this way), correct decoding of the content (what it actually represents) as well as a connotation at the level of vibrating, vague meaning of a poetic kind (which he called a third sense).

1.3 Then the third element of the creation of the patchwork describing a map of perception/understanding of images and, consequently, teaching these activities can be added. Those models assume that a viewer is to a large extent passive. He is sent a message which he comprehends or not, in full or in part. And that's that! Moreover, misunderstanding audio-visual texts includes an immanent component of ambiguity. Which is why a commercial TV message is usually banal, and the viewer's attention is often guided so that the appropriate meaning could be achieved.

Yet – and it seems that this is a predominant model – it may be developed in a different way. The situation changes when the audience, previously passive, becomes an active producer, when the very distribution is creative in cooperation with the Internet (Jenkins, Ford and Green, 2013). This may lead, as Jay Rosen has pointed out (2012), to a surge in the number of amateur artists and decline in the number of professionals, everybody will be a writer, composer or video producer. The question is: who will read, listen and watch what is produced?

2.

First of all, let's address the broadest reception context. In the third week of October 2018, a crucial event took place in Kaunas, Lithuania – the 8th Media and Information Literacy and Intercultural Dialogue Conference. It was held as one of the two major events of the Global Media and Information Literacy Week,

initiated by UNESCO. Its primary subject was the following slogan: 'Media and Information Literate Cities: Voices, Powers, and Change Makers'. Indeed, the event had a global dimension: several hundred participants from several dozen countries gave an account of the situation in their countries and provided the gathering with a theoretical framework. A phrase they used most frequently was *interesting for us* as all discussed subjects were actually associated with media illiteracy of different local extent. Famine in African countries, miserable situation of women in many parts of the world, manipulations of politicians or global warming posed serious challenges and thus were *interesting* for the overwhelming majority of participants.

This diversity indeed imposed a super global perspective where ideas that are closest to Mediterranean culture, such as the revitalisation of municipal libraries and archives, the production of media texts, identity they provided, problem of privacy, cultural product management, were beautiful, but rather marginal.

The opinion expressed by one of participants sounded intriguing. In her view, we are on the brink of progressive (chaotic?, appalling?) multimediality, and we are definitely experiencing alarmingly changeable shifts in the way media evolve in the cultural space. In her description of the media scene in her country, she emphasised progressive illiteracy: an increasing number of people either cannot read or do not understand what they read. This is surprising and the reasons for it are varied. I was most interested in one of the projects designed to reverse current trends, whereby writing and reading comprehension skills were taught using... audiovisual aids. The education authorities of that country were hoping that viewers of diverse screens will get interested in the written words faster when they will need them for different purposes (e.g. accomplishing the next stage in a video game or provide an avatar with appropriate accessories).

This reminds me of an episode attributed to famous people of the world of movies. Groucho, one of the Marx brothers, a surrealist of the film content and form, was asked whether TV could have any educational impact on viewers. Cinema experts know perfectly well that Groucho's retort overturning meanings was imminent: 'Yes, TV educates. When someone turns on the TV I go to another room to read a good book.' Ha, ha - funny, we did not expect him to say that TV education is nothing but a return to

the book – the good old medium. We still recognise newspapers as a more reliable source of information than TV news, whereas the Internet is used selectively as a source of information. The latter media are used most frequently but they are not necessarily trusted. We still tend to disbelieve the power of media education. An opinion that a sense of images and their sequence can be taught using some methods seems extravagantly unnecessary and false. I should like to point out that this notion is contradictory since teaching is generally a boring process and assumes that there is always someone recognised as a master-supervisor while today's media tend to stress partnership and tend to be suspicious of any wisdom coming from outside their sphere.

2.1 I think this is the right time to announce the need to recognise semiotics and rhetoric (variants: semiotic rhetoric and rhetorical semiotics) as a primary approach in this respect.

Paradoxically, the two strategies (not always coexisting) should be recognised in the space of contemporary media. The first one concerns the necessity of normal, positivist teaching of the laws governing moving images. This strategy would consist of:

- anthropological approach that advocates discussion about illiteracy levels in visual texts (see: Jan Rek);
- the good old visual semiotics (see: Guido Bonsiepe, Roland Barthes);
- distinctive difference between attributive and referential meanings in ethnical cultures (see: Larry Gross, Sol Worth);
- 'mediogenicity' (contemporary dimension of photogenicity), as well as iconography, iconology (Erwin Panofsky) or even knowledge about historically changeable film styles.

The other strategy is advocated by only one scholar, but it seems to be the freshest and most powerful regarding interpretation potential. I have Zygmunt Bauman and his concept of liquidity in mind, whose end may be found in the assertion that the right way to understand the media (and more broadly speaking: cultural) transformation observed in recent years is... to forget what we have learnt so far. This includes an element of childlike surprise when a creator becomes a producer and everything is interrelated.

The latter attitude is manifested by the participation in TV live debates or manifestos of active viewers. Although these examples amount to a claim that there is some space 'for learning' in our contacts with media, which is not only easy to assimilate, but

that can also be done intuitively. Such an approach also combines belief in the fall of old forms and need to apply new methods, which follows from the willingness to apply something new just because it is sexy.

2.2 A broader perspective shows that traditional awareness of the social position of a journalist vis-à-vis the rest is crumbling. Who is a media worker, showman, journalist celebrity, civic journalist, blogger? Who is going to take on their functions if we – due to different reasons – abandon these activities? Are we going to be willing to listen and watch ‘those new ones’ – often ourselves? What is a false and a true need; and can we cope with its lighter version? We already are imprisoned in the fetters of narcissism – don’t we like the most watching ourselves or those with whom we strongly identify? A social researcher will arrive at the following diagnosis: psychology has become a kind of cult of oneself. Its message is: everything is founded on you; family is a source of all evil and a good future depends on the way you position yourself towards others, but you are absolutely free to choose. The void of our true selves was hoped to have been filled by psychology and advertising (Zaborowski, 2015). Certainly, the void is filled with media – as there can be no void. But the way they set about their task is peculiar and paradoxical. Jacek Dukaj, a Polish writer and representative of the young and middle generations, asserts that a human being has not been evolutionarily adjusted to reading. Writing impairs memory (let us remind ourselves of Socrates’ fears in Plato’s *Phaedrus*). How many texts do we know by heart? Conversation is something special as this form of communication, unlike reading, excludes any false interpretations. Dukaj diagnoses the consolidation of a society focused on consumption (this is the right, ambiguous term) of short texts, well-featured in a remarkable visual form. As Dukaj (2010) phrased it: ‘Too long. I’m not going to read it...’

2.3 It is doubtless necessary to re-consider the ramifications of the way media literacy is passed on. For example, a question may be asked what novice journalists learn from their older colleagues? A TVN star carefully prepared for a very important (to her and the viewers) interview with Leszek Balcerowicz. Yet she was unable to ask the questions she had prepared – she managed at last but it did not turn out so well. The electric leads were too short and she had to struggle to get up from her chair.

This example highlights the role of coincidence and elevates the knowledge acquired through experience. Nobody is able to teach that. A TV star stresses the crucial role of details:

Preparations, research, knowledge, courage, concentration, strong questions, pertinent remarks, witty retorts, acquisition of information. This is critical. I still think so. But I also know that a shining nose may spoil a fairly good interview. Such knowledge is not necessarily vanity. It is rather awareness (Pochanke, 2010, p. 491).

Thus, the scope of knowledge needed to be functional in the media reality is still expanding. Let's consider video games discussed by the American in the *Columbia Journalism Review* (Bech Sillesen, 2015). Actually, the question concerns the scope of popular knowledge, but not that gained directly and incidentally, rather that provided by professional intermediaries, that is, journalists.

A crucial breaking point has been highlighted. A large amount of information supplied to any media user considerably exceeds their perception abilities. It seems that the most reasonable solution is to find and hire an appropriate intermediary – a journalist, someone who knows more than the average media user. At the same time a journalist's knowledge should not be hermetic, as the point is to explain the nature of global processes.

This time we have to choose between the design of computer games and a journalist who tries to make this knowledge comprehensible, being aware that the message is addressed to listeners viewers or readers demonstrating extremely different levels of knowledge. Thus, a new programme should focus on the development of leadership in media and journalism through the theory of design. Generally speaking, the question refers to the digital games that go beyond a narrow aspect and having a huge impact on the social issues.

Bech Sillesen aims to find how to break the traditional narrative of the video games. The experience she gained as a journalist permits her to conclude that a large number of players makes no effort to follow the logic of news. Thus, she decided that it might be useful to include the news story in the structure of the video game. Computer games design has provided a new prospect for information media. The latter are characterised by a decreasing degree of inclusion in a storyline. Yet a different approach may be adopted: let the viewer or listener think of the news in a funny way.

Computer games provide narratives that may be used in news programmes, and this will certainly not be boring. The authors of the programme contend that people are inspired by the context of teaching and learning with teaching as a tool for accomplishing an objective as opposed to learning as the objective.

Yet there remains the question of cooperation between two different spheres: serious news and entertainment. But if games were taken seriously, just as they deserve to be, the problem becomes marginal. Moreover, the author concludes that games will soon become an integral part of the news media. In this way news begin to determine a new model of reading.

Let us dwell some more on this phenomenon. Another trend is the use of games' potential in accordance with the following rule: 'If content is king, experience is the kingdom. Any item of news broadcast in the form of an Internet game becomes increasingly popular' (Miller, 2018). A good example of using the rules of games is what the team of *The Guardian* editors did. When news about the annual incomes of some important public figures leaked, *The Guardian* designed a special website, open to the public, containing 'articles on the suspicions of financial irregularities', where all relevant documents were made available. Importantly, readers/participants treated those news items as elements of the game, and most importantly, a lot of them ceased to be passive readers. Miller argues that experience (gained in other games) and the active participation (uncharacteristic of ordinary readers until then) became the hallmarks of the new media reception situation (ibid.).

2.4 The creation of one's own texts and reception according to strictly codified genre rules make us think about plagiarism – a curse of the era of extended digitalism. The most radical commentators will say that nothing original has been said since the Renaissance (or even earlier times) and everybody actually repeats what has been said before, more or less consciously; and even those who had stated this were not original in their views or ideas.

Journalists seem particularly sensitive about the fact that they create (or that is what they think) something unique. Even short accounts of the same event must be different; otherwise they will not find an audience. Is it plagiarism or, maybe, culture that makes an impact following the popular belief in the exceptional

status of the artist? Copy and paste poses no problem for seven-teen- or eighteen-year-olds.

It may also be that we are just focused on words, while the key problem is theft of thoughts. On the one hand, we note the stolen words (which is hard to prove), but on the other hand, we are too lazy to spot the theft at the level of thoughts. Thus, aggregation of detectives and their concentration pose a serious problem. Social media encourage us to pursue such actions. But what is the scope of freedom we have when making use of details of dress, for example. Plagiarising ideas indeed sounds absurd. Nobody expects TV series to be fully original (Fisher, 2015).

3.

The title of my essay means that it is impossible to talk about images and not add its adjectival characteristics. Images are manipulated; they prostitute themselves and are repeatedly raped. On the whole, this happens in external relations. But does it mean that they are at war against themselves? In my view, this is rather perpetual turmoil: as they are oftentimes self-contradictory, shouting that they are no longer themselves. And yet, they are far from assuming any identity. These are some examples Polish people probably recognise as rubbish, though required by the system.

(Fig.1) Photos of the six candidates running for the office of the Mayor of the City of Krakow were arranged into two rows

Wybory 2018. Kandydaci na prezydenta Krakowa

Magdalena Kursa 4 października 2018 | 12:21



Fig. 1

with three candidates in each row: three females and three males. Such an arrangement makes an overwhelming impression of chaos and sloppiness. A viewer may ask themselves about the chaotic background; which can be homogenous and monochromatic. The semantics of the diversified background becomes unclear. The same, rather undemanding, viewer finds it difficult to comprehend the different plans in which the portraits were made. Randomness and sloppiness have become basic criteria of the description of affinities between the six portrayed persons as no unifying strategy was offered. For example, we are wondering whether looking slightly to the left is not a privileged direction of the look. Thus, anybody looking at the picture must become a guerrilla (Eco would have liked that), while the viewer usually makes use of the extra-iconic relations with the faces featured in the pictures in order to create a homogenous impression in semantic terms. I am afraid that connotation precedes denotation, as Barthes suggested.

(Fig. 2) In this case impatient members of the candidate's staff referred to René Magritte's painting. The left side of the poster features *The Son of Man* (1964). This is a teasing self-portrait



Fig. 2



of a man whose face is hidden behind a green apple. The right side of the poster describes Łukasz Wantuch as the only politically non-aligned and independent candidate. This is a controversial figure: although he joined the campaign team of Jacek Majchrowski, he was an ardent advocate of an alliance between Civic Platform (Platforma Obywatelska) and Law and Justice (Prawo i Sprawiedliwość). A question arises why the campaign team members decided to play at ambiguous identities in the image and political message situation. There is no space for ambiguity in such a message. What does it actually mean? Does Łukasz Wantuch, who should be a crystalline and stable person, have actually no face (or does not want to show it)? Maybe the key to solving this mystery is the word JEDYNY [The only], printed in very big letters, that is to say Łukasz Wantuch is the only candidate with such high moral qualifications? Maybe... I am sure that the doubtful 'maybe' will not help win voters.

(Fig. 3) In this case we have a complex iconic situation structured as a meme: we can simultaneously see an Internet poster, and invitation to chat, and its spiteful interpretation below.

We can see the candidate's pretty face against the background of a lightly sketched bird's eye view of Krakow. Her face is so pretty that one Internet user doubted that it is real and



Fig. 4

believed in the Photoshop software power: ‘Ms Wasserman had her head size diminished; her nose was made slimmer and the folds on her face smoothed.’

Moreover, the direction in which Małgorzata Wasserman is looking is set to attract a viewer’s eye. Yet this is only the first half of the iconic game. The other half is based on the Internet meme structure – here the authors are inviting us to take part in a live chat, providing its dates, hour and a hashtag. A question is asked: ‘Why is Maggie Wasserman running in the elections in Krakow?’ And a reply is given: ‘Ponieważ jest nie do Poznania’, which literally means ‘because she is not for Poznań’. Such a wording contains a grammatical error since ‘Poznania’ spelt with a capital letter refers to the city of Poznań. To eliminate this error – using computer skills, of course – it is enough to spell ‘Poznania’ with a lowercase ‘p’ and read the phrase as ‘jest nie do poznania’, which now means ‘you can’t recognise her’. In my view, this example shows that there is an interesting semantic strategy based on an interpretative distortion of the original meaning. It requires considerable linguistic competence.

Interestingly, both cases include a pre-supposition about the nice face’s power to attract an audience. This belief is perhaps sensible with regard to a TV show but not necessarily to local election campaign, where other traits of character are preferred. To put it shortly, the campaign team of Law and Justice went overboard: Ms Wasserman is visually attractive without any special improvements. The line (or rather grey area) between a classical face according to the current canon of beauty and its fantastic and artificial version should not have been crossed.

(Fig. 4) At a glimpse, the photo designed by the campaign team of Prof. Jacek Majchrowski appears to have been very professionally executed. Yet that is not so. The surname and slogan

'We are making the future of Krakow together', set against the homogenous blue background, constitute a kind of construction-site structure. The very act of building is fine but it is risky to lean on an element of the set design fixed in some unclear way. The candidate's figure is awkwardly bent and this provokes rather negative connotations. Perhaps (this is an allusion to his age) Majchrowski is not strong enough to run for the office and needs to prop himself up. Is it really necessary to provide information about his academic title? Perhaps the authors of this message cherish the tradition that commends the excessive use of official titles, inherited from the 19th-century imperial authorities of Krakow, and finding it natural. I would buy a car from Majchrowski - this is an assessment of the candidate's reliability.

(Fig. 5) A comparative view from the 2018 Warsaw mayoral election campaign proves that statistics have recently become a very popular instrument for mendacity. TVP Info television station compared the number of votes cast by prisoners for candidates of the Civic Coalition (Koalicja Obywatelska) and the United Right (Zjednoczona Prawica). It turned out that in some facilities the number of votes cast for Rafał Trzaskowski from the

Wieczór wyborczy TVP Info: wyniki z więzień i niestety przegrał Płazyński

05.11.2018, 11:18



Fig. 5

Civic Coalition was as many as eight times bigger than that cast for his main competitor.

Infographics have the power of a nuclear bomb indeed. The numbers are convincing. But what are these numbers going to prove? What is the goal of such a comparison? The numbers are certainly true. Yet it is clear that images were used to demonstrate an untruth. The reasons why prisoners overwhelmingly support one of the candidates are complicated and vague. Is it supposed to make us believe that the other one is 'better'? Whom do the prisoners support and from whom they turn away, given their specific situation? This is an endless tangle of problems, which one photo is definitely not going to solve!

Summing up the knowledge we have gained from our wanderings: is it getting better; are we moving forward? Professionals are surely getting access to the whole process of the creation of images. Brilliant memes, smart combinations of images and words evoke the times of silent cinema, which actually lacked synchronic speech. At the same time, an excessive number of images has dramatically impaired their quality. Many of us remember taking photos in the pre-digital age. We used to take two or three rolls of film, consisting of 36 frames each (if we managed to get them), which encouraged us to be economical in visual terms. This made us carefully discuss, think or reflect on each potential photo before we took it. One had to decide if the depth of the focus met our aesthetic needs. Today, when we bring home hundreds or thousands of holiday shots, we tend to see them as rubbish, a kind of burden that makes it hard to find the best one, the one that the editors would choose for their book cover. If we carry on in this manner, and everything indicates that we are going to do so, we should carefully reconsider our relationship with images. The fact that this relationship has become radically different is no longer something banal. And this is just like the assertion that we face a sustained task to learn images and learn along with these images.

(trans. JN)

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Illustrations

- Fig. 1.** Elections 2018. Candidates for the office of the Mayor of the City of Krakow (Profiles), <https://krakow.wyborcza.pl/krakow/7,44425,24001953,wybory-2018-kandydaci-na-prezydenta-krakowa-sylwetki.html?disableRedirects=true> [Accessed 17 Oct. 2019]
- Fig. 2.** Merry election posters [Candidate for the city council. List 2, no. 15. The only non-partisan and independent candidate on the list: no support from Law and Justice (PiS), Civic Platform (PO) or Gibała. To learn about the photo, go to: www.LukaszWantuch.pl], <https://www.google.com/search?sa=N&sxsrf=ACYBGNRZpvaVI76-MGuRtYvEyfrdZXB00A:1573631191221&q=dla czego+takie+zdj%C4%99cie?+Dowiedz+si%C4%99+na+www.lukaszwantuch.pl&tbm=isch&source=univ&ved=2ahUKEwjc5aOB2eblAhXDDOwKHTGUBPg4ChDjbXoECAkQlw&biw=1745&bih=881imgrc=9YrlmpOAcE-UM> [Accessed 17 Oct. 2019]
- Fig. 3.** Did Wasserman exaggerate with Photoshop? Internet users have been ruthless [Live chat. Why is 'Maggie' Wasserman running in the elections in Krakow? Because you can't recognise her], <https://www.fakt.pl/wydarzenia/polityka/internauci-wytkneli-malgorzacie-wassermann-przesade-w-uzyciu-photoshopa/nfplx3k> [Accessed 17 Oct. 2019]
- Fig. 4.** Elections 2018. Does the candidate on the poster resemble himself? [Prof. Jacek Majchrowski - Candidate for the office of the Mayor of the City of Krakow. Slogan: 'We are making the future of Krakow together.'], <https://www.google.com/search?sa=N&sxsrf=ACYBGNRZpvaVI76-MGuRtYvEyfrdZXB00A:1573631191221&q=dla czego+takie+zdj%C4%99cie?+Dowiedz+si%C4%99+na+www.lukaszwantuch.pl&tbm=isch&source=univ&ved=2ahUKEwjc5aOB2eblAhXDDOwKHTGUBPg4ChDjbXoECAkQlw&biw=1745&bih=881imgrc=9YrlmpOAcE-UM> [Accessed 17 Oct. 2019]
- Fig. 5.** Election night on TVP Info: Results from prisons, and unfortunately Płażyński has lost, https://www.press.pl/tresc/55188,wieczor-wyborczy-tvp-info_-wyniki-z-wiezien-i-niestety-przegral-plazynski [Accessed 17 Oct. 2019]

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**On the Languages of Media
and Postmedia Art**

Introduction

In 2019, we celebrate the 100th anniversary of the foundation of the Bauhaus School, known as the Bauhaus, one of the first few art universities at the time, whose programme of studies responded to the challenges of avant-garde artistic trends, profoundly transforming the face of contemporary art (all of those universities were created largely by progressive artists themselves). In the case of Bauhaus, the emphasis in the programme was focused on combining those teaching perspectives characteristic of disciplines that were traditionally treated as separate, unrelated fields of social practice: art, craft, design and engineering, as well as on developing a comprehensive attitude, competence and skills relevant to all of these disciplines – developing their common metalanguage. Thus, the specific programme of Bauhaus first referred to only one – though complex and multifaceted – of the most important trends forming a new order of art in the 20th century. That said, the Bauhaus programme was extremely consistent and conclusive, thus making the university a place where students could actually learn and assimilate new rules and principles; and the new languages of art upon which they were based, constructed as a result of the interaction between all disciplines involved in the programme.

Independent study was a very important element of the teaching programme. The paradigm under which they constructed their creative attitudes remained *in statu nascendi*, so students were expected to develop their own innovative approaches within the proposed framework. Their imagination and creativity were tested, as well as their sensitivity, diligence, perseverance and teamwork capability (Siebenbrodt and Schöbe, 2012, p. 39). At that time, the direct artistic context for the Bauhaus programme was the development of fields of related, but at the same time largely different, avant-garde currents: functionalist, constructivist and productivist.

But in order to fully realise this intention, in order to introduce students to the space determined by the newly postulated modern creation paradigm, it was not enough in the opinion of the creators of the Bauhaus programme to simply prioritise knowledge and skills. Students had to be free from the domination of ideas, notions and concepts associated with the traditional thinking about art. Essentially, the fundamental relativisation of the traditional aesthetic order and the art system rooted in the same needed to be effected. This purpose was served by a preparatory course, which would fill the entire first semester. Completing this course was a condition of admission to the selected studio and continuation of studies. The preparatory course programme was initially developed by Johannes Itten – otherwise considered the least radical of the creators of Bauhaus – and further developed by László Moholy-Nagy and Josef Albers. Among the goals formulated by Itten, it is worth noting this one in particular: ‘To free the creative forces and thus the artistic talent of the students. [...] The students were to rid themselves step by step of all dead conventions and pluck up the courage to do their own work’ (Itten, 1963). The need to overcome traditional foundations and postulates of art was thus brought to the fore in the Bauhaus programme.

A hundred years later, we are in a phase involving a further progressive transformation of the art paradigm; we may also be in the course of another artistic revolution. And also today, progressive art universities that try to keep pace with radical art support the trends they evoke and develop new creative attitudes. In turn, they propose study programmes whereby students have the opportunity to free themselves from existing conventions and gain knowledge and develop skills that enable them

to establish direct dialogue with currently developing creative trends. In this way, they are equipped to meet the expectations of the new era.

An Incubator to Experiment Art Practice Liberated from the Matrix of Art, proposed by École nationale d'art (ENDA), a university associated with the Biennale de Paris, is the most recent example of such a programme. On 11 August 2019, on the Facebook site of the Art, Technology, Consciousness: Technoetics public group, there was a call for applications to participate in the programme, which was publicised as being open to new creative challenges going beyond the existing art system. Offered to interested candidates, the programme 'aims to liberate them from the inherited ideas of 20th century art history, and proposes an inquiry into the crucial issues of 21st century art, whose history is now unfolding and in which they might eventually participate' (this and the following quotations are taken from the call for applications on Facebook).

So, just as in the case of studies at the Bauhaus, ENDA's educational course promises an introduction to the most important issues of the latest art, combined with a simultaneous arm's-length distancing from the dominant conventions of art. This time, however, the artistic principles and concepts from which students are to be freed are, above all, those visions of art that the avant-garde proposed in the previous century and which were actually applied by Bauhaus, among others.

What connects the former Bauhaus proposal – which, *nota bene*, made it different from other avant-garde tendencies of that period – with today's ENDA offer is its consistent negation of the concept of purity or the autonomy of art. Whereas at the Bauhaus, art was linked with design, craftsmanship and engineering,¹ art in ENDA is structurally and conceptually integrated with scientific research. In the call for applications for admission to the programme, the university defines its profile in the following way: 'École nationale d'art (ENDA) is a graduate school for research and experimentation in art.' The concept of artistic research and diverse trends from the field of Art & Science or SciArt represent

¹ It is worth noting that the Bauhaus aesthetic programme has continued to flourish in the art of new media, to the greatest extent of all historical avant-garde currents, from the work of Jean Tinguely, Nicolas Schöffer and Edward Ihnatowicz, to the contemporary works of Bill Vorn and Patrick Tresset.

the framework of the ENDA programme. Which is why the ENDA programme is addressed to artists and researchers who want to connect conjoin these fields of practice within their competence and activities ('The curriculum [includes] practical and theoretical working sessions'). Consequently, the École nationale d'art's programme constructs a platform that integrates both creative fields.

The nature of the programme is also revealed by the fact that the invitation appears on Facebook profiles. Some researchers of contemporary media and media culture (Levinson, 2010) consider social media as the newest, most radical form of new media, and the context of new media actually provides the broadest framework of the ENDA programme. Its narrower framework is determined by various aspects of the interaction of art with research and science: by determinants that characterise individual areas of SciArt, and by all properties common to them: hybridity, teamwork (an attribute also valued in the Bauhaus), laboratory work, and all new concepts of creativity and art emerging from their fusion.

Bauhaus and École nationale d'art are two examples of universities that have endeavoured to propose didactic programmes in the field of artistic creativity aimed at overcoming existing visions of art and pre-existing methodological approaches. Both these universities focused on selected issues, forming carefully defined programme concepts. However, when considering the didactic programme that would be needed today, developing the perspective proposed by ENDA, we should first consider the general profile of artistic education, which is in keeping with the nature of today's civilisation and culture. Next, we should attempt to identify the challenges that art universities and their educational programmes should meet today as part of that profile. Later in this paper, I will reflect on the general cultural characteristics of the age and the emerging profile of artistic culture, as well as presenting the challenges that I consider to be the most important today, discussing their significance for artistic education.

New media art: from postbiological world to networked reality

The postbiological category was once popularised by Roy Ascott (2003). From his perspective, the postbiological world in which we live appears to be essentially shaped around technology,

because its experience is mediated, transformed or entirely produced by technology. A vision of cybercultural reality emerging from Ascott's concept is tied to the new media.

Following Ascott's diagnosis, I assume that the contemporary social context that defines the cultural profile of the age is primarily a result of the technicalisation and new medialisation of culture.

The medialisation of art was a slow and arduous process. The first activities aimed at introducing technical media as creative tools into the space of 19th- and 20th-century artistic practices provoked an enduring resistance from swathes of the art milieu and academia, which for various reasons questioned the artistic potential of the emerging visual media: photography and film, followed by television and video. On the other hand, however, the increasingly wide dissemination of media technologies and their unquestionable ability to create images that displayed the properties thus far found only in art; and the changes introduced to the world of art by historical avant-gardes, ultimately resulted in media finding their own place in the field of art.

But initially, in order to obtain the status of works of art, media images had to take shapes characteristic of related but non-media art forms. It was in this mode that pictorial photography emerged, the first variety of photography accepted by the world of art in which properties considered to be artistic were essentially a result of those activities not specific to the photographic medium. The *film d'art* aspired to the rank of art in the same way through its imitation of the forms of theatre. On the other hand, when creative television - which I consider to be the first concept of video art - developing in the 1960s, was self-positioning itself in the field of art, it benefited from the transformation of artistic culture that took place due to the activities of historical artistic avant-garde movements, to encompass photography and the film arts. Despite this, the history of video art began only 30 years after the permanent introduction of television into the social space. Shortly thereafter, digital technology appeared in the world of art - the computer, which fulfils the role of a metamedium vis-à-vis numerous new media currents of art: interactive installations, virtual reality art or internet art, to give just a few examples.

As a result of all these processes, a specific mode of establishing and developing the art of technical media in the broad sense of the word (media art, new media art and postmedia

art) evolved. All of these creative media are constructed on two levels. In the foreground, the properties, structures and forms resulting from the technological determinants of technical media art are shaped. And those properties that emerge from the field of non-media arts are developed in the background; they are engaged in an interaction with the attributes of technical media. These interactions are constitutive of the artistic status of the work. The aesthetics of works created in this mode are defined in a dialogue between these two spheres. And although such interactions are no longer necessary for the constitution of the artistic rank of the technical media, the same interactions often co-determine the nature of this art.

Such duality obtains for the technological art to this day. And although its form currently adopts a slightly different shape – the technical nature of the art media no longer raises special controversy, and art itself seems to remain in a symbiotic relationship with technology – the duality remains invariably important. While characterising the most advanced form of technological creativity – the art of new media – Lev Manovich pointed out the configuration of those properties constituting the same, which is particularly important for its aesthetic profile. In his opinion, it also has a two-tier structure. Its first layer consists of cultural determinants, such as the encyclopaedia, story, plot, theme, composition, point of view, mimesis and catharsis, comedy and tragedy. The second layer, on the other hand, includes aspects and components derived from computer technology: process and packet, sorting and matching, function and variable, computer language and data structure. As a result, a specific form of computer art (and culture) emerges, being a synthesis of cultural attributes and meanings as well as computer properties, traditional humanistic principles of modelling the world and computer principles and means that do the same in their own, different way (Manovich, 2001, pp. 45-48).

In the field of each particular art of technical media there has also emerged a trend that aesthetically tries to be based solely on the media properties of this art. All such varieties find their place in the spaces of avant-garde artistic practices, constituting their radical, progressive varieties. They set out specific rules, procedures and working methods that lead towards so-called *pure*, autotelic, media art forms. Conceptual photography,

structural film, analytical video or software art are their distinctive multimedia varieties.

Currently, this contextual process is developing apace due to computer technologies and the digitisation of reality, although cybernetic and robotic cyberculture sources and currents are also worth mentioning; as now, digitised, they have developed and combined with the issues of networking, artificial life, artificial intelligence and machine learning. The world has gained new dimensions, levels and aspects through new media. Among them, it is worth pointing out virtualisation, which is a result of the dynamic development and dissemination of digital imagery and of shaping digital environments: from online gateways and various online projects to virtual game worlds; virtuality-related immersion, telematicity and mediatisation of experiences; the growing role of digital, in particular online, archives – databases (more and more often also created in a social mode) together with the processes of externalisation and memory distribution; performatisation of social behaviour, arising from the development of interactive communication practices seeking to dominate; or community-based participation emerging from the expansion of social media and Web 2.0 and 3.0 culture.

Art that uses digital technologies as tools, creative work environments and media of expression provides especially vivid examples of processes that make up the modern world of cyberculture. Artistic structures, creation patterns and strategies for organising experiments developed on the foundation of the new media today represent important perspectives for the development of art, as well as contributing to the shaping of new cultural paradigms. Postmodern creative gestures, such as appropriation, repetition, transformation or remix, are now being repeated in new conceptual contexts, among which deconstruction, transgression and transdisciplinarity seem to play particularly momentous roles. The new order of art they define first touches the visual and audio-visual spheres, assigning images new formats, perspectives and functions, although we can see numerous multi- and hypermedia works evolving in this sphere, which are extremely important for future artistic and cultural orders. And they refer to complex multisensory experiences for which literary, performative and sound media forms are an important

foundation. In the visual space itself, on the other hand, nomadic forms of imagery, transmedia constructions are shaped, such as image sound and word image. New functions of the image are also being developed, which becomes a map of the place for connective transformation into an element of the three-dimensional environment, and then – into an augmented reality. These processes also lead to a change in the form of contact with images, to a replacing of the position vis-à-vis the image with being-with-image or being-in-image. As a result, the image eventually ceases to perform the function of representation, instead becoming an object, environment or, finally, the interface of an interactive experience (cf. Kluszczyński, 2015).

The art practice developing in the new media paradigm takes many forms: from technical and systemic ones, such as Art & Technology, oscilloscope art, cybernetic art, telecommunications art, holographic art or laser art, to currents of creativity that make recourse to digital technologies, such as computer graphics and animation, machinima, generative art, virtual and augmented reality art, location art, software art or internet art. These currents have fluid borders, which means that many of the works constituting them belong to more than one of those currents.

This broad spectrum of trends in new media creations consists of a number of properties that constitute their paradigmatic background. These features are a construct from which individual trends, as well as the individual works constituting them, select sets that define them by species or as individual entities. Some of them function in a clearly defined form, as present in the names of new media art varieties. Others are their additional hidden attributes. These properties include, among others, the technical nature, automation, autonomy, telecommunication, happening-processualism, modularity, variation, virtuality, simulation, telematicity, digitality, non-linearity and spatial orientation, interactivity, database, hypertextuality, cybertextuality, hypermediality, structural dispersion, multi- and intermediality, networking, navigability, convergence, structural opening, individualisation of the proposed experience, collectivity of creation, participation and hybridity (see Kluszczyński, 2014).

The indicated properties appeared successively in the field of media art, ranging from photography to computer network

media, and they have constructed and developed its aesthetic characteristics.

Along with photography, in addition to technical characteristics, technical automatic procedures have been introduced into the cultural practices of image creation. The technical apparatus has taken over from the human act and automated some of the components of the creative process in the field of imaging. And these were techniques that merged the creation of vision and the creation of a material image-artefact into one process under the control of technical machinery. By reaching for the photographic or film medium, the creative man controlled the machine, and the creative machine controlled the process of creating images.

The same may be said of film. Both of these visual media, apart from the indicated features, by which they broke ties with traditional imaging, have to some extent maintained strong and significant relationships with the same. As solid material quality combines photographic and film images with all earlier types of images. It brings them some kind of ordinary stability and durability.

But in the case of electronic images, the situation is different. In fact, they are not images – visual artefacts lasting over time in an unchanging form – but have the status of events, performances. They do not produce a permanent artefact, but pass away with the moment of their self-presentation, freeing up space for subsequent pictorial performances.² Nam June Paik brilliantly explored this feature in his artworks. **Fig. 1. | between pages 154 and 155**

Following the technical transformation of the field of imaging, this second transformation thus deprives images of existence. Besides their existence, electronic quasi-images also lose the ability to represent reality; a representation that is legitimised only by television telematicity. In this situation it becomes only a function of television broadcasting. The telematic semblance of representation, realised by real-time transmission, however, in fact acquires the characteristics of presentation, because the borderline between iconicity and indexability is blurred here. Instead of the pictorial representation of absent reality, there is telepresence of transmitted worlds *sui generis*, situating themselves between representation and self-presentation. Along with

² Today's video technology creates electronic images in a different way, but being event-related still remains their primary attribute.

the transmitted signal, television transmits places, not images; the latter appear in real time on the television screen.

In contrast to electronic television images, video images have – thanks to their rooting in electromagnetic procedures and embedding in the material of the tape – a kind of permanence. They can be repeatedly presented based on the same notation, thus transcending and overcoming their non-existence. However, this permanence is essentially secondary. It is first and foremost the permanence of the electromagnetic recording, and only then of its visualisation. So the permanence in question is not, in fact, the permanence of the image, but the possibility of its presentation.

Digital images are also characterised by their event-like structure and by their withdrawal from the sphere of material artefacts. But in this case, that quality of digital quasi-images is not bound with their transitory status. Regardless of the visualisation technology, the foundation of digital imagery is permanent. While electronic images fully deserve the term ‘event’, for digital images I prefer to retain the term ‘performance’. Still, the near synonymy of both these categories points to the similarity of both forms of the quasi-imagery discussed here, but encouraging us to precisely define their differences. So with regard to television images, the difference between an electronic event and a digital performance is based on the one-off nature of the event vis-à-vis the possibility of many identical performances. But in the case of video images recorded on tape, there is the possibility of the multiple repetition of an always-the-same electronic event as opposed to the possibility of many different performances of the digital image. The difference in this case is therefore due to the possibility of executive modification of the digital image while maintaining its identity (on account of its own properties: numerical representation, modularity and variability), whereas the repetition of magnetic recording reproduction always leads to the same visual event, and change is regarded as a technical defect and damage to the work. This difference is blurred in the context of video synthesizers, which, even in the analogue version, create the possibility of performing diversity, and that prompts us to repeat the already-formulated proposition about the proximity of electronic and digital images.

The digital revolution thus continues the process of image dematerialisation started by its electronic predecessor. Its non-

-existence is now algorithmically formatted; the image, while being permanent in numerical form, remains in the state of infinite readiness for varied performances on many different devices built on a metamedial computer foundation.

Virtual environments abandon traditional imagery in yet another way. They cease situating themselves and being available only on the screen located in front of the recipient-users; they cease to be an artefact placed vis-à-vis the recipient, within the common world, themselves becoming the world, surrounding the recipients from all sides (*immersion*), introducing them to simulated reality and allowing them centrifugally, and therefore also bodily, to experience their own causative, telematic presence in virtual reality.

In all their forms, interactive images expand the gap between the field of classic images and the contemporary forms of visualisation, a break that emerged and developed with the appearance of electronic images. Contemporary images, or rather quasi-images, because they not only appear in real time as events or performances, questioning their own existence as entities lasting invariably in time – they not only escape the obligations of representation, presenting nothing but themselves – but also submit to impacts, transformations or even creation on the part of recipients-users. These images are transformed into action tools, interfaces that create the possibility of multiple communication and interaction with hardware and software, as well as with themselves. The perceived factuality of digital images now metamorphoses into the instrumentality of interactive images. Regardless of their form and directly performed function, interactive images transform the sphere of visual events shaped by electronic and digital images. Instead of contemplated event-images, there are interactive task images; instead of aesthetic distance – participatory responsibility.

Images and quasi-images have been linked on the network. But they also became networks. Writing about networks here, I do not limit the use of this category to the Internet. Not only because modern networks are very diverse and increasingly converged, they include the Internet, Ethernet, telephone and geolocation networks, using wired and wireless infrastructure. Within them, new networks are created, of a different level, such as Twitter or Facebook. Also, however, because – as I have already pointed out –

the images themselves have become networks. Digital images, according to their media characteristics, are modular networks. For the same media-related reason, every digital image is a network of its potential variations. In addition, interactive images are networks of virtual or real variants shaped by user interactions. Each of these variations of the network introduces characteristic properties into the world of images, making them also developed multi- and hypermedia structures. The transgressive character of modern information and communication technologies endows the created images with similar transgressive qualities. Transmedia nomadicity and transgression also become their basic properties. The networking of images introduces fragmentation, and at the same time a new kind of holistic order – the network – as a horizon defining the experience of images. Each image is both a fragment and a networked whole. There is nothing but a fragment and the network in the world of digital images.

All varieties of images analysed in these considerations, which appeared in our environment after photographic and film images, i.e. after the technical revolution, which I previously referred to as images or quasi-images, we can also call post-images. I suggest such a name for them, because, on the one hand, they share a common history with the images, and, from the perspective of the recipients and users – those who do not subject their status to theoretical interpretation – are still experienced more or less as images. On the other hand, due to their different properties, they break the bond with traditional imagery.

The post-images are deeply hybrid. They problematise issues of imagery in the age of networked, interactive digital media: existence, mutual relations, ways of manifesting and experiencing imagery in the world of post-images. They also problematise the methods of their interpretation and evaluation, situating us in a position from which we should rethink the properties and senses of the nomadic iconosphere.

ArtSci, critical art and social responsibility

The transgressive dimension of artistic practices mentioned earlier encompasses activities that bring about weakening, undermining or questioning of the boundaries that mark out culturally defined territories of art. Abolishing the boundaries separating art from other fields of practice, all forms of transgression put

it in direct relations with other spheres of social life and their respective concepts, methods of operation, tools and products. As a result of these confrontations, artistic phenomena emerge to a significant degree co-shaped by non-artistic fields, internally diverse phenomena. Transgression thus supports the deconstructive stance, being the main factor in the processes of hybridisation of art. Referring to the logic of Giorgio Agamben's reflections on the post-identity forms of modern communities (Agamben, 1993), I would say that on this path art has lost its identity grounded in common properties, becoming an open field in which every work is an instance of art.

Deconstruction and transgression turn out to be two aspects of the same, complex transformation process in which art parts with inherited identity. And takes the effort to shape a new one.

From the very beginning of the shaping of the new media paradigm, the relationship between art and science was intense. Initially, the artists directed their interest towards the theory of communication and media, mathematics and cybernetics, and the dialogue with them brought forth the first creative trends of the age of new media: cybernetic, robotic, telecommunicational and algorithmic art. They are probably the most expressive forms of the multiform Art & Technology trend, in which kinetic art also played an important role, being the first tendency in 20th-century art in which the artefact, understood as object, took a processual form. All of these early (initiated in the late 1950s and 1960s) manifestations of the interaction of art with science were also contextualised by engineering and technological theory and practice. Further forms of the relationship between art and science went even further into the world of science, towards life sciences, medicine, neurology, genetics, physics, nanotechnology and artificial intelligence research. In this way, the Art & Science trend, also called ArtSci, marks out the other area of contemporary artistic practices, symptomatic of the modern world, tangential to new media art. Its numerous trends, such as bioart, neuroart, biorobotic art, nanoart, artificial life art, are characterised by profound transdisciplinary hybridity. They create art forms in which borders are crossed and wherein many different disciplines of social activity are brought together.

The cybernetic transformation of the concept of a work of art has been consequently followed by the transformation of

aesthetic experience. This takes the form of an event in which the viewer/recipient becomes a participant. The performance of the recipient, and thus also himself or herself, thus becomes part of the work. It is constituted by the relations between all components; it develops in the space in which this complex event takes place. Therefore, the distance separating the recipient from the work of art, which is characteristic of an aesthetic experience, disappears. In cybernetic works, the piece and its recipient form a single, complex, hybrid whole.

Aesthetics responded to this situation with a research approach, under which a cybernetic work of art, its surroundings, as well as its reception, together form one systemic order. It is, therefore, an extension of the artwork, because it embraces the entire arrangement. A work of art becomes a system (Burnham, 1968).

In robotic art, a direct extension of cybernetic art, especially when it is combined with artificial intelligence and interactivity, systemicity is transformed into networking. This still has to do with a leaning towards a holistic order, but of a different kind, not as in systemicity. Among the works of numerous artists following in the footsteps of the creators of cybernetic art – Nicolas Schöffer and Edward Ihnatowicz – next to the works of Louis-Philippe Demers, Ken Feingold, Chick MacMurtrie, Simon Penny, Ken Rinaldo and Stelarc, the work of Bill Vorn occupies a special place.

The aesthetic experiences of Vorn's robotic art are programmed in such a way that they could partly take the form of cognitive behaviour. What defines life? What does it mean to be human? Can there be life in the machine? What is artificial life? What is artificial intelligence? Recipients discover their own readiness (or lack thereof) to accept a posthuman, postanimal, non-humanistic vision of created life and intelligence, to immerse themselves then in the world of social beliefs and culturally-shaped attitudes to the subject. Owing to Vorn's works, we are able to compare and contrast previously acquired and internalised cognitive patterns as regards life and intelligence with our current sensations of his robotic works, which is further extended by a reflective analysis of the whole experience. **Fig. 2. | between pages 154 and 155**

When addressing the issues of artificial life and intelligence, Feingold also offers us, above all, a reflection on ourselves: human life and intelligence, their transformations and transgressions. To Feingold, the theatrical, proscaenic dimension of the

Fig. 1.
Nam June Paik,
Magnet TV, 1965,
installation view,
*Programmed: Rules, Codes,
and Choreographies in Art,
1965–2018*,
Whitney Museum of
American Art, 2019.
Photo: Ryszard W. Kluszczyński



Fig. 2.
Bill Vorn,
Prehysterical Machine, 2002,
Concordia University, Montreal.
Photo: Bill Vorn





Fig. 3.
Ken Feingold,
*The Animal, Vegetable and Mineralness of
Everything*, 2004.
Photo: courtesy of Ken Feingold



Fig. 4.
Oron Catts and
Ionat Zurr,
*Victimless
Leather*, 2004.
Photo: courtesy of
Oron Catts and
Ionat Zurr



Fig. 5.
Guy Ben-Ary,
Silent Barrage,
2009–2012.
Photo: Philip Gamblen



Fig. 6.
Christa Sommerer and
Laurent Mignonneau,
A-Volve,
1994–1997. Photo:
courtesy of Christa Sommerer
and Laurent Mignonneau



Fig. 7.

Anna Konik, *W tym samym mieście, pod tym samym niebem...* [*In the Same City, Under the Same Sky...*], 2011–2015, a view of the video installation, Ujazdowski Castle Centre for Contemporary Art, 2015–2016.

Photo: Bartosz Górka



Fig. 8.

Luz María Sánchez, *Vis. [un]necessary force_4 (V.[u]nf_4)*, 2019, participatory multi-channel sound installation, duration: I (3:17 min), II (3:04 min) III (3:05 min), installation view: Musikkens Hus, Aalborg, 2019.

Photo: Luz María Sánchez

designed works, their ability to stimulate and engage viewers, is very important. Feingold's art involves various dimensions of audience activity: physical, intellectual, affective, and imaginative. It also aims to stimulate emotions, not fully conscious behaviours. Developing between the directness of participation and the distance of reflection, Feingold addresses the issues of trans-categorical relationships, networks of hybrid creations, impassable alienation of existence and the elusiveness of identity, thus placing us vis-à-vis the most important challenges of the modern world (cf. Kluszczyński et al., 2014). **Fig. 3. | between pages 154 and 155**

Art exploring the issues of artificial life creates artificial ecosystems. Christa Sommerer's and Laurent Mignonneau's *A-Volve* or *Interactive Plant Growing* seem to be a perfect representative example of that. **Fig. 6. | between pages 154 and 155**

The form of their experience, such as their immersion in the environment of artificial life, also leads the recipients-interactors, participants of the events generated there, towards sensory-experiential and reflective experiences. Both these dimensions of experience – Apollonian and Dionysian – are intertwined, co-determining the most characteristic property of communing with works of this type. Hybrid multidimensionality, which is its dominant attribute, encompasses many areas, combining as it does the technological and cultural field and the field of simulated nature, reality and virtuality, and art and science. It combines the cool of rational analysis with magic and the euphoria of physical sensations. And in any case, it deeply engages the recipients, transforming them into participants and contributors of events.

Now, in biological art, engineering and computer science have found support in synthetic biology, and genetics and tissue culture have joined artistic strategies. The works of bio artists combine aesthetic, cognitive and critical strategies, and take up issues arising from the development of biotechnology. At the same time, they introduce strategies characteristic of a participatory culture into the sphere of specialised science, participating in the development of the transdisciplinary paradigm. In addition to revolutionary aesthetic consequences, their art suggests a reflection on the interpenetration of the material field of life and the virtual digital sphere, and on the programming of life with all its consequences.

Bio art can be considered as a response to processes that have thoroughly transformed the world of science over the past few

decades, complementing and in many cases even replacing its traditional goals and the cognitive tasks with creative activities of a new type. Regarding biology itself, today it is thought to be developing in the direction of biological engineering, becoming a synthetic biology and transformative in terms of the typical research project, developing a knowledge about the world of living forms in favour of a desire to expand the paradigm of its transformation or creation (SymbioticA Research Group, 2001, p. 141). As if in response to this progressive transformation of biological sciences, art also changes its goals and methods of action, proceeding in the opposite direction, i.e. enriching the creative perspective in an alignment with research goals. In this field, Oron Catts and Ionat Zurr (and to some extent Marta de Menezes or Anna Dumitriu) seem to be preoccupied in particular with a reflection on the social consequences of the transformation of biological sciences mentioned above. Their art has made synthetic biology and the holistic transformations of science the subject of theoretical-cultural, anthropological and aesthetic reflection.

Oron Catts and Ionat Zurr create semi-living sculptures, objects existing only thanks to life-supporting apparatus, in laboratories built in gallery spaces. **Fig. 4. | between pages 154 and 155**

Artists are occupied with the problems of life, its comprehension and definition, boundaries and forms, as well as the issues of identity, transgression, and exploitation. The art created by Oron Catts and Ionat Zurr, just like cybernetic and robotic art in another field, breaks with the traditional idea of representation so characteristic for Western visual culture, replacing it with a specifically-conceived concept of presence. In their works, these artists do not seek to present life, but create it. Media used by Catts and Zurr are described as wet and biological.

So life is simultaneously an object of creation and reflection. But due to the fact that this life is laboratory-constructed in the now, the subject of discussion also extends to the relationship between nature and culture, the philosophical problems of the creation of life and living beings. In the context of bio artistic practices, the art studio becomes inevitably transformed into a research laboratory, creative work tools - into scientific apparatus, while a cultivated tissue culture becomes the artefact. In this way, the traditional artistic sphere inevitably merges with scientific and ethical issues.

The works of Catts and Zurr are not only activities that transfer laboratory equipment to the gallery space, making it an indispensable component of the presented works. They offer recipients an experience that opens up a world constructed on scientific foundations, immersing them in a postbiological biotechnosphere. They also initiate – which can be considered the inevitable culmination or permanent foundation of each of their works – cognitive discourses aimed at reconstructing existing definitions and systematics of life.

Biorobotic art, examples of which are provided by the work of Guy Ben-Ary (together with other artists and researchers from the SymbioticA laboratory), emerges from mutual interactions of the biological art of tissue culture and engineering, as well as computer and robotic art. I call it *hybrot art* because these works are hybrids connecting live neural networks and robotic techniques (cf. Potter et al., 2004). The most interesting of them develop their autonomy at the level of artistic creation. *MEART – The Semi-Living Artist* (2002; the 2001 prototype version was called *Fish and Chips*) was made up of two main segments – a neuron culture and a robot. When the signal from the camera (eyes) reaches the neural culture (brain) via the Internet (nervous system), it is processed and delivered to the robot (arms) to make a drawing. *CellF* (2016) is in turn a hybrot musician, who creates improvised music in response to sounds (music) supplied from outside. In both cases (similarly to the installation *Silent Barrage*, 2006) there is an autonomous subject of creation.

Fig. 5. | between pages 154 and 155

CellF introduces one more theme to our considerations. Ben-Ary applied a method called induced pluripotent stem cells, in the process of its creation (iPSC - Shinya Yamanaka and John Gurdon received the 2012 Nobel Prize for developing it). Owing to that, cultured neurons – the *cellF* brain – could originate in skin cells taken from Ben-Ary, processed into stem cells and then into neurons. Thus, neuron culture, which is the control centre of Ben-Ary's work, can be considered a *sui generis* extension of his own brain.

Developing interactions with science, art does not bypass its interest in the humanities, in particular cultural research and social studies. Reflection on contemporary socio-cultural orders, the Anthropocene and ecology, migrations, nationalisms and

totalitarianisms, racism and exclusion, violence and civic self-organisation are increasingly the province of art. Artists adopt an analytical and critical stance, bringing out invisible processes and political games, undertaking deconstructive, subversive, critical actions in their art, the results of which provide various kinds of support to disadvantaged social groups, and maintaining hope for social change.

As in the case of the works from the ArtSci field, we also find various creative strategies in works from the critical art circle. Some differences between artists' attitudes apply not only to the topics discussed, but also to the working methods. In a 35-channel video installation *In the Same City, under the Same Sky...* (2011-2015), Anna Konik lets women - immigrants residing in Stockholm, Białystok, Bucharest, Istanbul and Nantes - speak with the voices of local women, who empathically identified with their stories and brought them out of the sphere of invisibility.

Fig. 7. | between pages 154 and 155

Konik's work is based on social activism, work in and with communities. Research on their fate led to the creation of a database, an archive of the narratives that make up the tissue of *In the Same City, Under the Same Sky...* Krzysztof Wodiczko also shapes his works in a similar research process - by creating archives. Their subjects take part in his works, as well as in other works of Anna Konik, giving the emerging works a special participatory status.

The Transborder Immigrant Tool (since 2007-ongoing) by Electronic Disturbance Theatre 2.0/b.a.n.g. lab (Micha Cárdenas, Amy Sara Carroll, Ricardo Dominguez, Elle Mehrmand, Brett Stalbaum) is a mobile phone application created for people endeavouring to cross the desert border from Mexico to the United States to lead them to water resources. The application also offers poems to its users in an attempt to influence their mental state. Like Wodiczko's *Vehicle for the Homeless* (1988-1989), *The Transborder Immigrant Tool* was not handed over to dedicated users as a real tool supporting their journey across the border. Instead, it drew attention to the problem itself, highlighting advanced systems of control and political violence (because state borders in the modern world, in which identification with a place is systematically and thoroughly undermined, are nothing other than political violence³).

³ See also Luz María Sánchez 2487 and *riverbank*, both from 2006.

On the contrary Luz María Sánchez has passed her work – a mobile application, connected to a dedicated website *Vis. [un]necessary force_3* (2017–2021) – on to users: collectives operating in Mexico, who are looking for the remains of their abducted and murdered relatives. The work – an audiovisual cybercartographic form – is also a commemoration of the victims and a tool, a database, for building memory, oral and audiovisual history. Data obtained during exploration expeditions have been scientifically systematised. The work also serves to empower participants and strengthens their sense of community.

Vis. [un]necessary force_3 is a transdisciplinary, collaborative creative work that is based on the foundation of research. The artist also participates in exploration expeditions. The result of one such expedition, carried out with the Las Rastreadoras collective, is the installation *Vis. [un]necessary force_4* (2019–2020) using, among others, the sounds recorded during the trip.

Fig. 8. | between pages 154 and 155

Conclusion

In my opinion, three problem areas, fields of theoretical reflection and creative practices mark out the most important fields for contemporary artists. The art of new media, ArtSci, and critical art, jointly shape the basic system of contemporary artistic culture. They share both the technology used and, above all, transdisciplinary hybridity.

Two of them – ArtSci and critical art – clearly belong to the field of postmedia.⁴ This concept refers to two primary determinants. First of all, postmedia is not a single medium, but a complex media environment, which as part of convergence processes combined them all into a complex whole, comprehensively offering all the properties and possibilities that were once dispersed among individual media. On the other hand, as a result of divergence processes, postmedia have splintered into numerous diverse environments, which, unlike individual media in the past, co-operate in creative processes. Secondly, postmedia guarantees universal access, ease of use and the obvious use of technological media capabilities, which means that the centre of

⁴ Although it is not difficult to find theories, such as the concept of Domenico Quaranta, which now also assign such status to the art of new media.

attention shifts from the media, their challenges and creative potentials, to their cultural effects and interactions with non-artistic surroundings. We are currently observing the development of postmedia with growing interest, especially in the diverse field of Art & Science trends (broadly speaking, i.e. including humanities and social sciences).

The trends that are characteristic of the three areas jointly determine the creative and research fields of art,⁵ indicating at the same time what profile contemporary art education should adopt. In fact, art education should develop between media and postmedia, between meta-artistic reflection and research commitment that goes beyond traditional artistic challenges, so that it is located somewhere between subversive analysis and social support technology. Contemporary art universities should prepare their graduates for acting in this complex area. The challenges they face there, if they are creatively addressed, will make their emerging works meaningful, important and valuable statements in the context of the modern world.

Among those challenges, I would first include:

- (1) Technical and media competence: management of automatic processes, programming and media awareness.
- (2) Participatory competence: planning and organisation of creative behaviour of recipients.
- (3) Social competence: group work, creative cooperation and community attitude.
- (4) Institutional competence: work in public space.
- (5) Workshop competence: a combination of art studio, science laboratory and gallery work.
- (6) Conceptual competence: transdisciplinarity and hybridisation.
- (7) Philosophical and cognitive competence: rationality, methodology and exploratory needs.
- (8) Ethical competence: critical attitude and empathy.

(trans. PS)

⁵ An extremely interesting example of an art and research programme integrating all indicated areas is the ACHC (*Artes Ciencias Humanidades y Ciudadanía - Arts Sciences Humanities and Citizenship*) project, developed and initiated by Luz María Sánchez at the Universidad Nacional Autónoma de México in Mexico.

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Specificity, Perception and Teaching of Contemporary Visual Language: Needs and Challenges

The objective of this paper is to present some reflections on the mode in which visual communication is created today and how this subject is taught, based on my teaching experience at the Faculty of Media Art, Academy of Fine Arts in Warsaw.

While examining teaching practice with reference both to studies on contemporary visual communication and directly to problems faced by the students of our Faculty and other similar art universities, one is bound to consider the question of the essence of creation and reception of the audiovisual message in terms of its significance, reliability and authorial responsibility. In my view, these issues should be teaching subjects. I find them very personal as an artist, and they accord with my attitude towards visuality. Consequently, I expect such a personal and committed approach from my students; and it seems to me that this ensures an authenticity of the created message, which entails sharing one's reflections and insights.

I also present three MFA theses. The theses I have selected crown the teaching process. Moreover, in my view, they provide valuable references to my reflections as they update my own idea of visual statement, and have been representative of the young generation of artists.

The deliberations below have been organised around the questions that inspired them.

Is the capability of reading visual messages a blessing or a curse? As a social being, man has always sought to communicate his own vision of the world to other members of his community, and – as a result – a vision of himself. It is obvious that the forms of these messages changed both because of the social groups in which they were created and because of the desire to produce a specific effect in the group of recipients. From very primitive, though effective, sound forms through equally original, newly appreciated visual forms to today's socially complex, or newly simplified, methods of producing images.

Focusing solely on broadly-defined visual messages, it is possible to assume that visual communication is communication by means of images or the conveying of information through visual forms using a wide spectrum of media. An accurately selected and appropriately addressed visual message is based on the sign coding system, including formal elements as well as those referring to the ideological aspect of a produced statement. This means that the cultural specificity of a society that is a prospective addressee of the message is of crucial importance, as the message's shape and form change depending on the linguistic or cultural context. Denis McQuail distinguishes several processes of social communication: intrapersonal, interpersonal, intragroup, intergroup, institutional/organisational and mass (2010, p. 18).

This seems quite significant as the focus should be given to the range of this utterance, its privacy or personal nature, while referring to the supposed development of the visual message (Rose, 2006). As regards visual messages, the scope of the tool impact becomes far more universal than any word or sound. This is perfectly exemplified by emoticons – graphical signs expressing basic emotions, including anger, joy or sadness. They are already widely used and have become an artistic tool. Moreover, they are part of a common trend for communicating through the image. Małgorzata Łosiewicz emphasised the growing role of images in the process of 'mediatisation' some time ago:

Analysis of interpersonal contacts in modern societies reveals an omnipotent process of mediatisation. Development of telecommunication technology results in the increasingly common use of mobile

phones, Internet or e-mails. Media expansion leads to their predominance in the processes of communicating. In this way social communication is subject to the process of mediatisation at the private and business level (2009, p. 207).

This view was elaborated by Piotr Sztompka, who wrote:

Although writings still predominate, a new visual civilisation emerges. Numerous symptoms indicating a new situation predominantly include a huge role TV and DVD play in everyday life. Internet is becoming a basic tool at work and home. We read illustrated magazines, watch cartoons, look at the picture windows in Internet, send pictures by mobile phones (MMS). A large number of life areas are prescriptively regulated by images. Iconogrammes have replaced standard information. Road signs organise traffic (2005, p. 38).

Thus, what is our ability to interpret visual messaging? Is it an appropriately moulded sensitivity enabling us to comprehend any language rooted in the specific social group? That nowadays we are not even aware of numerous language rules established in the highly developed societies, which we take for granted when making use of the visual messaging, is a fact that is all too obvious. We remember how a recently discovered Amazonian tribe that had never before had any contact with the so-called civilised world was unable to indicate any affinities between a clay pot they had made and a two-dimensional pack shot photography of this pot, taken by scholars from 'our world'. This example may make us aware that the skill of reading visual messages is associated with the technique we are taught or our own sign-decoding system.

And yet, I am not interested in the very skill of decoding a special language that gives priority to either emotions or three-dimensional reality to the two-dimensional surface of the photo or monitor. This is rather a study area for sociologists and historians of the development of culture. What interests me more is the problem of the conscious teaching of such a skill at the artistic university level. In my view, it is higher education institutions that are responsible for teaching individuals in a well-thought-out manner so that they may create a lucid and conscious visual message. And here an important question may be asked: is it only artistic universities that are entitled to teach people the shaping and defining of visual messages in some specific societies?

Certainly, the answer is negative, which provokes another question: **Is the ability entailing the conscious and professional designing of visual messages a blessing or a curse in modern times?** If I were to briefly answer this question, I would say that it depends whether someone demonstrating such ability is able to distance oneself from reality. Another crucial question is about the way somebody skilled to create visual messages should function along with the majority of society whose demands about their quality are low. A fragment quoted below includes the views that Nicolas Bourriaud and Marek Wasilewski hold on this subject:

The current practice of art shows us that defining artistic activity exclusively in the field of art is no longer sufficient. There are many answers to questions, frequently asked, who is an artist. They must consider the role of the artist in the world in which he lives and works. These roles can be many, and this multiplicity need not be negative, as it may be complementary. Taking up the game of consisting in imagining who an artist might be, we may as well start with Nicolas Bourriaud's highly intriguing hint. He wrote that the contemporary artist is a 'semionaut' inventing trajectories between signs: 'The most common denominator shared by all artists is that they show something. The act of showing suffices to define the artist, be it a representation or a designation' (2002, p. 108). Bourriaud makes it clear that a contemporary artist is not defined by his work, understood as the production of new objects or meanings but an attitude and activity leading to the re-programming of already-existing signs (Wasilewski, 2017, p. 34).

And here another question arises: **Why does society need visual awareness?** Jerzy Jarnuszkiewicz, my grandfather, a sculptor, used to say that nobody needs art as an indispensable part of life. This is a strange and sad statement, particularly when it is made by a professor and an acknowledged artist who devoted all his life to art. Yet this is a statement that I find to be true. To paraphrase it, you could ask about the reasons for which society needs visual culture, about the place this culture occupies in the audience's consciousness. This is a hard subject as it concerns very immeasurable values difficult to categorise and put into specific tables. To decode this question, it is useful to refer to the encyclopaedic definition of 'awareness':

awareness – a psychological notion in the strict sense, difficult to define, referring to a sense of experiencing specific mental states (psychological phenomena); perception enables human beings to orientate in the surroundings, adjust actions to the meaning of events; as well as making it possible to comprehend the contents of personal psychological experiences (experience one's 'self'), and the very fact of their experiencing (Encyklopedia PWN, 2019).

The Encyklopedia PWN provides us also with information that 'awareness' is described by language and, importantly, that image messaging is also a language in itself (Bonsiepe, 1985, pp. 303-309).

Learning this language is the prerequisite of any conscious experiencing. In my view, this is a crucial assertion for thinking about the essence of visual language in the development of contemporary information societies. Not without reason do industrialised countries have recognised the development of visual culture as an element of their foundation. This is represented by a large number of examples, including that concerning the duty of the emperor of Japan to take care about beauty and harmony.

In my opinion, visual consciousness is a crucial facet of civilisational development. Apart from the advantages resulting from the diversification of social relations, such as the subtlety of messages, multi-faceted characteristics of visually-built utterances, improved skill pertaining to the identification of the senders' intentions, exposing disinformation and the different forms of media manipulation, visual language paves the way, of a unique nature, towards exploring the essence of the world. This makes it possible to frame the questions about our environment in a manner different to literature, science or music, which allows for seeking a complex structure beyond obviousness. At this point I would like to refer to one of my students' MFA degree pieces: *Pozostałość* (Remnant), authored by Agata Witczak, which highlights the ever-pressing problem of the human impact on reality, or – in other words – our material influence on the environment that includes a mark or some imprint we leave on the earth and acceptance of death as a moment we can no longer have such impact. This is what Witczak (2019) wrote about her piece:

My project comprises three video productions showing the human impact on surrounding matter and the subsequent dispersion of its

consequences. Each production shows the situation the moment after interaction between humans and the environment. [...] A crucial point is what happens to the energy after interaction and not who and how transferred it. The work is aimed at describing the modes of interaction ongoing between humans, matter and space.

The first video film, made using a thermographic camera, features the dispersion of the heat remaining after interaction. The film refers to the traces man leaves behind unwittingly and unknowingly, and, consequently, to our passive participation in the world. Over the course of time, the temperature transferred to the object becomes the same as the temperature of the environment. Interaction leaves no traces and the environment returns to its original state. The second video film features a form made of sand. Its structure bears the clear imprint of a hand – a remnant of the human-object interaction. Over the course of time, a slow decomposition of the form proceeds, which leads to the erasure of a trace left by the gesture. The film refers to the intentional and active human action resulting in the distinctive impact on the environmental form. The third film features some elastic material capable of restoring a previous shape. Just as in the previous cases, a trace left after interaction is gradually erased and the material re-establishes its original shape. The film refers to some passive impact made by human: a constant pressure force exerted on the surfaces touching human body. The author's idea is to visually feature the relationship between humans, objects and the world. Objects demonstrate the properties that enable them to retain and remember our energy. In each presented case a trace left after the human action vanishes and the energy transferred to the object is dispersed. Its decay is caused by the force of entropy that constantly impacts the world. The temporary and elapsing nature of the traces left in the aftermath of human interaction represents the key message of this artistic production.

Figs. 1-6. | between pages 178 and 179

As a teacher, this MFA thesis completed at my studio in the academic year 2018/19 provoked me to ask a significant question, which is the topic of the next part of this paper: **Are global challenges (also) the challenges of media education?** My answer to this question is certainly in the affirmative. Art and visuality have always provided an answer to human needs. A number of artists have anticipated them but this has usually cost them incomprehension, frustration and sometimes premature death.

Today, social models have changed substantively, even in comparison with those of the early 20th century; and so has the role of the bard or artist misunderstood by society.

Nowadays, everybody wishes to express themselves. I do not mean any specific minority movements but nearly all members of any society, who, even 'within one's normality' (you can repeat after Milan Kundera that 'daily life is divine') wish to pronounce their daily impressions to other people. This has led to the emergence of an extremely interesting interrelation between the author of the message and its target group. The point is that in the age of communication, democracy and freedom of speech, the challenges posed to individuals by reality (although it is the individuals who challenge reality!) have become global challenges. The things we want to watch, the manner we want to experience our sensations, as well as the form of the message, are rooted in our daily experience and needs. Emoticons exemplify this issue. Small visual forms are beginning to substitute extensive descriptions of emotions and feelings. Moreover, the availability of the visual content is changing. The ongoing technological development has a huge impact on the mode of its recording as well as incredible availability and extent of the produced information. Consequently, the modern world where message authors function along with their potential readers have very specific areas of demands. They are enclosed within the specific technological boundaries as well as – maybe primarily – the contents determined by these boundaries. Thus, the question arises how our institutions, responsible for visual education, respond to the current challenges and how they recognise these challenges in their syllabuses. This concerns technological, ideological and ethical dimension. The question may be framed in the following way: To what extent are artistic universities places of contemporary media multi-faceted education? This is the question we asked at the Faculty of Media Art prior to the reorganisation of this unit in 2016 as we saw a need to find a formula which embraced modern challenges. This is well manifested in the preamble to the syllabus effective at our Faculty:

A first-degree university course primarily emphasises knowledge and technical skills, the analysis and recognition of media in terms of accessibility of the artistic message and development of the consciousness of inspirations and the selection of sources. A crucial

element of the syllabus is the building of audio-visual consciousness and sensitivity of students, which is to be accomplished through the classes on modern concepts of image and sound. Another stage includes the learning of skills of artistic analysis in terms of formality, perception and functioning in the specific culture, which facilitates learning competences needed to create original artistic productions, demonstrate artistic achievements and work in teams at this stage of education.

Second-degree university course is focused on the transfer of expert knowledge and skills pertaining to the development of the original artistic message. Education is based on the inter-media and multimedia application of artistic tools combined with theoretical reflection. This enables students to skilfully use the language of artistic expression and professional technology, conscious and effective work in the area of media art. By developing a skill of critical reference to the contemporary culture and socio-political events, education reflects individual and artistic development of students manifested by conscious artistic productions. Such an approach makes it possible to learn social competences in the establishment of teams executing artistic projects and management of their work. This facilitates cooperation with external institutions in the execution of multi-element projects (Preambuła, 2016).

I have included a lengthy excerpt from the preamble as it was prepared by a team of university professors, including myself, as a response to the question about the position and the significance of an organisational unit such as the Faculty of Media Art and its tasks in the contemporary society using visual language every day by means of modern digital technologies. I am aware that it is still valid three years later and should be recognised as a comprehensive and lucid declaration on the direction of educational activities. Thus, it is the view expressed in the discussion about the programme assumption in the visual language education whose knowledge is a crucial aspect of media and information competence which extends to the entirety of society. Decades ago, the framers of syllabuses for British art universities expressed the view that artistic educational institutions should focus not on 'making artists' in terms of primarily technical skills, but on the consistent development and improvement of the mentioned consciousness. We would call this a comprehensive humanistic consciousness with a special stress on the visual arts. It

seems to me that this facet is a critical argument in the perennial discussion on the following questions: Is it necessary to graduate from an artistic school in order to become an artist? Are artistic schools the only place where you can learn about visuality?

In my view, any firm 'yes' or 'no' would be either an exaggeration or a populist trick. Given the experience of a number of Polish and foreign higher education artistic institutions, I think that it is possible to be a conscious and professional artist and not just a graduate from some artistic university course; which, however, is something of a rarity. Yet I find that artistic education is crucial in social terms. This is primarily because of the transfer of knowledge about the cultural achievements that may be called tradition. This does not mean that I endorse an approach where artistic universities are recognised as a place where contemporary media education is defined as a traditional coping of imaging mechanisms adopted by predecessors. Instead, I mean that cultural continuity should be preserved but not only through the acceptance of the achievements of 'the elders or past masters' but also –and perhaps primarily – as a critical approach, including the negation or dramatic revision of its foundations.

Intellectual dynamism of this kind, maintained and harnessed by the Warsaw Academy of Fine Arts, and many other such academies, provides a constant modification of the visual language system typical for younger generations; as well as ensuring a perpetual enhancement of the educational system. Thus, the question arises about the process of visual language education that would address the dynamics of the ongoing changes? Volatility and the individualism of the era of post-modernity as a context of the young people maturing is described by Krystyna Szafraniec in her paper 'Young people and new media: Socialisation under one's own supervision'. The excerpt quoted below illustrates the view she holds:

Postmodernity, also called the late (Giddens) or second (Beck) modernity, is a conventional term adopted to define a developed society of the late 20th century. No society in the history of human civilisation has ever been so technological and so dependent on technology: society whose life was incredibly complicated, a society witnessing unprecedented rate of change, a society full of internal contradictions. In the postmodern era, sociologists highlight such social features as volatility (Bauman), thoughtfulness (Giddens) or risk (Beck) in order

to emphasise the fact that our world is no longer structured, predictable and regular. There are no fixed solutions, benchmarks, ready-to-use patterns, obvious truths and authorities. Life in the postmodern world has become something like a 'speeding leviathan': not only are the changes permanently ongoing but they are going beyond human expectations, going out of our control.

Postmodernity involves a dramatic split between culture and ready-to-use patterns and practices. Erosion of traditional institutions and authorities, volatility and obscurity of the environment contribute to the diminishing predictability of the world that – consequently – becomes the world 'to shape', where our basic task is to create a new world that is adequate to new situations, challenges, strategies, and life patterns. This is not a task where traditional authorities always turn out to be the right ones. At the same time, the inevitability of these processes and their global nature make it impossible not to participate in the transformations resulting from (post)modernity (2015, pp. 200-201).

In my opinion, the prerequisite for any further deliberations should be the answer to the following question: **To educate or to sensitise?** Any teacher in an artistic educational institution finds that teaching skills, enabling students to easily create artistic expressions – in a specific medium, word, sound or image, - underpin any educational activity. It seems quite clear that any artistic expression, including that which rejects dogma, requires skills needed to create a lucid, and purely formal message. The issue becomes more impactful when we refer to the content of production, and discover conscious efforts moulding its visual / artistic and ideological expression.

Education (Lat. *educatio*) means upbringing / rearing, i.e. adjusting to the rules and ideals accepted in specific groups or societies. Referencing such a definition to visual language entails the introduction of specific, accepted as normative, activities, the manners of narrative and, consequently, the creation of an expression in some rather specified form. This looks – particularly in an academic context – like a rather gloomy vision of the conservative approach to a phenomenon being synonymous of artistic freedom (at least in the Western world). Yet here, the following question may be asked: why have so many outstanding artists – the vanguard of their generations – had an educational background that could definitely be called traditional? In my view,

because they demonstrated exceptional sensitivity. I understand this sensitivity as a skill to feel and then experience impressions and the world in a manner stimulating creativity and comprehensibility (Florida, 2003). So educating means sensitising.

This suggests that an answer to the question about the essence of artistic education and the primary tool for the development of the consciousness of contemporary visual language is obvious: it is the bolstering of students' vigilance, which is actually this very sensitivity. Such a thought came to my mind soon after I had graduated from the Leon Schiller National Academic School of Film, Television and Theatre in Łódź. I was lucky to have studied under several outstanding professors, including Witold Sobociński, Jerzy Wójcik and Jolanta Dylewska. This is where – apart from a range of obvious skills needed to transfer the three-dimensional reality where we function to the two-dimensional surface of an image – I was taught something crucial: vigilance, participation in the real world, the multi-faceted analysis of a situation which I want to speak about or refer to. This is not only a visual dimension or technical and technological possibilities, but also a way of thinking about different facets of the world and a final decision: what I want to find crucial and how to code my message.

Even during my university course, when I was assistant to Prof. Rostaw Szaybo, an outstanding graphic artist at the Faculty of Graphic Arts, Academy of Fine Arts in Warsaw, I realised that the essence of university education, at least the one I had always found valuable, entails arousing a curiosity about the world in students. Yet this should be a kind of exclusive curiosity made uniquely individual. In the studios run by the aforementioned professors this was a focal point for discussion. As technical skills had always been something obvious, not much attention was paid to them, assuming that they were the common knowledge and ability in any artistic school. Obviously, the very idea of an image is based on technique and technology. Nothing has changed in this respect. The subject of discussions was far more crucial: a mode to define the world for one's own purposes. And this is what I recognise as the primary task of artistic higher education institutions with regard to visuality: the development of students' sensitivity to the world, the world understood as a student her/himself and their surrounding reality, the world

understood as the relationships in the space of permanent, honest and keen interaction. Does all this make a graduate from the artistic school an artist? To provide an answer, I shall quote Marek Wasilewski:

One can also try to answer the question in the wider perspective that is provided by the reflection of Zygmunt Bauman. In his *Life in Fragments*, he describes a shift in narratives that define the lives of modern humans. While once man was a pilgrim who passed through his life with a clearly defined mission and purpose to fulfil (which required many sacrifices), today people do not have such a purpose. They seek sensations and pleasures in life, do not engage and do not sacrifice anything, and yet still want their lives to be a journey, so they behave like tourists. The metaphor of artist as tourist is reinforced in Susan Sontag's pertinent observation. She wrote that the camera (one of the most important tools of the contemporary artist) makes us tourists in our reality (2017, p. 34).

Certainly, somebody following these thoughts may notice that the ability of decoding signs and using the language of visual messages is different in ordinary people and graduates from artistic university courses. This is a perceptive insight. Thus, the question arises about the consciousness of using visual language in different social groups, including comprehension of the artistic visual language in society and the commensurate social tasks of artistic schools and cultural institutions. In my view, although this may look like a serious problem, there are premises to assume that it is not. There are two factors contributing to this and they should be considered, all the while planning actions aimed at enhancing the development of competences of the whole of society in this area.

Firstly, a consciousness of the visual message seems to be common in today's information societies, notwithstanding the fact that it is primarily intuitive. The overwhelming majority of people belonging to society are able to decode to the extent that allows them to come into contact with an artwork containing this message. Although this is no substitution for purposeful education in this area; but inevitably the language of the visual message – shaped by professionals, including graduates of art schools – reaches a recipient capable of its decoding, especially when this is the basic level of the recognition of affinity to reality. This is

a bit similar to the situation when immigrants are able to communicate via language notwithstanding the fact they have never before learned its grammar rules. Consequently, the level of communication is quite poor but the aforementioned facts allow for some optimism and encourage us to start teaching the basics.

The other fact refers to the very characteristics of the university teaching. By arousing vigilance and sensitivity to the world, presenting traditions in the specific area, but within the framework of accepted ingenuity and the personalisation of the message, enables the author of the visual message to enter into relationships with a society that is the message addressee. Nowadays, you do not need extensive knowledge about the Bible, iconography or rules of composition to decipher an image at its basic level. In a way, being part of the society and culture harnesses a comprehension of the message. Another issue is the exclusiveness of art and the notion of the aristocracy of spirit, accompanying visual culture and its messaging over different periods of time; although – paradoxically – particularly nowadays, in the era of modernism and the democratisation of the Western world.

To illustrate this mechanism, I want to refer to an MFA project from 2016, authored by Kamil Kotarba and entitled *OMG*. This is how this artist explains his message:

OMG (meaning Oh, my God – an abbreviation used in the Internet and young people’s slang) features the images of gods – problems of the first world. [...] OMG, these gods comprehend us so much! Whenever you ask them they instantly respond to your worries. OMG gods are close to human life... The piece comprises seven, a number of second-long looped video forms whose static equilibrium is broken with one mobile element. The repeatability of motion refers to the repetitiveness of mantra. A video set should be presented simultaneously. [...] The gods’ costumes are made from everyday objects that assume new meanings through their transformed functions. For example, an egg beater becomes an antenna enhancing a WIFI signal, a cucumber transforms into a radar; whereas shoes are used for clapping instead of running.

Although the word ‘god’ is a masculine form, in my project each of the gods has no sex – they are universal/genderless. They also have no faces that could suggest their sex. These are the attributes corresponding to first-world problems, the world whose patrons are these gods. **Figs. 7-15. | between pages 178 and 179**

The project relates to current social issues, analyses daily problems – the space so close to all communication platforms based on the visual message, such as Facebook or Instagram. The author makes use of the visual signs that can be read by all members of the target group. Yet the real value of this piece is the specific approach to first world problems – the subtle use of irony both in the narrative and the elements employed to create a message.

So, what is a contemporary visual message, especially one using tools that can mimetically report reality, such as film or photography? Are the pictures we watch just an account or a manipulation? This is crucial in the era of ‘fake news’ and so-called ‘alternative facts’ – phenomena that rest on the assumption that parallel realities exist at least in the area of visual and information language, and on the meaning and functions of a message based on tools of mimetic representation of reality.

Finally, I would like to refer to a piece that addresses the universal problem of ideologisation. Like Agata Witczak or Kamil Kotarba, Magdalena Morawik, the author of the piece, refers to the features common to a specific society. This is definitely a topical issue, combining eternal human need to express views and manifest one’s presence. This is what Morawik (2017) has to say about her realisation:

This project called *Middle Gray* is a 9’14’ video featuring a scheme into which you may interpolate different ideas. I looked to develop a situation where the message author and tools are unified. I recognise a flag as a scheme for absorbing ideas that I find appropriate.

Gray is the point zero, while any departure or deviation may be defined as a determination of the position. In ideological terms, gray is some shade, a scheme to be filled with a content through normalisation, equilibrium and discipline. It may prove equilibrium, rather of a scheme that foregrounds the invariability and stability than of greyness.

My goal was to prepare an absolutely neutral, semantically pure environment. The only element I intentionally skipped is the human factor, the way a flag is moved. Inertia, the inability of continuation and extreme exhaustion result from the permanent use of a tool, sending the message signal. The rhythm and pace of moving a flag, along with the rhythm of the heart and breath of a person moving the flag is like the transformation of desynchronisation into

synchronisation. The length of recording, i.e. the time a featured person uses a flag, is the period from full energy to full exhaustion resulting in an inability to continue. Only the capture of an activity in full, using one camera, without montage, manipulation, can show something I find most significant in this relationship.

Figs. 16-21. | between pages 178 and 179

The piece seems to be particularly significant as it meets assumptions I find crucial. Using relatively simple means, it touches on vast areas and makes them universal. This is what I wrote about it a few years ago:

Magdalena Morawik's project titled *Middle Gray* is very up-to-date. Not only because of its visual side, which unifies the message, but primarily because of its semantic layer.

The author's intent seems simple. Using a video form, recording a male silhouette against a grey background, performing a characteristic motion with a re-scaled grey-cloth flag, she has made a hyperrealist description of the motion mechanism. But when we begin to analyse this aspect, it turns out that a seemingly simple concept raises self-referential questions. The background, the costume of the protagonist, the prop, the screening time closely linked to the physiology and efficiency of the human body appear to be the simplest and most powerful answers to the subject.

The subject of a man entangled in ideology.

[...] The author removed familiar colours, symbols and signs, allowing for projection of the recipient's views. She has made an opportunity for strengthening our desires. Often it allows us to realise that they are there.

Gray in the visual structure of the image constitutes its density, the skeleton of the whole. It is a tone and colour carrier. It embodies the visual idea. This set of background, costume and prop allows for manifestation of the idea. But not the visual one, of a concrete shape, but the complex one, determining our relation to the world.

I have to recall here Umberto Eco's concept of an open work, which, although it has been around for over half a century, it has become extremely up-to-date. Transferring the accent from the relationship author and work to the one between work and recipient has given us the viewers the opportunity to be a part of it. It builds another valuable analogy between the world of art and the ideology that drives our reality (Jarnuszkiewicz, 2017, pp. 185-186).

All the above-mentioned issues relate to the current situation of university media education, at least in the areas that – to my knowledge – are developmental and responding to the modern demands of education. Despite the fact that – in my view – there are a lot of such places in Poland and Europe, it is necessary to refer, at least in the form of an epilogue, to the challenges anticipated by the academic community. Obviously, I am going to provide just one example of such an institution, the one I know best – Faculty of Media Art at the Academy of Fine Arts in Warsaw.

As the Faculty was established only ten years ago, the teaching methods and corresponding challenges are still the primary focus. In 2016 (28–29 October), an international conference on the methods and challenges in teaching visual arts was held (*Methods and Challenges in Contemporary Didactics of Visual Arts. Contexts of Imaging Tradition*). Its primary goal was to discuss the ramifications of the adoption of new teaching methods focused on the personal development of students at the Faculty of Media Art. Extensive changes and reforms implemented in the faculty's organisational structures as well as syllabus made us realise the paramount role of dialogue in the development of an environment that would be most advantageous for students. The conference participants focused on the very idea of education, a need for interaction between academic scholars and the dramatically changing external world, and functions that artistic higher education institutions should perform in modern audio-visual societies.

Prominent Polish and foreign conference guests have offered different approaches to the aforementioned issues. The conference resulted in the emergence of extremely interesting themes building up a coherent vision. This is well illustrated by the view expressed by Prof. Artur Tajber, a Polish scholar who attended the event:

Didactics must not limit cognitive and creative processes, so our foremost duty must be to keep track of the directional norms, at least until experience has rendered them obsolete. In the context of substantive issues, it is therefore essential to continue to organise the relations between concepts and to update the semantics in which they apply. Thus, the genesis of intermedia and the polysensory fusion should be clearly highlighted and emphasised. Their origin sheds light on the context of the evolution of phenomena and

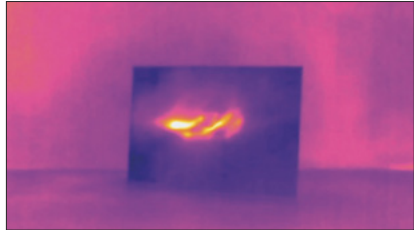
Figs. 1 and 2.

Agata Witzak, *Gąbka* (Sponge) 1, 3
video stills



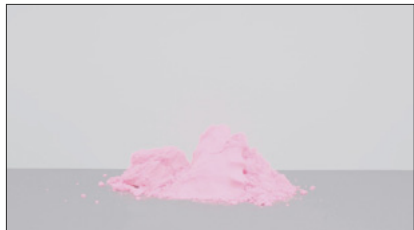
Figs. 3 and 4.

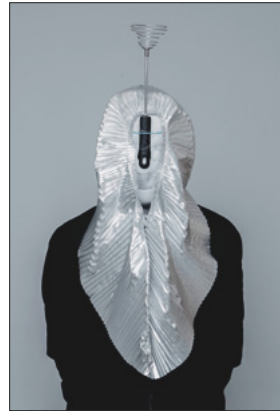
Agata Witzak, *Term* 1, 3
video stills



Figs. 5 and 6.

Agata Witzak, *Piasek* (Sand) 1, 3
video stills





Figs. 7-9.
Kamil Kotarba, *Bożek dobrego zasięgu Wi-Fi* (God of WiFi Range) 1-3
animation stills



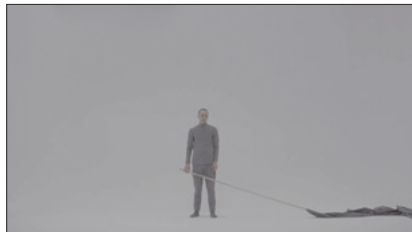
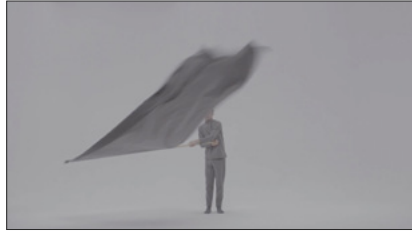
Figs. 10-12.
Kamil Kotarba, *Bożek rozwoju osobistego*
(God of Personal Development)
animation stills



Figs. 13-15.
Kamil Kotarba, *Bożek weganizmu*
(God of Veganism)
animation stills

Figs. 16-21.

Magdalena Morawik,
Middle Gray 01, 03, 04, 05, 06, 07
video stills



concepts, on relationships with other conceptual themes, and on the prospect of continuation.

Constant verification of assumptions takes place in the briefly described environment, and especially in the periphery of the area in which the set of problems we have discussed is situated, in contact with other parallel or contiguous narratives (2017, p. 61).

It is the multiplicity of media and measures that any contemporary author of the visual message has to take (highlighted by Artur Tajber) when operating in the area involving inter- and multimedia specialisation. As Ryszard W. Kluszczyński (2010, pp. 24-25) asserts, this results in the erasure of medial boundaries within the message. If I were to predict the development of communication language over the next decade, I would primarily focus on the multi-faceted and multi-dimensional nature of the modern message. The boundaries between different forms of expression within the language of communication, just like the language of art, are going to expand and obliterate. In my view, a departure from traditional, strictly defined mono-media messages will take place. Instead, we will be seeking unexplored areas, such as bio art, as a manifestation of the post-digital era, which Prof. Kluszczyński mentioned. I think that a number of experiments aimed at plugging computers into our nervous system have been recognised as a scientific fact and an element of future developments in media communication. In my view, a visual medium will become a basic form of education in ten years' time. This will change the mode of communication just as the cinema screen and TV set have been replaced with more personal forms of participation in this medium: laptops, iPads or smartphones. Direct streaming may also become a common reality.

In my opinion, the use of rhetoric in social media and beyond will develop: message, deciphering, participation will assume a deeper dimension. Consequently, we will observe the growth in a number of digital natives – as Marc Prensky has phrased it (2001).

Does this mean that we will become the screen slaves; or will some representatives of the new generation set us free from this trap? I think that screens will no longer be the only kind of interface between the message sender and addressee. In metaphorical terms, however, if it is to be recognised as a remote

message, the problem of enslavement will become aggravated and assume a more intimate form. Not without reason, performative actions regain popularity. This is because of the form of participation of the message addressees in the very process (effectuated, for example, by the presence at the moment a message is created, becomes a work of art in the perception of audience). Below, I quote an excerpt from the book authored by Jacek Kolasiński. Regarding performative actions, the author argues:

The large public performance projects adhering to the aesthetics of philanthropy receive academic institutional support and framework for their development as outreach community projects. However, they are often perceived as ancillary endeavours to academic research and creative practice. Their ephemeral existence is documented outside of the contemporary art context. They are acknowledged by the marketing mechanisms of the academic establishments to promote their institutional vision and mission, or exist in the memory of the collective oculus of the social media to bring a comprehensive array of the individual participants' voices. 'The survival of my own ideas may not be as important as a condition I might create for others' ideas to be realised,' says Mel Chin (Kolasiński, 2017, p. 72).

We cannot fail to see therefore that modern technologies will enable recipients to modify a message and participate in its creation. This is nowadays applied in the artistic projects carried out at the Faculty, including the VR studio run by Dr. hab. Jakub Wróblewski.

To conclude, we may ask what media education requires in today's world, in particular with regard to egalitarianism and exclusiveness. I am convinced that such requirements will be defined in the near future. Yet the fact that it is the frame that has been determining our consciousness in recent decades will not change.

(trans. JN)

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Academy of Fine Arts in Warsaw
**Art as a Field of Experiment
in Creating a Message**

Introduction: Creating and interpreting a message

I run the 3D and Virtual Occurrences Studio (*3D i Zdarzenia Wirtualne II*) at the Faculty of Media Art, Academy of Fine Arts in Warsaw. In the last few years I have been observing the increasing popularity of digital tools, which I also have happened to be using both in my artistic and didactic work. This is naturally a result of the increasing availability of equipment and programming tools. Collaboration with my students today very often ends with the creation of illusions – more and more young artists are interested in the issues of embodiment, immersion, and in creating experiences. The teacher's role is to make recourse to complementary tools or to present strategies that allow for the building of virtual, immersive environments and to create audiovisual messages – we capture a movement, scan objects in space, and engage in coding and programming. I find myself asking: are we indeed teaching lies in the post-truth era, or are we teaching how to generate hyper-real virtual worlds in an artificial reality? The students under my tutelage focus on creating an artistic message which often balances the creation of specific (or ephemeral) versions of reality against the falsifying of reality-types of actions. Their artistic experiments are intended to mislead the viewer, and often do so. After all, is cinema not an illusion in which we participate voluntarily for a given period

of time? (What is important from this perspective is how the film functions in semiotic categories or in the context of audiovisual culture – directly referring to the concept of a dream introduced by Alicja Helman [Helman and Ostaszewski, 2010, p. 250]). Cinema, a more than hundred-year old form of an audiovisual message, has charted new directions and tendencies – from registering to documenting, and creating. The contemporary artistic paradigm is based on uncertainties, understatements, and illusionary, fake realities – a direct result of how the medium has developed over the years.

Some examples of these new directions include Bartosz Konopka's films (*Rabbit à la Berlin*, 2009, and *The Art of Disappearing*, 2012), Janek Simon's projects (recently presented in the form of a monographic exhibition titled *Synthetic folklore* at the Ujazdowski Castle Centre for Contemporary Art), Agnieszka Kurant's realisations, or some of the works presented at the Ars Electronica Festival in Linz in 2018 and 2019.

Fig. 1. | between pages 190 and 191

What follows is a selection of contemporary events that use media to create a message both in disciplines that are supported by technology, as well as those more traditionally embedded in the art world.

Algorithms – new forms of creating media content

In the opening chapter of his new book *Life 3.0*, Max Tegmark (2017) characterises the ways in which technology is used to create media messages. He discusses the use of algorithm-based Artificial Intelligence in the creation of digital content, which in turn influences the reception of a message, transforms the way in which we perceive reality, and finally impacts the actions of both individuals and societies. Properly implemented algorithms can affect financial systems, decisions made by large groups of people (Hern, 2017), or the processes of collecting and selling data (Kelly and Fortson, 2017). We live in a world of obtaining, analysing and processing data. The unstoppable increase in computing power, new discoveries being made in the field of AI scholarship, and the phenomenon of deep learning, all make it possible not only to collect data, but also to better understand the specific connections between different sets of data, or the activities and

localisation of internet users. Many of these new discoveries exist on the border between science and art – which makes them all the more fascinating.

Neuron networks

What does a neuron network mean for a scientist, and what does the same mean for artists? How can it be used in the creative process? Can we hope that artists will be motivated by the desire to discover the truth and to offer a personal statement about the world? Will their artistic strategy involve playing with the viewers' expectations, trying to trick them or creating a specific discourse (which is very interesting both in the context of post-internet art, as well as the history of art in the 21st century)?

An artificial neuron network (ANN) is a collection of basic units for processing data, communicating with each other and working in parallel, or, in different words: a collection of connected input-output units – with each connection associated with a weight that can be changed in the learning process (Strefanowski, 2006).

The calculating units are modelled after the human brain. As part of the DeepDream project (Deep Visual-Semantic Alignments for Generating Image Descriptions), Google has been developing project primarily focused on the broadly defined visual arts.

Fig. 2. | between pages 190 and 191

We can develop critical thinking only by learning how certain tools and mechanisms function. Users should be aware of the level of available technologies and the different ways in which they can be used.

Digital archaeology – CGI

In 2012 a user nicknamed MrNuclearCat published a one-minute long video on YouTube titled *Golden Eagle Snatches Kid*. The video project was part of a term paper submitted at the School of Digital Arts in Montreal. In order to receive the highest grade, the video had to attract at least one hundred thousand viewers. Within two days the video had attracted 2.7 million viewers. The creators of the video were Normand Archambault, Loïc Mireault and Félix Marquis-Poulin.

Figs. 3 and 4. | between pages 190 and 191

Since its publication the video was seen by more than 46 million people. Four people worked on this viral video in a period

of five months, which amounted to 400 hours of labour. The artists used technologies such as 3D modelling, rigging, animation and compositing. They needed working stations, as well as experience in 3D technology and knowledge about programming. Currently available technology that uses AI and artificial neuron networks can speed up the production of similar materials, and can really disorient viewers, since the simulation capabilities are today much greater than they were just a few years ago.

Audio

Agnieszka Słodownik wrote in the bi-weekly *Dwutygodnik* (April 2018) about the technology being introduced by the Canadian company Lyrebird involving an algorithm that only needs a one-minute long sound sample in order to create an utterance. Lyrebirds are birds that can imitate the human voice, as well as various types of mechanical sounds, explosions or musical instruments. Their ability to imitate is endless – from the sound of a whistle to the sounds of machines or engines. The main character in the film *Zelig* (1983), played by Woody Allen, can almost automatically adopt the behaviour characteristic for the group of people he is among, while additionally being able to resemble them physically. Mimesis has always fascinated artists. The desire to create perfect copies of reality has been the driving force for artists throughout the centuries, and today it is easier than ever to achieve it – there are tools that make it possible to digitally transform an image.

Artificial identities

On the website whichfaceisreal.com there is a quiz which allows visitors to the site to choose a real person from among two faces featured in a picture. The synthetic image juxtaposed with the real one is generated by an algorithm. The website uses the technological solutions introduced by Jevin B. West and Carl Bergstrom from the University of Washington. **Figs. 5 and 6. | between pages 190 and 191**

The authors of the quiz write:

Computers are good, but your visual processing systems are even better. If you know what to look for, you can spot these fakes at a single glance – at least for the time being. The hardware and software used to generate them will continue to improve, and it may be only a few years until humans fall behind in the arms race between forgery and detection (West and Bergstrom, 2019).

The quality of the images produced by the algorithm, however, is deceptively similar to real photos.

Lil Miqueli has more than 1.6 million followers on Instagram. The phenomenon of the digitally-created influencers has been already studied (Walker, 2018), and their creators have generated revenues from marketing overlaps and collaborations with lifestyle and fashion brands (Shieber, 2018).

The *Saya* project, created by Teruyuki Ishikawa and Yuki Ishikawa, is also interesting. Its objective is to create a convincing human using 3D modelling technology. **Figs. 7 and 8. | between pages 190 and 191**

The image is convincing in terms of its static renderings, but it is not so realistic when presented in motion. In 2018, the Chinese Information Agency Xinhua began to use AI tools to create digital news anchors (Baraniuk, 2018). A video published on YouTube on 20 February 2019 is of a much better quality than the one published the previous year – such a development seems to validate Moore's law, which states that the number of transistors in a dense integrated circuit doubles about every two years (which is highly achievable considering the current increase in processing power).

An interesting and visually arresting project that uses images captured in a photo booth was presented at the Zentrum für Kunst und Medien in Karlsruhe on December 7, 2018. An algorithm trained on fifty thousand photos was able to create incredible transformations of the images of people captured in a photo booth. **Figs. 9-14. | between pages 190 and 191**

The results of studies conducted by the Nvidia company were presented in an official video published on the website dedicated to their research project.

The era of engines

Many contemporary artistic projects are based on game engines. A game engine is a code-based integrated programming environment accessed through an interface. The interactions made available by the engine or object programming can be used to create realistic events that simulate the laws of physics, collisions, behaviours – often enhanced by AI-using modules. Worth mentioning are the research projects conducted by the company Epic Games, in collaboration with Nvidia, especially

the pioneering project Siren from 2018 (Crowley, 2018). I believe that real-time graphics is the most fruitful direction of artistic and research initiatives as we move towards the future. This year, two diploma thesis projects under my supervision made recourse to this technology. Below is an excerpt from a master's thesis written by Agata Witczak and presented during her viva voce on 6 July 2019:

A\colon \to X is a sequence function defined on any isomorphic set according to the order structure. The title of the work refers to the mathematical translation of the way the Rummikub cubes (introduced for the first time in Israel in 1980) are stacked by a person suffering from Alzheimer's – an incurable and progressive neurodegenerative disorder leading to death. It is presented in the form of a simulator initiated by the patient's family – to whom he or she devotes their remaining attention. The grandmother of a student, experiencing the final stage of the disease, engaged in the activity by attempting to put together a sequence of numbers. The interactive experience of digital reality transports the viewer into the subject's world – a person whose perception functions according to different laws – giving them a chance to transpose the exposed elements. Participants can interact with objects, trying to put together a typical sequence of numbers. The experience is created on the basis of a game engine, supplemented by an algorithm that affects the numerical values on the cubes, which influences the nature and tone of the work. By creating a simulator based on virtual reality with the possibility of six degrees of freedom, participants can experience the extent of their body through various relationships to space, as well as the ability to interact using their hands. Reducing audiovisual measures, as well as limiting the number of objects, makes it possible to maximally cleanse the simulation of unnecessary and distracting stimuli – which highlights the patient's reduced perception skills. The work creates the types of illusions included in the disciplinary matrix of the paradigm studied by professor Mel Slater. They include: place illusion and plausibility illusion, but also active presence and embodied presence which determine agency and embodiment. Together with Andrei Isakov, we have distinguished components of the work that, as a whole, may constitute the basis for evaluating its implementation: the idea, the selection of an appropriate form for the project, the characterisation of visual, spatial and audio measures, the level of interactivity, the feeling of agency and

affordance, the level of immersion and the project of the experience with a particular focus on the use of the algorithm. Together they characterise the author's projected activity that is possible to view only by using the specific medium to which it refers. (Witczak, 2019).

Fig. 15. | between pages 190 and 191

The quoted description demonstrates the change in the direction of works that are currently being pursued at the Faculty of Media Art. It took two years for the inclusion of virtual reality projects based on game engines in the didactic process at the Academy of Fine Arts in Warsaw. I would like to add that the challenge stems not only from the quality of the exemplified reality – the creation of an ideal simulation cannot be an aim in itself, but is and must remain a means necessary for creating a work of art.

The second exemplification of my students' latest explorations are more complex projects representing the so-called 'art and science' paradigm.

The project *Medytatorium* is an interactive experience of virtual reality created for a single viewer. From its inception, the aim of the work has been to use relaxation techniques and the information distributed by the participant's body to control the narrative about the experience. My students have proved to be highly skilled in implementing experiences that use the six-degree freedom designed as so-called room scale projects (I want to mention some of their earlier VR projects: *Sztuka wypoczynkowa* [Leisure Art] and *Future environments*, presented at various exhibitions). In their degree piece, Karolina Polkowska and Mateusz Kajma (Academy of Fine Arts in Warsaw) negated the crucial feature of VR projects – the possibility to move through space. The decision – a result of the need to greatly lower the level of muscle tension – influenced the creation of their own way of experiencing perception in the horizontal position. This measure became one of the first factors leading to a reduction of stress and the lessening of tension among the participants. When working on the scenario of the experiment, the artists collaborated with a specialist on meditation and visualisation techniques – a doctor of medicine who studies methods for expanding human consciousness. Her practical knowledge and suggestions shared during consultations helped in constructing an audio message which the participants had to follow. In the recording, my students used scientifically-tested ASMR techniques based on the spontaneous

response of sensory meridians that are activated as a result of the special way of reading and recording the audio message; this step represented an important artistic decision. A student working in a partner workshop – *Sound in Virtual Reality*, led by Przemysław Danowski at the Faculty of Sound Engineering at the Fryderyk Chopin University of Music – was invited to participate in the construction of the sound experience. He composed the sound score especially for this project. In the architecture of the experience, Polkowska and Kajma used a chakral system that divided the narrative axis into four stations-levels. The reference to dharmic beliefs is not incidental, the path begins at the base of the spine and ends a little above the top of the head. Each level has a unique aesthetic referring to the colour and character of the chakra. The interdisciplinary project was made possible owing to a collaboration between the Faculty of Media Art and the Faculty of Mechatronics at the Warsaw University of Technology. As part of his engineering degree piece, supervised by Dr. Marcin Witkowski, Mieszko Wodzyński designed a way of sending information from biofeedback sensors to a game engine, a technical solution that was implemented in Polkowska's and Kajma's degree piece. Mieszko Wodzyński helped in the project, showing professionalism and a set of hard competences. The biofeedback-to-EMG technique (*ElectroMioGrafia*) implemented in the project intercepts information from the participants' two muscle-tension centres. The choice of the type of intercepted signal was not accidental – the process of muscle tightening and relaxation is a well-known relaxation technique, and the second source of data consisted of the participant's heart rate (BPM parameter). **Fig. 16. | between pages 190 and 191**

To sum up, I would like to highlight the project's orientation, its references to Eastern mysticism, its creation of a uniquely immersive storytelling, its aesthetic, its use of current VR technologies used for distributing content, its use of the participant's body in shaping the experience, as well as the artists' own way of controlling the narrative. The interdisciplinary character of the project is especially significant – collaboration with specialists from different fields and with two important scientific and artistic Polish institutions.

This project is especially important because it focuses on the role of the recipient (who is at the same time an active

Fig. 1.

Janek Simon,
Carpet Invaders,
2002,
video, courtesy of
the Raster Gallery.
Source: press materials
from the Ujazdowski
Castle Centre for
Contemporary Art in
Warsaw

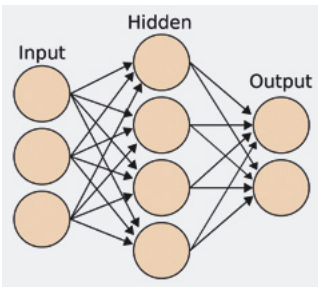
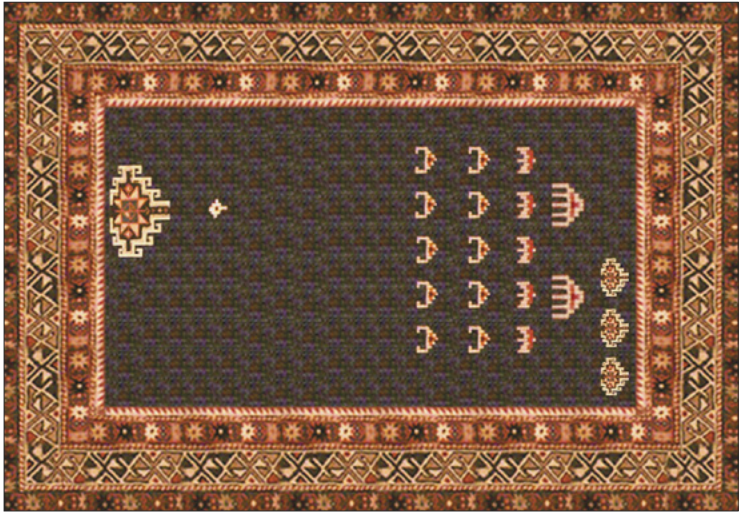
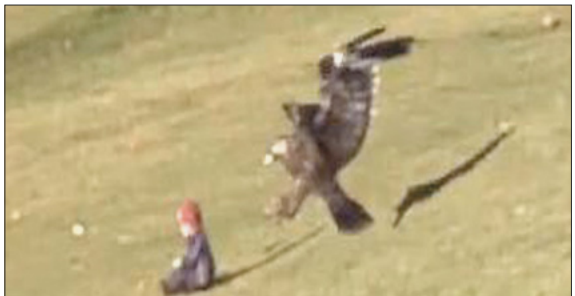


Fig. 2.

Portable Network Graphics

Source: https://commons.wikimedia.org/wiki/File:Artificial_neural_network.svg [Accessed 21 Sep. 2019]. Creative Commons Attribution-Share Alike 3.0 Unported

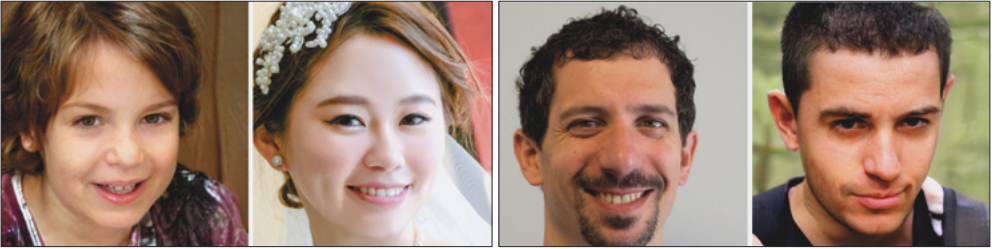
Source: https://commons.wikimedia.org/wiki/File:Artificial_neural_network.svg [Accessed 21 Sep. 2019]. Creative Commons Attribution-Share Alike 3.0 Unported



Figs. 3 and 4.

Golden Eagle Snatches Kid,
YouTube.

Source: 18.12.2018, YouTube video <https://www.youtube.com/watch?v=CE0Q904gtMI> [Accessed 21 Sep. 2019]



Figs. 5 and 6. *Which Face Is Real* [game].

Source: <http://www.whichfaceisreal.com>

Figs. 7 and 8.

ZBrush [graphic program by Pixologic]
Source: <https://zbrush.tuts.com/2015/11/28/saya-3d-art-by-teruyuki-and-yuka>



Figs. 9-14.

Spelling Mistakes Cost Lives
[Daren Cullen, Twitter].

Source: https://twitter.com/darren_cullen/status/1060225126313156613
[Accessed 27 Jul. 2019]



Figs. 9-14. *cont.*



Fig. 15. Agata Witczak, *A Colon I to X*

Source: archive of 3D and Virtual Events Studio, Academy of Fine Arts in Warsaw

Fig. 16.

Karolina Polkowska
and Mateusz Kajma,
Medytatorium.
Photo: Piotr Kucia



Fig. 17.

Project by the Skrekkøgle studio
in Oslo.
Source: <http://skrekkogle.com/projects/still-file/> [Accessed 21 Sep. 2019]

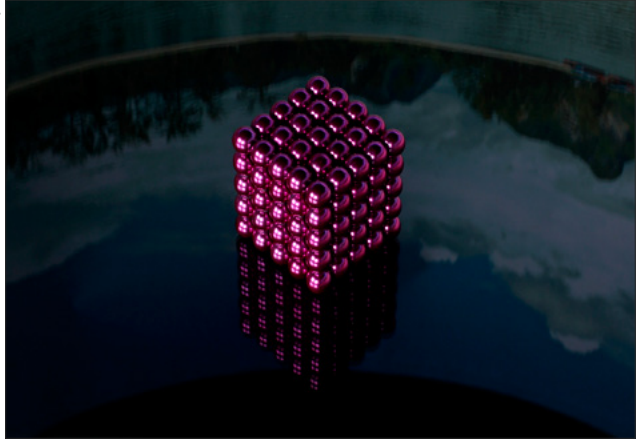


Fig. 18.

Refik Anadol,
Melting Memories.
Source: <https://vimeo.com/264369157>



participant) in the process of shaping the work. Immersion as a new form of controlling the recipient's perception introduces the issue of embodiment in VR – blurring the boundaries between different realities. What is also interesting is the question of the responsibility of the artist. We do not have sufficient data on what effects VR experiences can have on the organism and the perception of the participant – the language of immersive projects is only beginning to take shape nowadays.

Tools for creating content

The following tools can be used to create immersive projects:

- Modelling: Autodesk 3D Studio Max / Autodesk Maya / Blender / ZBrush
- Engines: Unify / Unreal
- Augmented reality: Vuforia
- Stitching: Insta360 Pro Stitcher / Mistika VR
- Texturing: Adobe Photoshop / Adobe Illustrator
- 2D animation: Adobe After Effects / Blackmagic Fusion
- Video: Adobe Premiere Pro / Blackmagic DaVinci Resolve
- Sound / spatial audio: Reaper / Blue Riple / Facebook 360.

Most of these tools have a graphical user interface (GUI), so they can be employed by the end user. More complex processes require knowledge of programming languages – and learning them takes a lot of time. The set presented above also facilitates work with real time graphics; however, it requires head-mounted display equipment (HDM) such as Oculus, HTC Vive or the long awaited Valve Index.

Simulation

Actions that implement the laws of physics and mathematics, and real time graphics, enable users to calculate the object's behaviour by simulating initially-determined values using a specific model. These types of actions are crucial from the perspective of media education – mathematically-increasing computing power brings the simulations to a level that can be characterised not even as being deceptively similar to reality, but identical with it, and creates hyper- and meta-versions of reality.

The project of the Norwegian studio Skrekkøgle presents an interesting step in another direction – the arranged photographs

look like renderings and quasi-simulations, thus introducing a fascinating interaction with the convention.

Fig. 17. | between pages 190 and 191

Immersive worlds. Artificial environments

Refik Anadol is working on exciting projects that interweave art and science. He specialises in actions taking place in the public space, primarily site-specific projects, parametric sculptures, the analysis and visualisation of data, the relationship between image and live music. Anadol's entire artistic output is concerned with immersion; he studies both digital and physical spaces, creating a hybrid relationship between architecture and media art, and using artificial intelligence. **Fig. 18. | between pages 190 and 191**

In his work, Refik Anadol often uses machine learning (*WDCH Dreams* - 45 terabits of processed data), the interpretation of internal movements of the human brain (*Melting Memories*, accompanied by excellent documentation) and machine learning algorithms used for searching and sorting relationships between 1.7 million documents (*Archive Dreaming*).

Dangers. Tendencies and prognosis

During the conference *On the need for media education* (National Film Archive - Audiovisual Institute in Warsaw, 2018) I presented the results of research where I had used widely available programming that allows for the creation of artificial neuron networks in order to capture the image of an individual and then use it in another video. The effects of the three days I spent on researching and learning programming were satisfactory, as well as the week dedicated to training the algorithm. The process of hacking somebody's identity was relatively simple, what is more - I managed to do this by using free software only. What proved to be a barrier was the capabilities of the equipment - the better the parameters, the shorter the algorithm's training time. Deep learning is a powerful tool which, when properly used, can bring about numerous benefits in specific sectors of the economy, finance, medicine, transport - indeed, the possibilities are endless. Naturally, deep learning can be also used for the wrong reasons, harmful or even criminal.

As part of the *deepfakes*, so-called revenge porn was created - artificial neural networks connect actors from porn movies with any identity registered in digital form. Such materials appear on

the Internet and use the images of famous people, mainly from the film industry (Marti, 2018).

Waleeh Maaz (2018) published an article on the portal ModMy in which he discussed the issue of child pornography being produced with the help of artificial neuron networks. To illustrate the problem, Maaz presented the example of a manipulated video that used images of the underage actress Emma Watson, known for her role in the Harry Potter films. It is therefore possible to create compromising material about a person, given enough audiovisual material. Similar examples were published on the Reddit platform, which despite their fairly 'innocent character' still exemplify the possibilities of Artificial Intelligence. What I find most interesting is the problem of the aesthetic of error and the value of the artefacts that are produced once the algorithm is not properly trained, or when there is not enough material for it to analyze and re-use. Even such inept examples, called zombieporn, attract the attention of internet users.

Another interesting problem relating to the issue of the occupation of public space are the activities of contemporary new media creators. In 2018 the MoMAR collective produced a guerrilla exhibition titled *Hello, We're from the Internet*, which used augmented reality technology to illegally¹ expand the art collection of one of the most important contemporary art galleries in the world. The artists remixed Jackson Pollock's paintings with a smartphone app that allowed for the adding of content by way of a camera – the paintings became markers. A similar mechanism was used in 2011 in the Occupy Wall Street augmented reality action which expanded the public space via the adding of digital content.

Conclusion

Although the contemporary recipient is more skilled at recognising manipulation, the volume of unsubstantiated content being shared, and the lack of knowledge and inability to verify sources of information – connected with a weak understanding of content-producing technologies – limit an understanding of the language of media and the abilities necessary for their

¹ This term fits the description of the action, although it could also be that it was a viral action created in agreement with New York's MoMA, but I do not find any evidence supporting this interpretation.

use. I strongly believe that new goals will be set for connecting people in our current era of unfavourable climate prognosis. New forms of communication will surely be created, using as yet unknown technologies that will create different hybrid, and analogue-and-digital mediators. But perhaps humanity, tired of digitally-mediated reality, will ultimately end up developing, or returning to, more traditional forms of communication.

(trans. JB)

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IV

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Entangled in the Media: Cognitive Neuroscience Perspective

The point of view I would like to present here is slightly different from the dominant way of thinking about the media. Having received an invitation to develop the issue of media education from the point of view of psychology and cognitive neuroscience, I thought about the intention of the editor of this monograph. If I read it correctly, it is to inspire media education activities, in particular the activities focused on young people, in terms of the impact of the media on their recipients and creators, on interpersonal communication, as well as on the economy, culture or broadly understood civilisation. In addition, I think that the intention of the editor of this volume is to provoke a reflection on how to optimise media usage. In other words, we have been tasked with looking a little deeper and wider at the issue of media, the possibilities of learning about them, as well as the possibilities of sharing this knowledge with other people as part of a media education programme.

I will start by saying that the word 'education' already suggests commitment. Education in any field, including media education, assumes that there is a reliable body of knowledge allowing description, explanation and the prediction of phenomena

related to its subject matter; in this case the media. Reflecting on the extent of such media knowledge that could be the subject of responsible education, I have come to the conclusion that at the current stage of development of media studies and media technology, knowledge about their potential or actual impact on their recipients is very limited for at least three reasons. First, because of the emotional and cognitive condition of modern-day people shaped in the process of the evolution of species. Secondly, because of the extremely dynamic pace at which media and communication technologies are developing and changing. And thirdly - and possibly most importantly - due to the media involvement in the commercial and political context. In this study, I will focus on the first of these conditions to learn about the phenomenon of the media.

Considering the mental and physical condition of modern man in the field of media communication (this also applies to all other forms of communication and cognition), it is not possible to abstract from two fundamentals. I shall express them by referring to thoughts formulated by outstanding contemporary philosophers. The first quote is from John Searle's book *Minds, Brains, and Science* (2003, p. 18) in which he states that:

Mental phenomena, all the mental phenomena whether conscious or unconscious, visual or auditory, pains, tickles, itches, thoughts, indeed, all of our mental life, are caused by processes going on in the brain.

This is the fundamental truth that is rarely mentioned in the context of the media. The second thought comes from Steven Pinker's book *How the Mind Works* (Pinker, 1997) in which, among other things, he formulates the assumptions of evolutionary psychology. He states, for example, that the brain is a type of computation organ produced by natural selection to acquire and process information from the environment in order to initiate specific behaviours.

When we look at issues related to the understanding of the media in the modern world from an evolutionary point of view, we must realise that the history of humanity (only in *homo sapiens* version) goes 200-300 thousand years back (Wood, 2011), while the history of the development of the nervous system, including the brain, takes us a dozen or even several hundred million

years back (Park, T.S. et al., 2018). In this long period pertaining to the evolution of species, all changes in the structure and function of biological organs of living organisms were subordinated to the survival and continuation of the species. This means that the functionalities of individual brain structures and other human internal organs only served to strengthen the survival principle of the species and those that implemented this principle to the greatest extent were selected. Today, the world around us has undoubtedly much changed from the way our ancestors lived, but evolutionary changes require much more time than tens or even hundreds of thousands of years. And this is one point of view.

The second perspective covers media history, and its first traces appear somewhere around 30-40 thousand years ago in the Palaeolithic era. The first indications of potential media objects, such as drawings and cave paintings in Altamira, Lascaux or Chauvet, come from this period, although we cannot be sure whether they were consciously constructed messages addressed to a wider audience. We also know about the beginnings of music in this period, based on the discovered fragments of musical instruments. In some forms, such as dance, image and sound have been combined for a long time, but generally up until the mid-nineteenth century we most often encounter unimodal forms of communication through the media. These are paintings, mosaics, sculptures, musical works, as well as written text. At the end of the nineteenth century, the Lumière brothers went beyond the static image, and with the discovery of the possibility of combining image and sound in one message in the first half of the twentieth century, the era of moving audiovisual message began in the version we know today, of course, much more technically improved. Therefore, for about 100 years we have been dealing with a form of bimodal exposure of a media message created for the purpose of dissemination in accordance with the intention of the sender. The development of technology in the twentieth century allowed not only a radical increase in image and sound quality of media messages, but, more importantly, caused a sharp increase in interest in creating multimodal messages activating not only eyesight and hearing, but also other sensory systems. All this has happened over the last 20-30 years. And this is the second point of view that I would like to draw attention to here.

All you have to do now is to place both these perspectives on one time line, i.e. the history of the development of the nervous system, which has been going on for millions of years, and the history of the media, especially in the version to which we currently have access, and it turns out that there is no exaggeration in saying that we, the people of the second decade of the 21st century, are better equipped to live in a cave than to sit for hours in an armchair in front of a computer or TV screen. The time that separates us from the moment when the first media objects appeared is too short to develop mechanisms that allow us to fully control and handle the phenomenon called media.

Let me present two examples - although there are countless out there which illustrate this phenomenon. The first concerns 3D television. Even in 2010-2012 it seemed that we were one step away from a technology that would allow us to watch television in 3D. All large TV manufacturers proposed technologies for transfer of 3D content. After several years of futile efforts and a short increase in sales of TV-sets with 3D image systems, almost all companies withdrew from mass production in 2016. Why? Dozens of hypotheses have been formulated to explain this unprecedented decline in the new technology. But one of the most convincing is that these systems completely did not provide for image correction due to the slight movements of the viewer's head and body in a natural situation (Angco and Atienza, 2015; Arnoldussen et al., 2013; Hwang and Peli, 2014). One of the most important mechanisms guaranteeing us survival in three-dimensional reality is to coordinate head and eye movements. Well, the moment when we fix our eyes on some element of the visual scene, we can determine in what relation this element is to other elements surrounding it, precisely due to the fact that through a small movement of the head we see other surfaces of this element. Thanks to it, the previously invisible parts are revealed to us, and we receive information about the depth of the scene being watched, i.e. the third dimension.

We can observe this phenomenon by watching a cat preparing to catch a mouse. Its eyes are still, but its head is constantly changing its position. Thanks to this, it fully controls the spatial position of the mouse. If the micro-movements of the head, with eyesight fixed on some element of the visual scene, are not accompanied by the impression of viewing it from different angles,

then such a scene is cognitively unreliable. In some ways it is even repulsive and can give rise to very unpleasant physiological sensations, such as, for example, pain or dizziness, and even vomiting. Because this precise challenge was never addressed, interest in 3D TV has dropped. Only cinema offers this type of pleasure now, but at the cost of including further sensory systems in the film reception. Thanks to this, the cognitive system approves this situation, just as it is willing to accept a rollercoaster, although it has little to do with natural experience. Multimodal entertainment engages almost all senses, from eyesight and hearing, through touch, kinesthetics, smell and taste, to pain receptors. To sum up, evolution has not yet equipped us with such a mechanism to control three dimensions that during head movements would not require access to side walls of viewed objects invisible *en face*.

The second example concerns the mechanism for monitoring the source of information. I observed this phenomenon for 15 years, when I was conducting experimental research commissioned by Polish Television (TVP).¹ Hundreds of times I watched and recorded the behaviour of people who watched and later recalled the content of television news programmes. The research results leave no doubt that we have a very serious defect in the mechanism for monitoring the source of information. To briefly explain the essence of this mechanism, a simple distinction must be made between our experiences in the real world (e.g. watching a street scene from the pavement) and experiences related to watching and listening to media messages (e.g. watching the same scene on TV). Both scenes have many similar elements, and the better the audiovisual technology we have, the more so. Undoubtedly, it is pleasant to watch images on the screen and listen to the accompanying sounds, similar to those we encounter on a daily basis, but that is what the trap is all about.

After a period of enjoyment, we experience increasing difficulty in the accurate identification of the source of information, i.e. why we know what we know. The more scenes watched on television or other information media that are potentially available 'in real life' (e.g. home healthcare, politics or crime), the effect is clearer. We can treat the scene seen on television as a scene seen live, in natural conditions, and vice versa. Why?

¹ Papers discussing the author's research are listed at the end of the article.

Because, as in relation to the previous mechanism, evolution did not have enough time to develop a properly functioning control system determining whether the source of our knowledge is our experience in the real or virtual world. I have observed many times that after watching several news items on television people were lost as to how come did they knew what they were talking about and think that they knew about some events (Francuz, 2002). The growing similarity between the medium and the reality is a source of confusion (homogenisation) of information in the recipient's mind. It is worth noting that life in the so-called natural world has not given us many premises indicating the existence of non-natural stimulation. Biology cannot keep up with technology and hardly 'understands' that, for example, there is such a thing as light that generates an image that resembles nature. On the screen, we can easily see moving objects and perceive them as something almost real. And so often does our central nervous system.

In light of the considerations we have made so far, we must return to some fundamental questions about the human condition and the ways in which we learn about reality. Of course, there is no space here for a complete lecture on this issue, because all psychology, and to a large extent philosophy and other related fields of study, deal with it extensively (Buss, 1999; Downes, 2018; Maruszewski, 1996; Nęcka et al., 2006; Reisberg; 2013; Wagemans, 2015). Nevertheless, for the purposes of this study, I would like to refer to it as straightforwardly as possible. The basic sources of knowledge about the world are sensory data, interpreted and stored, modified or established in the memory with each new act of cognition. The basis of these processes is determined by the biological structures and adaptation mechanisms shaped during the evolution of the species, whose aim is to support life. Although these systems are very efficient, they are not limitless in the field of sensory data processing. One could even risk saying that we as humans are very limited in this respect.

On the one hand, our sensory organs receive information from the world even several orders of magnitude greater than we are capable of assimilating, but on the other hand, our subjective picture of reality is in terms of complexity several orders of magnitude richer than the information filtered at the entrance to the cognitive system. The amount of stimulation from the world

recorded compared to our subjective experience of seeing or hearing is disproportionately small. This means that subjective experience is by no means a reflection of the outside world, but a product of our brain. In other words, in every act of what we feel as an experience of reality, our cognitive system does not recreate it, but creates it based on memory records. Each perceptual experience is created based on autobiographical data stored in memory. And so, the concept of what they call 'reality' develops in the mind of every person. It is worth noting that it is virtual at its source because it is produced by our minds/brains, and not reproduced from nature.

The memory structures and mechanisms of sensory data processing are called imagination. Thanks to imagination, we can not only visualise our previous experiences or anticipate future ones. Without imagination, we are also not able to interpret sensory data reaching us on a regular basis, but the most important thing is that the mechanism behind this word seems to be the fundamental mechanism that complicates our understanding of the media.

Imagery memory processes have two basic functions. They constitute the foundation of our cognition and perception of the world. They give us a sense of understanding of the world we live in. They operate on the content of our previous experience. It is the imagination that gives us the most common patterns of recognising things. But there is also another function of imagination. It is creation, creating things in the mind that do not exist in the world, and then introducing them into one's and others' sensory space. There was a time when there was no Eiffel Tower; in the mind of Gustav Eiffel there arose the idea of a tower that was never there, and now it is in Paris for everyone to see. There was a time when there were no pyramids, and now they are there for all to see. Somewhere in the imaginations of our ancestors, a thought appeared that resulted in the emergence of something material in the real world. The same is true with the production of media objects, images, music, movies, games, literature. At its basis, there is the same source in our heads, the same mechanism: and that is the imagination.

I am saying that such close relationships between the imagery mechanisms and the media make it fundamentally difficult to learn about the media and their impact on the human mind.

I believe that the media appropriate the most important human interpreter of reality: memory and imagination in almost unlimited manner. Every new cognition, including learning about the media and their impact, is filtered by previous experience with the media. It is a vicious circle. I would like to draw your attention to the basic difficulty that accompanies us in getting to know the media. Most often, we do not realise that our cognition of the media is involved in the media, in what they offer us in terms of form and content. To get to know the media and their impact on the human mind, you need to distance yourself from them, you must be outside their influence. But it is an impossible task, since we are all stuck in one information soup, in which natural and media realities are mixed. The natural and the real with the virtual, created. In this context, another difficult question arises: is it possible to control the penetration of media forms and content into our minds at all, and is it possible to control this process?

At this point I would like to mention a certain analogy, which in my opinion aptly illustrates the difficulty we face in learning and gathering reliable knowledge about the media.

In 2018, the Nobel Prize in medicine and physiology was awarded to James P. Allison and Tasuku Honjo for research into a new method of immunotherapy for cancer treatment, in particular its malignant forms. It turns out that there is an interesting correlation between a dysfunction of the immune system in its fight against cancer cells and the dysfunction of the cognitive system – in particular the attentional system of cognitive control – in the fight against information that destabilises the cognitive representation of reality, and one which often leads to various psychological pathologies. To thoroughly explain this analogy, I will begin by discussing the issues related to the onset of cancer and the difficulties associated with its eradication, and then briefly present the essence of the method of cancer immunotherapy.

The problem with treating cancer is that the cancerous cells are not recognised by the immune system. Under normal conditions, the immune system attacks all unwanted bodies that it recognises as foreign to its own organism. In other words, the immune system learns to recognise its own cells and distinguish them from foreign ones. It maintains at least a high level of

mobilisation towards foreign cells, or even immediately begins to destroy them. Certainly, at the initial stages of the development of the immune system, in ontogenesis, it is confronted with many new cells, which it must learn to recognise as threatening or non-threatening, but as time passes, when it acquires some efficiency, it works more and more effectively and maybe even more radically with regard to those cells it considers foreign. Cancer cells are difficult to fight because they are invisible to the immune system. Most cells reveal their characteristics and thereby their presence by sending specific signals to their membrane. These signals are interpreted by the immune system, which, depending on the recognition, does or does not take specific actions. Cancer cells also send such signals, but at extremely low, subliminal doses. Therefore, the immune system does not recognise them and does not even notice the existence of these cells. This allows cancer cells to develop unrestrictedly at the expense of the organism that they parasitise (Krzakowski et al., 2014; Weinberg, 1998).

Immunotherapy is a technique for treating cancer by bringing about a situation where the immune system receives enough information from cancer cells. As a consequence of the diagnosis, the immune system may take appropriate action directed against cancer. Currently, several techniques are being tested pertaining to the enhancement of signals from cancer cells (including the technique of infecting them with a virus, which, recognised by the immune system, begins to be fought, together with the infected cancer cells., thus increasing the sensitivity of the so-called control points of the immune system response) (Wysocki, 2016). Either way, the concept of immunotherapy treatment comes down to revealing the presence of cancer cells in the body and activating the natural forces of the immune system, which is fully ready to destroy such cells; provided it recognises their presence in the body.

How can this technique and the process of cancer formation contribute to an understanding of the phenomena related to the information processing by the human cognitive system? Just as the ability of the immune system develops to differentiate its own cells, i.e. those oriented to support the life of the body, from foreign cells, so almost since birth a cognitive representation of the surrounding reality is constructed, which allows to survive. The basis for building a cognitive representation are sensory data

coming from everywhere, processed by the central nervous system. Such information is filtered by the attentional system of cognitive control, which initially has quite coarse filters that allow it to differentiate life-sustaining information from those that threaten it. With time and the frequency of certain information, as long as it essentially does not pose a threat to survival, it is included in the cognitive representation of the world in which a person develops.

Already at this moment two elements of the above-mentioned analogy can be formulated. Information in the human cognitive system is an analogue of cells growing in the body, while the attentional system of cognitive control is an equivalent of the immune system that deals with recognising, differentiating and approving or rejecting specific information. Information that is not assimilated by the cognitive system is that which is recognised by the attentional system of cognitive control as threatening to the cognitive representation of reality. Threat can be understood here as any excessive departure from the mental balance, resulting, for example, from an inability to reconcile incoming information. Similar to the relation between the immune system and cell recognition, the attentional system of cognitive control can also react to information, provided that it recognises it, i.e. that it is not invisible to it and is clearly marked.

Let us first consider whether it is possible for the cognitive system to receive information that is not actually visible to the attentional system. Of course, yes. A trivial example of this type of information is a subliminal signal, which is one that bursts into the cognitive representation of reality unnoticed by the control system. There is, however, an even more serious problem related to reaching the cognitive system by seemingly non-threatening information; this may encompass ambiguous information about its specificity (by the way, some cancer cells may send information about what they are not to the immune system, so they end up suggesting that they are beneficial or at least not harmful to the body).

The attentional system of cognitive control clearly has two weak points, which I have already pointed out, that is, monitoring the source of information and controlling the processing of memory data in the imagination. First, because of the similarity of media messages to non-media (real) messages, the cognitive system encodes data flowing from both of these sources in

a very similar way, treating them as if they had come not from two, but from one source and, what's more, from the more natural one, which shaped the cognitive control system in over hundreds of thousands of years of evolution. This means that elements that are the effect of the creation of other people and are transmitted via audio, visual, audiovisual and multimodal media are included in the representation of reality in a way that is not fully controlled. From the point of view of this kind of dysfunctionality, for example, the content of the television message is included in the cognitive representation of the world outside the media. And, what's more, with time the information about what was the source of this content becomes blurred. In addition to several examples already given, dozens of other examples indicating the accuracy of this observation are provided in the book *Factfulness* by Hans Rosling (Rosling et al., 2018). Rosling shows to what extent people are burdened with negative media news on the world in which they live.

Secondly, the mechanisms of creating ideas based on memory resources are often devoid of self-censorship, that is, they do not fully control the content of their products. In extreme cases, such unlimited activity of the imagination allows to produce unusual things, for discoveries and, in short, is the foundation of creation at its best. The content of the media is excellent material for processing by imagery mechanisms. This mixes the worlds created outside the cognitive system and those worlds created inside the memory, based on available resources. The cognitive control system has little impact on the course of these processes, primarily because during evolution the phenomena associated with the reception of media messages were sporadic, and certainly not everyday experiences. The effect of passing all this information flowing from sources generated by other people through the attentional system of control is the emergence of more or less disturbed representations of the world among the recipients, which ultimately can manifest in the form of various mental disorders. Without looking far, it is worth paying attention to the obvious connections between patterns created by fashion and the behaviour of its recipients. In this sense, information entering the representation of the world beyond the control of the cognitive control system may behave like cancer cells, and effectively change the structure of its cognitive

representation in an unpredictable direction – and be treated as beneficial or invisible. This situation is somewhat reminiscent of the introduction of the horse packed with the Achaean warriors to Troy. We all know how that story ended.

Therefore, it is worth considering how to activate the sensitivity of the cognitive control system in order to differentiate two types of information – from the natural world and from those from the world of culture (media). The point is not to teach this system in order to combat any of this information, but to ensure that as part of the cognitive system, control over resources and their potential mutual impact is increased. In extreme cases, it may also be that the cognitive system does not allow certain information for further processing, due to their harmful content, for example in the face of the multitude of repetitive information whose purpose is to completely change one's beliefs by brainwashing, aggressive advertising or NLP persuasion (Basu, 2009).

An important litmus test that could help identify information through the attentional system of cognitive control is the 'intentionality test' (a working title). One can imagine that if the recipient of aggressive advertising knew what the intention of its creator was, then they would be able to decide whether they want to surrender to it or not, whether they would prefer to enter it in their cognitive system and recognise it as their own, or to destroy it, just as the immune system destroys cancer cells when it recognises them as threatening to the host. Just like in immunotherapy, you can either activate information to reveal its value for the cognitive system, or increase the sensitivity of the cognitive control system. The first solution seems difficult. Let's consider the second one.

Perhaps the solution could be training that consists in detecting the sender's intentions. Of course, this method would not guarantee an effective distinction between desirable and cancerous information, but would allow, at least to some extent, to take optimal actions. The question therefore arises as to what hints in the incoming information may be relevant from the point of view of discovering the sender's intentions. Some of them seem obvious, for example the frequency of repetition. If the information is repeated unnaturally often, it should alert the attentional system of cognitive control so that it learns the intentions of the sender. The issue of identifying the sender's intentions should become the key

here to form something like a training in the critical analysis of information flowing through the media. In other words, the point would be to determine on what basis we recognise the intentions of the creator of the media message. I think that in a world flooded by media information, the ability to recognise the intentions of the senders of these messages is currently very poor, especially among young people who have not yet had many opportunities to learn to recognise the indicators of intentions.

Recognising the intentions of others is one of the key survival mechanisms, and therefore it must have a strong foundation in the biological system. In the natural history of humanity, intentions were probably identified primarily based on the observed nonverbal behaviour of another person or groups of people. Over time, intentions became increasingly camouflaged, because concealing them could have become a source of success, an advantage over others. People taught themselves to hide their intentions precisely in order to survive, but on the other hand, the lack of sensitivity to hidden cues about intentions could have become a source of failure. Perhaps the camouflage of intentions and their interpretation were developing simultaneously. Both mechanisms had to be related to cognitive control. For example, if I can control facial expressions, I can better camouflage my intentions as a sender of information. However, as the recipient, losing access to one indicator of intentionality (e.g. the poker face of the sender), I must learn to see other signals of the sender's intentions in order to survive. This game has probably been going on for centuries and seems to be getting more sophisticated.

The situation is particularly complicated in the case of such messages which we are currently dealing with via mass communication tools; and through those technologies that involve almost all human sensory systems (7D). Therefore, a set of markers of intentionality relating to these messages (indicators of the intention of their sender) should be catalogued and then disseminated as broadly as possible. I think that this is a task at least for psychologists, media experts, anthropologists and cultural experts. Such an approach could also be a starting point for building a reliable media education system.

Finally, it is worth asking a several provocative questions about the condition of the modern-day humans entangled in the media outlined here. First of all, it is worth considering whether

and to what extent media involvement positively and negatively has affected the development of the homo sapiens species. I often ask myself these questions. Is it bad that young people are on their smartphones almost all the time? Or is it not so bad at all? Maybe this is the next step in the development of humanity. To what extent virtual worlds, to which we will have easier and easier access, and at the same time worlds that will be more and more credible, closer to natural experience, affect our identity, who we are or become? Maybe it would be good to have many identities. Who says we must have one only? In what sense will these worlds affect culture and interpersonal communication? Modern media studies have no reliable answers to these and many other questions. But these are only surmises. In my opinion, knowledge of the media is overwhelmingly speculated upon by so-called media experts: it is expert knowledge based on 'because I think so'.

Finally, I would like to make some recommendations on the directions which media studies may choose to take. First of all, I am calling for intensified efforts to find financing for a national (world) media research programme, which would aim to (1) articulate a set of the most important issues to be solved in the field of media, from a psychological, social and cultural point of view. We have to name the problems we face; (2) develop a theoretical and, most importantly, methodological framework for media research. There are currently no methodological standards in this field; (3) methodically gather empirical research results regarding the nature of the media in relation to the human mind/brain and society. The result of this work should be the creation of a theoretical model of the phenomena analysed. Media studies need a theoretical model that we can refer to, which can be verified. There is currently no such structure in media studies; and (4) develop and implement media education programmes. If we have reliable knowledge, we will be able to teach others, but because we are not currently in possession of such knowledge, let us be careful when it comes to teaching what the media is and how we may control it.

(trans. MW)

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**Media Education in the
Context of (Cyber)psychology:
New Perspectives, Tools and
Strategies of Studying Media
and Their Users**

Introduction

Reflection on media education today – in the era of digital and social media, in the culture of convergence and Web 3.0 participation, and in a time of the growing importance of AR¹ and VR² in different areas of everyday life (including education, work, art, journalism) – requires the introduction of new research perspectives.

Until recently, most so-called traditional research practices focused almost exclusively on analysing the cultural text/media product, and the category of the digital recipient. This concept is characterised by a user project (most often in the context of traditional media such as literature or film, and in reference to semiotics), embedded in the message by its author. For example, in the case of film, the role of the latter is to characterise basic competences (e.g. in literature, film, culture) that are required from a hypothetical recipient so as to properly understand the message. These types of analyses did not study

¹ AR – augmented reality, a system connecting the real world with a computer-generated world.

² VR – virtual reality, a form of digital reality created with the use of computer technology. It relies on creating digital images of objects, spaces and events which can represent both elements of the real world (computer simulations), or a completely fictional world.

real media users, and did not consider the existence of new media, which require a completely different set of competences. That said, the first decade of the 21st century brought about a change in how we think about this issue.

Today most academic communities and practitioners – media educators (psychologists, media scholars, sociologists, political scientists, linguists, pedagogues, cultural studies scholars) – agree that digital and media literacy are crucial resources for an individual (at every stage of life). The regularities connected with the process of human development and the different types of competences are studied as part of life-span psychology and in the pedagogy of lifelong learning. Some of them also agree that, in addition to creating so-called catalogues of competences, it is important to study their actual level among individuals and in reference to different types of the media (Ogonowska, 2013; Jasiewicz, 2012).

New technological solutions give us access not only to information, but also introduce us to various new forms of social interactions occurring in the digital environment. The media that use virtual or augmented reality technologies intensify emotional and cognitive involvement, enabling users to participate in a multi-sensory experience, or to find themselves in a virtual form at the centre of events, spaces, digital objects. Naturally, these new cyberrealities and hybrid spaces influence every basic sphere of human functioning: biological, psychological, affective, cognitive, and social. The degree and scale of this influence is the subject of partial research conducted in different fields (Curran and Hesmondhalgh, 2019; Adamski, Gawroński and Szewczyk, 2017). There is no doubt that the dynamic development of tactile, interactive, VR- and AR-based media has influenced the change in how we perceive the role and function of contemporary media education. Today the main objective of media literacy is not only to teach critical thinking or the critical reception of texts (as it was emphasised in the past), but also, for instance, to understand different aspects of cybersecurity or online communication in real time, including communicating with digital objects (e.g. bots).

Each discipline ‘maps’ these issues in a different way. For example, where psychologists focus on how the media influence selected aspects of human functioning, media scholars study the content of the media and the transformation of genres; and linguists

concentrate on issues connected with the language of the media. Together, all of these perspectives help us to better understand the complexity of media education in the contemporary world.

Media education is not a homogeneous practice, but a set of different activities oriented towards the achievement of specific goals. Digital, media and information literacy have various functions that are linked to specific activities of people who come from different socio-demographic backgrounds. To put it differently: selected aspects of media education are adjusted to the needs of particular social groups (e.g. age or professional group). Thinking about the evolution of how we approach media education in relation to the 20th century, and the new tasks that await us in the 21st century, may serve as an inspiration for further metacognitive reflection.

In social sciences – psychology, pedagogy, economy, political sciences, sociology – emphasis is put on studying quantifiable effects: (1) the influence of traditional and new media on an individual; (2) the material and immaterial effects of these actions and their persistence; (3) the influence of individuals, social groups and societies on the media and its measurable indicators.

Table 1. Crucial aspects of media education

Key research fields	Discipline	Key terms
Media education: historical (diachronic) approach in the context of mediamorphosis and strategies of using the media (consumption, production; presumption); / comparative intercultural studies in the political context (synchronous analysis)	Media studies; cultural studies; political studies; communication studies	Media literacy; digital literacy; information literacy; mediamorphosis (traditional media – new media); paradigm change (mass media – social media); comparative media studies
Media education as an interdisciplinary research subject + analyses of specific educational practices (assumptions, ideologies, institutions)	Pedagogy, media studies; psychology (education, media), political studies; sociology of education	Formal and informal education; interest groups interested in media education (educators, academic community; politicians; NGOs); media education in different stages of school education

Table 1. (continued)

Functional analysis of media education	Sociology of education; media studies (theory of uses and gratifications); communication studies	Functions of media education in different social groups (age, gender, social status, race, nationality); spheres of life (education, work, science, entertainment, e-services; social communication); media education as a form of preventing pathological forms of media use and risk behaviour
Components of media education	Cognitive psychology; social psychology; computer sciences; communication studies	Critical thinking; technical competences; cognitive competences; social competences; linguistic, communication and cultural competences; creativity/innovation
Role of media education in modern societies	Sociology; media studies; communications studies	Civic society; communication and democracy; preventing digital exclusion; culture of participation; Web 3.0 culture
Media education for different social groups	Pedagogy of the media; communications studies, cognitive developmental psychology	Educational strategies; form and content; use of different media (print, visual, audio-visual, electronic, new media; social media)
Evaluation methods / tools for measuring individual types of competences	Sociology of education; psychometry	Evaluation of process; evaluation of results; evaluation of methods; evaluation of educators; competences in thinking; competences in taking action

In the humanities – in literary studies, film studies, theatre studies, art history – scholars concentrate primarily on changes in the form and content of the media (conventions, genres, media formats) and their aesthetical and ethical consequences. Specific educational actions use these different perspectives in relation to the media, digital and information literacy. The way they are profiled also depends on the

characteristic of the target group and the specific aims as set out by the educators.

Media education: a (cyber)psychological perspective

A psychological, as well as cyberpsychological, approach to the media education focuses on the relationship between an individual and the media (Whitty and Young, 2017). Cyberpsychological media education today is understood as referring to: (1) the different channels, ways and strategies of communicating, which create a common infrastructure; (2) the complex environment that uses VR and AR technologies for communication, interaction, telepresence, immersion; (3) AI technologies imitating selected behaviour (e.g. use of symbolic language); (4) analogue and digital repositories of data using specific methods for processing information; (5) institutions which produce texts, artefacts and/or social environments (e.g. the Internet) and (6) those texts (Adamski, Gawroński and Szewczyk, 2017). The various ways of defining the media directly influence the subject of interest for media education. The cyberpsychological approach has become – in this context – an object of study for both the social sciences and the humanities.³

Scholarship in the field of cyberpsychology considers both the attributes of the media (with examples of how to conceptualise them listed above) and the features of media users. These relationships are then presented in the form of models, and the real effects of their mutual influences and interactions are examined on this basis. As a result, the original assumptions are corrected. It is also possible to move beyond the sphere of life: a particular problem becomes the basis for creating a model of mutual interactions, which in turn is subject to empirical verification. The results can be finally used to characterise the relationships and construct a model that will visualise the problem, helping to identify key aspects (Ogonowska, 2018a).

The process of shaping media literacy is a part of both paths of research. In each case it is important to relate to both the main (universal) and the specific features of an individual. Among them, resources and their correct identification play an important role in every educational process.

³ As a result of the most recent reform of higher education research: communication and media studies, art studies, culture and religion studies, etc.

Table 2. Selected relationships between competences

Type of competence / Example	Language competences	Communication competences	Social competences	Cultural competences
Media literacy	Interpretation of media messages	Adjusting the form and content to the attributes of the receiver	Understanding situational conditions of social communication in traditional and new media	Understanding and constructing media messages through references to other cultural texts
Digital literacy	Using computer programs to create digital objects	Using digital objects in different social contexts (formal/informal situations; artistic, political, commercial use)	Understanding the ontological status of digital objects taking part or mediating in network communication (bots, avatars)	Understanding and constructing digital objects through intertextual and inter-media references
Information literacy	Creating information architecture (files, folders) on personal computers	Using external repositories of information and looking for access points, also through communications with other network users	Using existing information and communication infrastructure to accomplish social needs	Searching for and producing information referring to various forms of cultural activity

Although the main (universal) resources depend on the individual's age (and are different on each developmental stage), they are however specific for a particular cohort. For example, people born at the beginning of the 21st century – defined as a generation – are especially skilled at using various mobile forms of digital media, which is not necessarily coupled with the ability to properly understand information or evaluate their ontological status (fake news vs. information based on facts). It is possible to shape complex digital, media and information literacy on the basis of the resources of the individual.

The main resources of an individual presently consist of: (1) flexibility (ability to adjust to changes without losing one's identity); (2) being open to otherness (social, cultural) and tolerance for diversity; (3) high motivation to explore living environments (including the world of new technologies) coupled with activism (acting, searching for information, creating digital culture texts); (4) high motivation for personal development on the basis of individual resources (intelligence, abilities, skills), social resources (people, groups, institutions) and cultural resources (material and symbolic culture) (Heszen-Niejodek, 2003, pp. 33-47). Media literacy does not consist of an isolated set of resources, since it forms active and changeable relationships with other types of competences: linguistic, communicative, cultural, social. In addition, they are constantly changing as a result of environmental impacts. The table below presents some of these relationships.

Psychologist Czesław Nosal defines competences as 'new, functional structures of intellectual activity that are shaped by socialisation, education, professional work, participation in culture' (Nosal, 2004, p. 22). According to this perspective, competences have four distinct components: (1) cognitive (e.g. used for creating cognitive representations of surroundings); (2) evaluative (e.g. rating criteria, values); (3) programming (tasks, problems, motives, aims, ideals); (4) metacognitive (enabling critical, reflexive, creative thinking) (ibid.).

An analysis of the relationships between various types of competences exceeds the scope of this article. However, it must be stated that digital and media literacy are a variant of cultural competences, while at the same time they are based on linguistic, communicative and social competences. Without the latter it would be impossible to create and receive media messages, communicate on and outside of the Internet, create digital objects with the intention to communicate (so that they can communicate something to someone), search for information in digital repositories, shape one's image in cyberreality, or use the language of new media to create objects also in the offline environment.

In the process of shaping digital and media literacy, it is also important to take into account the features of new media and the dynamics of mediamorphosis itself. The main attributes are interactivity, hypertextuality, virtuality. They can produce both

positive and negative attitudes and actions among users. Some of the negative examples include: technophobia leading to digital self-exclusion, a disruption of behaviour, pathological forms of using the Internet and digital tools, and finally, various forms of cyber-aggression (Pyżalski, 2012).

High levels of media and digital literacy can therefore lead to positive effects on different levels (social activism on the Internet, development of civic society, development of personality), as well as negative (aimed at oneself, others, various social groups). Deficiency in these competences in turn leads to negative effects whose scope and intensity depends on the attributes of the individual (age, social position, type of work, personality, interests, character). These topics are studied in cyberpsychology, as they relate to multidimensional relationships between people, new media and the digital environment.

Media education for teachers and educators. Towards cyberreality

In our current age of media civilisation, in the culture of participation and because of the blurring of reality and cyberreality, it is indeed quite impossible to ignore the significance of media and digital literacy in formal education projects and curriculums. Table 3 maps out the three major perspectives on media education in the cyberpsychological context.

These issues are crucial in the education of teachers, pedagogues and school psychologists, media scholars and journalists, as well as social communication experts. These occupational groups not only actively use selected elements of these competences every day, but are also tasked with educating society about them. They act as authors of academic or popular science books and publications, experts who comment on these issues in the media (including social media) and model specific behaviours and communication patterns in relation to both traditional and new media.

The rapid development of new media art and media objects designed for specific utilitarian purposes (e.g. advertisements, billboards), which both use a new type of language, is also one of the reasons why these topics should be included in media education projects. However, these projects must move beyond relying on strictly academic scholarship, and instead engage with grass-

Table 3. Media education: three major perspectives

Perspective / (cyber)psychological aspects	Main topics
Teaching about the media/media attributes that can (potentially) trigger specific behaviours	Content and form (genre, format, representation-simulation); aesthetical, ethical and political issues; ideology of message (critical analysis of media discourse); politics of representation; types of media and strategies of communication; codes of communication; the media systems; political and economic power of the media; political economy of the media - impact on form and content
Teaching (and learning) through the media / types of competences necessary for the process to be effective	Use and production of messages; searching for and evaluating information; cooperation in cyberreality; active and effective use of media tools to realise personal goals and participate in the digital environment (bots, avatars). Shaping social responsibility in the context of the development of the global digital society.
Teaching media educators / effective identification of resources and deficit areas in media, digital and information literacy	For educators: standards, programs, support networks, digital repositories (instrumental, psychological and informational support, coaching)

roots initiatives that respond to the environmental needs almost instantly, and are more compatible with the dynamic of mediamorphosis. Formal education, by its very nature, is very resistant to change.

Undoubtedly, there is an urgent need to take further steps in the field of training digital, media and information literacy, and to study the effects of this process. The level of knowledge, competences and skills of the educators should also be part of the evaluation, as well as the innovative methods used by them in relation to different groups participating in trainings, workshops, and lectures.

It is therefore important to move from postulating that we need to implement media education, and instead take action and ask how to organise a coherent, systemic and modern

system of shaping digital and media literacy. Whether specific solutions can be regarded as innovative is based on:

- direct relation to everyday life (increasing effectiveness and quality of performance in relation to a specific sphere of life, e.g. professional work, civic activity, e-services);
- direct relation to the current state of science and ability to implement scientific solutions and results of research to currently implemented educational systems.

Due to the dynamic development of neuroscience, cyberpsychology is certainly providing a new context for reflection on media education.

Cyberpsychology as new context for research on media education

Cyberpsychology (or cybernetic psychology) is a relatively new research area dedicated to exploring the relationship between humans and new technologies, contextualised from a psychological perspective. It is commonly assumed (Connolly et al., 2016; Ogonowska, 2018a) that the field of cyberpsychology either emerged from media and communication psychology, or is a separate sub-discipline focusing on a study of the Internet, virtual reality, augmented reality, artificial intelligence, and such issues as user experience, interactions (human-computer, human-avatar, human-bot), immersion, telepresence, 3D, 4D, 5D experience etc. It also deals with how the digital representations of people and environments influence the real attitudes and social behaviours of individuals both online and offline (Suler, 2016; Ogonowska, 2018b; Power and Kirwan, 2014).

The field of cyberpsychology began forming at the end of the 1990s, in response to the emerging new technologies becoming a dominating factor in crucial sectors of human functioning: social relations, e-services and various forms of interpersonal communication. The growing access to new media, including the Internet (from the 1990s) also became an important context for the emergence of cyberpsychology (Ogonowska, 2018).

The Internet became a space of affective attraction, which resulted in a large number of users, who became providers of content (in the first stage) and – through their own activity – began to become a part of mainstream media. Internet users would also conceive new products and media services, which they would later

create by themselves, imposing desired patterns/models of products on big corporations/media agencies (in the second phase). These grassroots activities became the defining feature of Web 2.0/Web 3.0 culture, or the culture of participation (Henkins, 2006).

All of these phenomena became the subject of interest for media scholars, sociologists of the media, political scientists, communication scholars and cultural studies scholars, only to move later into the spheres of research relating to the pedagogy of the media or the psychology of the media and communication, relating to the effectiveness of learning or social behaviour online (see Ogonowska, 2008b; Ogonowska and Ptaszek, 2013).

That is why many publications either implicitly or explicitly emphasise that cyberpsychology is, first and foremost, a form of applied psychology, emerging from the practices of everyday life (Connolly et al., 2016). New concepts, theories and models that seem more suitable for characterising human functioning in different spheres of the media civilisation are therefore created on the basis of 'practical research'.

There are also specialised modules in academic education: Applied Psychology of Digital Technologies, Psychology of Cyberspace and Online Behaviours, Computer Forensics.

The problem with expanding knowledge in the field of cyberpsychology also lies in the need for constant reflection on the status and identity of this hybrid sub-discipline, which because of its subject clearly relies on media scholarship focused specifically on new media.

The necessity to strike the right balance between psychological knowledge on the one hand, and media scholarship on the other, remains a priority. This in turn requires scholars to possess a dual set of competences – both in psychology and the (new) media. The development of cyberpsychology also provides new perspectives for scholarship in the fields of media studies, cultural studies, philosophy, sociology and art/literature of new media.

Together with the dynamic advancement of new technologies – which are interactive, virtual, networked, digital, hypertextual, based on convergence and online communication in real time – the field of cyberpsychology has also become more specialised with regard to five major criteria:

- (a) type of medium: psychology of the Internet, psychology of computer games, psychology of online reality;

- (b) problem/issue: user experience, cyberviolence, pathological uses of new technologies, artificial intelligence, multiplication of online identities;
- (c) strategies of using the medium: immersion, telepresence, networking, network communication etc.
- (d) uses: online counselling, psychological diagnosis and therapy, internet support groups; e-learning, the impact of digitalisation processes, digital repositories of information and e-services on everyday life;
- (e) meta level: social attitudes and behaviour towards new technologies: cyberexclusion (causes and psychological effects), cyberphobias etc.

The dynamic growth of new media presupposes the need for rethinking the strategies for using them in the context of selected paradigms from psychology of media (see Table 4).

Table 4. Paradigm, keywords, strategies of studying media and their users (selected example)

Psychological paradigm	Key words	Strategies for studying the media and media users
Psychodynamic paradigm	Unawareness, psychic conflicts, significant individuals, personality defence mechanisms	Users' motivations for creating alternative e-personalities on the Internet; personal and familial conditioning for regressive behaviour in cyberspace
Behavioural paradigm	Behaviour as reaction to stimuli; conditioning of behaviours, learning processes, influence of environment on one's activity	Impact of online environment on social behaviour of users; environmental conditioning of cyberviolence and prosocial behaviour; impact of online form of support on the offline behaviour of users
Humanistic paradigm	Development of an individual, autonomy, freedom of action, transgression	Media identity projects on the internet; use of cyberspace to remove barriers connected to disability, development of individual and group potential in online community projects

Table 4. (continued)

Biological-medical paradigm	Influence of an individual's psychophysical construction on the sphere of behaviours, feelings and emotions; genetically-conditioned psychophysical predisposition and psychic, psychosomatic and somatopsychic illnesses	Psychological conditioning and consequences of cyborgisation (medicine, art projects, professional advancement); impact of technologies on the development of diseases of civilisation; impact of cyberenvironment on human organism (functions, structures)
Cognitive paradigm	Cognitive processes (e.g. remembering, thinking, perception, problem solving, decision making, creativity), linguistic and communicative; internal conditioning connected with an individual, and environmental conditioning, resulting from the context of one's life	Impact of multitasking on the effectiveness of information processing; impact of intermodal coding of information on remembering; ⁴ new media conditioning of the linguistic and communicative competences of users; impact of high technologies on the cognitive, linguistic and communicative development of children
Anthropological-cultural paradigm	Influence of cultural processes (regional/local, national, international, global) on behaviour	Similarities and differences in behaviour among global teenagers in various countries; users' attitude to new technologies and use of this information in designing friendly interfaces, humanoid and animal robots; knowledge from psychology, media and cultural studies in social computer sciences

⁴ Intermodal coding: the representation of the same information using different stimulus systems and more complex and organised messages, intended for different senses and neuronal ways of processing this information and storing it in the memory of the recipient.

Cyberpsychology also facilitates the conducting of detailed studies pertaining to how motivation and personality both influence the way we use social media and new media products/services which encourage to reveal or construct the self/me, to comment about the social reality, e.g. on blogs, Facebook, Snapchat or Twitter.

The use of online communication in education and therapy requires us to consider the advantages and limitations of the forms of social communication that are focused on achieving specific goals, for instance increasing the level of competences, abilities and knowledge, or improving mental health. From this perspective, emphasis is put on the attitudes of particular groups of users (e.g. therapists and their clients/patients; educators and students) towards the Internet, and the digital, social, linguistic and communicative competences necessary to participate in these processes (Power and Kirwan, 2014; Ogonowska, 2018a).

Since the 1990s, new media have contributed to the creation of a dynamic life environment, and today they also serve the role of a partner in interaction or a component of human bodies (in art projects and medical procedures, in preventive and penitentiary contexts). These phenomena, encompassing various spheres of human existence, lead us to ask questions about the actual effect of technologies on emotions, feelings, attitudes and behaviours. There are also some doubts connected with existential psychology, that is, questions pertaining to identity, autonomy and freedom, as well as the meaning of life in a world dominated by new technologies, which can additionally simulate real emotions and forms of communication. Cyberpsychology relates to these issues in the context of studies on e-personality and e-identity, cybervoyeurism and cyberexhibitionism, or the effects of human cyborgisation in the medical and artistic context. Such scholarship provides inspiration for practical solutions in a media education system that is interested not only in the issue of media and communication strategies but also in studying the interactions between different media and their users. Media, digital and information literacy are closely related to the context of everyday life; they are functionalised in such a way as to answer to everyday existential wishes, furthermore they enable to successfully take metacognitive and self-analytical actions. For example, the ability to use new media allows us to

receive informational, emotional, material and financial support; increase individual mental, social and material resources; and make social contacts that help to develop different competences (social, linguistic, communicative, professional etc.).

Deficiency in specific media competences leads to many social exclusions and self-exclusions from basic spheres of social life such as work, entertainment, education, politics, services, and communication with administration. These competences are therefore part of the basic resources of an individual in the 21st century (Ananiadou and Claro, 2009). Insufficient consideration of these issues in formal education – in different stages and phases – becomes a form of symbolic violence on part of decision makers and educators.

The problem has become serious enough for many national and international institutions to actively engage in monitoring and increasing the level of digital and media literacy of citizens. It is sufficient to list such institutions as the European Commission, UNESCO, various governmental bodies (e.g. the Ministry of Culture and National Heritage, the Ministry of Digital Affairs, the National Broadcasting Council, the Ministry of National Education) which take part in the Digital Poland Operational Programme 2014-2020. However, the main problem lies in the fact that the advancement of new technologies happens much faster than it is possible to implement new solutions in formal education. That is why informal initiatives play such a crucial role in developing some aspects of media, digital and information literacy, especially in relation to social media.

Cyberpsychology studies the relationship between people, media and digital environments, and creates new research possibilities for cultural studies, media studies and culturally-profiled psychology of the media and communication (Suler, 2016; Ogonowska, 2018a, 2018b). By focusing on the complex relationship between individuals, new technology and cyberspace, it allows to reconsider the role of an individual seen as a creator and narrator of the media, situated on different positions in relation to the object and effects of one's actions. Sometimes one is a beneficiary of technology and the cyberenvironment, and other times – as a result of other features of the Internet – a victim, a witness of cyberviolence, or even an aggressor. An individual also functions in many other roles, in different types of e-services and

Table 5. E-services as object of study in media studies, with the adoption of cyberpsychological analysis (selection)

Type of e-service	Subject of media studies	Key issues from the field of cyberpsychology
Education (e.g. e-learning)	Media and digital literacy in online education	Cognitive and personal conditions of online teaching (learning) effectiveness
Psychological therapy (e.g. online therapy)	Digital and media literacy among participants of online therapy and the strategies and forms of therapeutic communication	Personal and environmental conditions of therapeutic communication in cyberspace
Work (e.g. tele-work)	Interface and infrastructure of online work environment in different sectors of the economy: differences and similarities	Study of user experience in creating a user-friendly interface and effective infrastructure of the online work environment
Administration (e.g. online financial operations, online communication with officials)	Technological and communication solutions in different sectors of public communication and their effectiveness	Psychological condition of being prepared to use internet apps and cyberenvironment to communicate with officials

connected forms of mediated social communication. Controlling media, digital and information literacy impacts the effective use of the sphere of e-services, and therefore influences the social activity of citizens (see Table 5).

Conclusion

In our highly-technological world, media, digital and information literacy are the foundations for the building of other important resources (social, informational, economic, intellectual) of an individual. Retaining these competences at an appropriate level determines the quality of life of the individual and the ability to function in cyberreality, the ability to use digital sources of information and to create one's own digital objects. Scholarship in the field of cyberpsychology, dedicated to human behaviour in network reality (as well as VR and AR), suggests new perspectives for thinking about media education, connected with its growing role in such spheres of life as

work, leisure, health, services, social and political activity, and education.

Many negative social phenomena that exist in the offline world also have their equivalent in the digital environment. Among them are violence (mental, verbal), addictions, engagement in risky behaviour, gambling, and crime. Cyberpsychological studies on internet behaviour show that both criminals and their victims (each side in its own way) use the attributes of new technologies to enter social relations that can be considered dangerous, resulting in criminal acts, and also in the offline world. Quantitative indicators determining the time spent on the Internet do not translate into a qualitative increase in the competence of their users. The attributes of new technologies, for instance the possibility to communicate online with other internet users, can also trigger antisocial tendencies, e.g. verbal aggression or an excessive need for confessional behaviour connected with various forms of media exhibitionism (Ogonowska, 2017). Cyberreality can also help to model positive behaviours and social attitudes, especially when the broadcasters of content enjoy recognition and acceptance among internet users, and are thus recognised as a source of authority.

(trans. JB)

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**The Significance of Psychological
Training Programmes in Media
Education: The Case of *Człowiek 2.0*
[Human 2.0] Training Programme**

The aim of media education is to shape competences that enable critical, selective and conscious use of the media. Unfortunately, the aspect of shaping awareness related to both the characteristic features of media and the context of using them is often neglected. And the reason for this is that such cognizance would require psychological training, as opposed to illumination via the didactic path.

And so, what follows looks to think about facilitating the acquisition of a psychological perspective; and to ascertain what resultant aims are achievable.

Above all, it seems necessary to take into consideration, both in the media education programme, as well as in other forms of educating, some psychological consequences that are related to the use of different media, especially new technologies. This area includes, among others, the issue relating to how new technologies influence the cognitive, emotional and social functioning of people (Subrahmanyam et al., 2001; Subrahmanyam and Lin, 2007).

Another topic that should be discussed from the psychological perspective is how to adjust media education to the abilities, possibilities and preferences of people in specific age groups, especially during the period of intensive development (Lehtonen et al., 2008).

Broadening the psychological context associated with those chances and risks typical for new media is also a crucial issue. One very promising, although repeatedly ignored, possibility entails the use of new technologies so as to stimulate development or cognitive performance (through such approaches as computerised attention or working memory training). The risks may involve not only the media environment itself, but they could also be linked to specific patterns of how users of new technologies function today (e.g. the phenomenon of information overload).

There should be also space in media education that would allow for furthering the inclusion of psychological knowledge related to the mechanisms of phenomena that seem familiar, but are often not entirely comprehended, especially in the light of most recent knowledge, and consequently being oversimplified or inaccurate (e.g. the phenomenon of creativity or intelligence, problem solving ways and methods). It is especially significant when the competences shaped by media education rely on tools that are supposed to develop or shape these phenomena or other related processes.

The shaping of psychological competences encompasses both listening skills and assertive communication. Why are such competences especially useful in media education? If we agree (Pezda and Cieśliński, 2012) that good teachers are not so much those who have more information, but those who understand, interpret, doubt, reflect, are able to admit that they do not know something trying at the same time to learn together with students, then the challenges connected with teaching new technologies can also require from teachers the same attitudes and approaches and consequently interpersonal skills. Without them, collaboration with learners may encounter a number of obstructions and obstacles related to, for example, communication difficulties or the unstable sense of teachers' own effectiveness in issues where young people seem (in many respects) to lead.

The analysis of available media education programmes raises the following question: what was the vision of society adopted by their authors? It seems that many programmes refer to the needs of an information society, in which the production, processing, storage, transfer and use of information is the basic form of action; whereas the social position of members of the society is conditioned by their access to information (Chmielecka, 2004). What seems problematic in this context is the fact that, contrary to past times, today the

biggest challenge does not necessarily come from the gaining of access to valuable information, but rather rests on successful selection, comprehension, evaluation, and pertinent action. Each type of the media develops one ability at the cost of the others, which also pertains to the Internet. Research has shown that the intensive use of this medium impacts negatively on the mechanism of divisible attention, whilst also weakening the mechanism of selection (Greenfield, 2009; Subrahmanyam et al., 2001). As a result, we are able to process more information, but at a more superficial level it is difficult to situate the same information in a wider context; for example, incorporating into already available structures of knowledge or self-references. So perhaps media education should rather answer the needs of knowledge society, where the form of activities does not refer only to information (answering such questions as: 'what?', 'where?', 'when?', 'which?' etc.) or even to generalisations, but to the wider contexts, pertaining to knowledge that allows us to find an answer as to 'why?', that helps to explain the mechanisms of observed phenomena and thus understand them better (Chmielecka, 2004). Agnieszka Roguska and Beata Trębicka-Postrzygacz (2014) emphasise the need to construct a media education system that will fit into the vision of such a society of knowledge.

Unfortunately, new technologies also heighten the risk of experiencing so-called information overload, which happens when someone is forced to process more information than it is possible for their brain to do so (Toffler, 1971; Seidler et al., 2018). Long-term information overload can result in information fatigue syndrome (Thomas, 1998, pp. 523-524), manifesting in frustration, an increase in aggression, a feeling of being lost in life, a weakening of the skills needed for processing information and decision-making, troubles with concentrating or even understanding simple messages.

It seems therefore that media education should not just cover new technologies and the wider media world, but also assist in the safe and responsible use of the media in order to lower associative risks.

This in turn leads us to the needs of both the society of knowledge and the society of wisdom, which is supposed to be based not only on information and practical competences: on knowledge and the resulting ability to understand the world, but also on the ability to make proper use of this knowledge (Chmielecka, 2004).

According to this proposed understanding of the role of media education, it should meet several challenges, among them:

- (1) teaching practical skills connected with the use of new technologies: learning based on transferring information and on exercises;
- (2) situating new information in a wider context of knowledge. Deepening the understanding of discussed phenomena, as well as the mechanisms regulating the functioning of a media user;
- (3) shaping the abilities required for the conscious use of the media, especially new technologies. Teaching based on knowledge and independent, critical reflection, requiring a deepening of both consciousness and self-consciousness;
- (4) treating media tools as means assisting in a person's development, but not an end in itself.

In the autumn of 2016 an opportunity to implement such a programme for developing media competences arose. As part of the cycle *Pracownia 2.0* [Workshop 2.0], directed to teachers and educators, and realised at the National Film Archive – Audiovisual Institute,¹ the programme consisted of a cycle of training workshops dedicated to different topics connected with broadly defined media education, which largely overlapped with standard courses of this type. Its uniqueness rested on its addition of psychological training sessions that broadened the context of the discussed issues by including knowledge about users of the media.

During the cycle, different models were tested, the aim being to interweave the two modules (the psychological and the didactic) through either separate training courses (psychological weekend, didactic weekend) or combined workshops (psychology and didactics all in one day). The most effective model for interlocking these two perspectives took the form of two day-long weekend workshops, in which the first day was dedicated to psychological (preparatory) training, and the second to didactic, tool-oriented training.

Karolina Szczepaniak, a lecturer and trainer on media education and new technologies, was responsible for planning out the

¹ The project would be modified several times during its realisation at the National Film Archive – Audiovisual Institute, under the title *Człowiek 2.0* [Human 2.0], coordinated by Ewa Korzeniowska, Senior Research and Development Specialist.

didactic, tool-oriented part of the programme. The essence of this aspect of the workshops was to shape practical competences on how to use digital tools for educational purposes, as well as how to present information about important phenomena connected with new technologies (e.g. copyright laws on the Internet, or online ‘hate’).

The second, psychological component of the cycle was envisioned as moving beyond solely transmitting information and shaping practical competences, and towards a comprehensive understating of the discussed phenomena. The author of this article, Dorota Żelechowska, a researcher in social sciences in the field of psychology, working at the Institute of Psychology at the Adam Mickiewicz University in Poznań, was responsible for the content of this segment. The aim of the psychological workshops—through the process of explaining: the mechanisms of the discussed phenomena; the rules relating to a person’s functioning, developmental regularities, as well addressing the changes in these regularities that are a result of new technologies—was to build a representation of information in the form of knowledge. Reflection, discussions, and their own experience gained during the training course, helped the participants to achieve a critical and more conscious attitude both as media users, as well as educators working with students.

While designing the course, the authors adopted the following assumptions:

- (1) Shaping media competences not for themselves, but in relation to the human-technology relationship. This was education focused on a person and the context in which media competences are used.
- (2) Transfer of information, teaching practical competences, but also expanding understanding towards knowledge and awareness of the phenomena discussed, of the human being as well as of oneself. Pointing to what is relatively stable, and what is constantly changing and transforming.
- (3) Emphasis on deepening reflection, as a counterbalance for the (supposed) flow of new technologies resulting in a weakening of the mechanisms of deeper processing of content.

Examples of training courses based on the above model, which were particularly popular among the programme’s participants, are described below:

(1) Good communication in the digital reality

Psychological module:

What is assertiveness, and how it can be easily mistaken for something else. How to recognise assertiveness, what can be gained or lost by it. Discussion of the most common reasons for lacking assertiveness. Elements of an assertive attitude: thoughts, emotions, and behaviours. How to build an assertive attitude. Good ways of communicating—how to listen and hear, how to ask and understand.

Tool module:

Presentation of internet tools used for communication, and a discussion about online ‘hate’.

(2) Information and resistance to manipulation

Psychological module:

Processing information—psychological regularities and mechanisms. Differences between information, knowledge, wisdom, beliefs. Discussion of phenomena: information overload, cognitive dissonance, the need for cognitive closure, belief effect. Manipulation of information; social techniques for influencing. Psychological games and transactional analysis. Ways of protecting oneself from various forms of manipulation.

Tool module: Wikipedia, post-truth, fake news.

(3) Creativity and creative problem solving

Psychological module:

Explaining creativity from the psychological perspective. Discussion of the differences between creativity and creating. Stages of the creative process. Common ways of blocking creativity and ways of dealing with them. Methods for supporting creativity. Elements of creative thinking.

Presentation of methods for creative problem solving.

Tool module: What is design thinking – examples, graphics creation tools.

After analysing literature on the subject, and on the basis of personal experiences and feedback given by the participants of the training courses, a model of the course cycle was constructed, consisting of individual blocks, psychological workshops. The cycle could be used as a supplement to more standard media or digital trainings (tool- and problem-oriented). These psychological workshops would facilitate the development of knowledge

and competences in domains that are especially significant in the context of media competences but are almost completely ignored in standard training courses. The programme is based on varying degrees of training levels, from basic (level A) – which does not require any prior competences or knowledge from participants, through to advanced (level B), and ending with proficient, requiring some base knowledge and abilities. Listed below are the courses that make up the cycle of such psychological workshops. Some of them could be realised as part of the *Człowiek 2.0* [Human 2.0] cycle.

Table 1. *Człowiek 2.0* [Human 2.0]: psychological module

Training type	Level	Description
Introduction – basic information		
<i>Człowiek 2.0</i> [Human 2.0]	A	Introduction to the topic of the workshops. Mapping of plan, construction of scaffolding and map for future meetings. Discussion of basic information on how new technologies influence people in different spheres: cognitive, emotional, motivational, behavioural, with the consideration of developmental stage. Pointing to additional sources of information.
Cognitive psychology		
Cognitive psychology	A	Introduction to cognitive psychology. Discussion of basic elementary and complex cognitive processes. New trends and outdated (but still functioning in society) data. Cognitive development. Influence of new technologies on cognitive functioning on different stages of development.
Attention, memory	B	Elementary cognitive processes. Influence of new technologies – gains, losses, and what one could try to do with it.
Reasoning, intelligence, problem solving	B	Reasoning and intelligence. How are they influenced by new technologies. New theories and recent scholarship. Who is an intelligent student – abolishing myths! Problem solving.
Knowledge, teaching, learning	B	Beliefs and opinions. How are they different from knowledge. When does information become knowledge. Knowledge in the world of new technologies. Teaching and learning.

Table 1. (continued)

Abductive reasoning	C	What is abductive reasoning. How to actively use abductive problems in education. How to use the internet for this purpose.
Psychology of emotion and motivation		
Psychology of emotion and motivation	A	Introduction to the psychology of emotion and motivation. Basic and complex emotions. Types of motivation. Emotional development. Difficult emotions and emotional problems. Emotions in the 21st century, online emotions. Influence of new technologies on emotional functioning.
Motivation	B	How to motivate students to learn. What influences motivation. Internal and external motivation. Motivation to learn at school. When motivation is not enough and finding other ways for motivating.
Stress	B	What is stress. Effects of stress. Students' stress. Strategies of coping with stress. Stress and the Internet.
Anxiety	C	Anxiety and fear. Anxiety, fear and the internet. Students' anxiety.
Sadness	C	Sadness, melancholy, depression. Sadness and the internet.
Personality psychology		
Personality psychology	A	Introduction to personality psychology, discussion of selected theories. Developmental regularities, crises and challenges. Influence of new technologies on personality.
Self-knowledge, development, self-image	B	What is self-knowledge and why is it important. How to develop oneself and how to help others in their development. How to use new technologies for this purpose. What influences our self-image. Self-efficacy. Positive and harmful beliefs.
Self-esteem	C	Self-esteem: how to develop self-esteem. How to teach without over-developing self-esteem.

Table 1. (continued)

Social psychology		
Social psychology, communication	A	Discussion of selected social phenomena and psychological mechanisms used for explaining them. Regularities in social development. Introduction to interpersonal communication. Outline of issues (later developed during successive workshops). Good communication practices.
Good communication practices	B	How to speak and be heard. How to listen and hear. How to solve communication problems. Attitudes and values.
Morality	C	Moral development, moral reasoning, moral dilemmas. Morality on the internet.
Assertiveness	C	Introduction to assertiveness, building an assertive attitude, assertiveness techniques.
Risks and problems		
Risks in the world of new technologies	A	Psychological risks connected with the use of new technologies, especially the Internet.
Manipulation in interpersonal communication: how to defend yourself	B	When communication becomes manipulation. Manipulation techniques. Psychological games.
Manipulation of information	B	More subtle and less subtle ways of manipulating information (and users) in electronic media. Argumentation errors.
Aggression and how to deal with it	B	Aggression and anger. Active and passive aggression. Different forms of aggression. Consequences.
Internet addiction	C	Internet addiction: how to recognise, how to prevent, how to assist in coping.
Internet and procrastination	C	Why do we put things off until later? Online procrastination. Consequences. How to deal with it.
Chances and development		
Education in the 21st century	B	New methods of learning, teaching and self-development. Current state of knowledge and new trends in education.

Table 1. (continued)

Education in the 21st century – practical approach	C	Implementation of knowledge from the <i>Education in the 21st century – practical approach</i> course: preparation of individual projects.
Cognitive training sessions	C	Presentation of computerised cognitive training sessions, assessment of possibilities and limitations. What can and what cannot be trained. How to train successfully. How to choose cognitive training sessions.
Creativity	B	What is creativity, how to develop it, what blocks and what helps it flourish. Perhaps also creative problem solving.
Creativity in practice	C	Creative use of new technologies in the development of student creativity: participant projects.
Good practices	B	Appropriate attitudes: how to shape them, and how not to do it, and how to evaluate if a given attitude is good. Work on beliefs, emotions and behaviours. Where to look for information and how to properly evaluate sources (introduction).
Selection	B	Extending the topic of the selection of sources of information – in terms of content and self-control.
Selection in practice	C	Preparing a project that teaches selection (theory, but primarily practice) to be implemented in schools.
Individual work		
Individual work on participants' problems	C	Focusing on the problems reported by participants. Responses involve special workshops, self-help group, coaching, mentoring, consulting.

This programme has been running for several years now, and has proven popular amongst teachers, educators and other professionals. According to participants, supplementing the didactic perspective with a psychological perspective offers unique and valuable approaches that can ameliorate all process pertaining to media education..

In the environment of new technologies, there is a growing risk of mind manipulation. It is therefore especially important to move beyond simply teaching about media education and add components aimed at helping individuals recognised as media users. More complex training programmes are essential in helping to build media competences based not only on practical

skills and new information (which is the aim of most educational projects of this type), but also on a more comprehensive understanding and knowledge; and even on the conscious, independent, critical and responsible attitude of users of the media.

(trans. JB)

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Media Education in Polish Education System

The quality of media education, understood as ‘educating citizens how to properly use media and information and communication technologies, with the aim of conscious and critical reception of communicated contents, as well as independent creation or co-creation of them’ (Polish IFAP Committee, 2011) is highly dependent on its position in the education system.

As a result of the increasing significance and growing role of information and communication technologies in everyday life, there is a need for students and teachers to learn corresponding skills and to adopt and implement a new system of values. According to sociologist Tomasz Goban-Klas this imperative is ‘as important an objective for schools as is teaching how to write and count’ (2005, p. 194).

Because of the popularity of the Internet, or the realisation of such projects as the *Polish Education Network [Ogólnopolska Sieć Edukacyjna]*, aimed at connecting every school in Poland to the Internet, education has received a new dimension. The Internet has become a vast resource for information, making it easier to find crucial data (Gajda, 2005, p. 142). As a result of this process, traditional knowledge has becoming nothing more than information which needs to be ‘re-conceptualised in a dynamic

learning process' (Pachociński, 1999, cited in Kojs and Dawid, 2003, p. 62). The document entitled *Fez Declaration on Media and Information Literacy* (First International Forum on Media and Information Literacy, 15-17 June 2011), elaborated with UNESCO's contribution, states even that:

MIL is a fundamental human right, particularly in the digital age of explosion of information and convergence of communication technologies [...] MIL enhances the quality of human life and [...] social, economic and cultural development (2011, p. 1).

This approach to media and information literacy seems to align well with the aspirations and expectations of students who are either beginning or continuing their school education.

Generally, the aim of media education is to:

teach media reception and how to use media as contemporary intellectual tools. Teaching a person how to consciously and critically receive various types of media messages requires a substantial knowledge of media understood in the context of communication tools and expressed content (Siemieniecki, 2007, p. 137).

The National Broadcasting Council (KRRiT) defines media education as 'a process of shaping and popularising the skills needed for conscious and critical use of media in all social and age groups' (Stunża, 2012).

The education system must meet these challenges and realise the objectives listed above. In addition to changes which have taken place pertaining to educational legislation, they also require a change in how teachers traditionally approach electronic media. Contemporary media literacy is based on a critical, responsible use of media and therefore requires teachers to be familiar with what media has to offer today, to recognise media's diverse options, and to be proficient in the use of information and communication technologies, regardless of the subject they are teaching. This involves 'an active partnership between teachers and students, with the expectation that the teacher is aware of what interests young people nowadays' (Dobrołowicz, 2005/2006, p. 11). This means that teachers must be familiar with video games and TV series, apps and social platforms popular among their pupils:

Only then will it be possible to learn how students understand the world and how they experience popular culture, in order to use this

knowledge in critical analysis and interpretation of media texts. Participation in media culture can become an important step on the path to participation in high culture, however, under the condition that the school does not discourage pupils from high culture by enforcing its reception with the use of traditional methods and by making them fear new technologies (ibid.; Measuring cultural participation, 2012).

Some of the barriers for the development of media education in schools are:

- infrastructure barriers: poor broadband coverage, or none; lack of availability or difficult access to new technologies;
- competence barriers: lack of digital literacy;
- mental barriers: lack of awareness of the benefits of media education (Lew-Starowicz and Lorecka, 2013, p. 23).

On the other hand, contextualised factors in media education in schools include:

- education system (legal framework, pedagogical supervision, teacher education and training system);
- school (infrastructure, organisation of work, student-teacher relations, student-student relations);
- student (individual predispositions, socio-economic conditions).

Legal basis of media education

In the Polish education system media literacy is developed at every educational stage, beginning with pre-school education.

The most important legal documents on media education include:

- Act of 14 December 2016, the Law on School Education;
- Regulation of 14 February 2017 on the core curriculum for preschool education and the core curriculum for general education in primary schools, incl. for pupils with moderate and severe intellectual disability, and for general education in stage I sectoral vocational schools, general education in special schools preparing for employment, and general education in post-secondary schools;
- Regulation of the Minister of National Education of 30 January 2018 on the core curriculum for general education in general secondary schools, technical secondary schools and stage II sectoral vocational schools.

Article 1, paragraph 18 of the Law on School Education defines one of the basic aims of the education system as the formation of entrepreneurial and creative attitudes in students, encouraging active participation in economic life, including the use of innovative organisational and methodological solutions in the education process. It allows for teaching media education in innovative ways both in terms of the programme, as well as organisation and methodology. Before the introduction of these articles, pedagogical innovation was severely limited as a result of excessive reporting required under the previous regulation.

Major changes have been made to increase student safety on the Internet. Before the introduction of appropriate legislation, the safety of students was perceived only in regards to such emergencies as natural disasters or construction accidents. The dangers posed by the Internet have now been duly noted, while the role of schools has been defined not only as prevention from access to potentially dangerous online content, but also in terms of preparing students how to deal with them, also on school grounds, through the introduction of technological security. Paragraph 20 of Article 1 of the Law on School Education anticipates the popularisation of knowledge about safety in the Internet among students, and the shaping of proper attitudes towards these dangers, including those connected with the use of information and communication technologies and in emergency situations, and paragraph 21 of Article 1 – teaching students how to efficiently use information and communication technologies. Efficient use includes not only the ability to use certain devices, but also their effective and responsible use. The implemented core curriculum is to guarantee the development of this particular skill.

Preschool core curriculum

According to the new legislation, a pupil who is ready to begin primary education:

- respects the rights and obligations of himself/herself and others, paying attention to their individual needs;
- sees the differences between elements of the fictional world and reality, between real-life and media-created beings, between realistic and fictional beings.

Media education must begin at a young age, especially considering the decreasing age of children's first contact with the

Internet. What is also important is the time that children spend on the Internet. According to research conducted by the British Ofcom, almost half of children aged 6-16 remain online before 10 pm (Ofcom, 2016).

Primary school core curriculum

In the primary school core curriculum (Regulation of the Minister of National Education, 2017) elements of media education are present in several school subjects, for example, among the objectives listed in Polish language courses are the following: distinguishing between elements of the fictional world and reality, real-life beings and media-created beings, realistic and fictional beings. As part of the knowledge of stylistic devices, the use of basic stylistic devices (lexical, grammar, spelling and phonetic) is included in the following thematic areas:

- culture, tradition, multiculturalism, media;
- reliable use of information, recognising copyright laws;
- participation in educational projects (e.g. creating different presentations, exhibition programmes, creating short films with the use of multimedia technology).

A fragment of the core curriculum dedicated to art education states that:

Educating about the sense of responsibility and respect for one's own and others' work, including cultural heritage, is also important in development. This can also be manifested in the creation of a collection of one's own works, their documentation and lawful publication. Teachers should pay attention to and make pupils aware about the issue of intellectual property protection, and not allow them to create plagiarised works and publish them, e.g. on the Internet, without the consent of the creator or without the consent of the people depicted in the work (protection of image). They should also shape the attitudes of properly understood tolerance for the creativity of others, including respect for human dignity, and responsibility for the content and form of their own artistic creation (ibid.).

It is similar in the case of subject Civic Education. A student finishing primary school is able to:

- present the functions and types of mass media; explain the importance of mass media for the freedom of speech;

- find specific information in the media; distinguish facts from opinions and commentaries; explain the reliability of journalists;
- present the functions of advertisements and critically analyse a selected example of an advertisement;
- list the aims of social campaigns; analyse materials from a chosen social campaign.

An entire section titled *Compliance with law and safety regulations* is included in computer science courses. This pertains to every educational stage and necessitates: respecting the privacy of information and data protection, intellectual property laws, etiquette in communications and social norms, assessment of dangers connected to technology and their inclusion for one's own and others' security.

High school/professional technical school core curriculum

In the case of secondary schools, the Regulation of the Minister of National Education of 30 January 2018 on the core curriculum for general education in general secondary schools, technical secondary schools and stage II sectoral vocational schools, states that:

media are increasingly playing an important role both in social, as well as individual life, teachers should pay considerable attention to media education, that is educating students on proper reception and use of media (Regulation of the Minister of National Education, 2018).

According to the authors of the core curriculum, the aim of musical education is to supplement the humanistic, social and media education, as well as artistic education. The role of civic education (*wiedza o społeczeństwie*) is to shape the skills needed for understanding the role of media and their influence on people's actions and attitudes, and to shape the critical reception of media content and conscious use of them. After completing this stage of education, a student should be able to use multimedia sources of information and assess them critically, use multimedia recourses such as libraries, online dictionaries, e-books, personal websites; choose Internet resources based on the criteria of factual correctness and critically evaluate their content. In the case of computer science classes, a student should learn how to creatively solve problems from different fields, consciously using computer science methods and tools, including programming.

The approach of integrating elements of media education in the didactics of other subjects is also present in first-stage sectoral VET schools:

Because mass media are increasingly playing an important role both in social and individual life, teachers should pay considerable attention to media education, that is educating students on proper reception and use of media (ibid.).

A fragment of the first-stage sectoral VET school's core curriculum about student's health training is devoted to the critical approach to media information, according to which a student should be able to explain where to search for reliable information about health and sports, and to critically analyse media information on this issue.

Educational methods

Project method

The regulations introduced in the new core curriculum emphasise the importance of the project method in activating students in the educating process:

Acquiring social competences such as communication and collaboration in a group, including in virtual environments, participation in team or individual projects as well as organisation and project management is of great importance for the development and success of young people in their adult lives (Regulation of the Minister of National Education, 2018).

The application of the project method helps to shape entrepreneurship and creative skills in students and facilitates the use of innovative programmatic, organisational and methodological solutions in the educating process. The project method requires significant independence and responsibility on the part of students, creating conditions for strengthening of an individual educational process. When carrying out the project, the use of information and communication technologies is recommended.

The core curriculum directly encourages schools to participate in international projects, mentioning initiatives such as e-Twinning which require the use of platforms and online communication. Polish schools are at the forefront both in the number

as well as quality of projects being carried out as part of this European initiative (eTwinning, 2019).

In the case of civic education classes taught in secondary schools, 20% of time is reserved for implementing the project method. The last two weeks of the school year (after the final grades) may be dedicated to realising projects in every school subject. In order to make this possible, the meetings of Pedagogical Councils are held earlier.

Changes in the core curriculum present challenges for schools with regards to adapting work with students in such a way as to enable them to search for, critically analyse and effectively use available information.

In order to achieve high quality education in schools, it is obligatory for schools to provide students with access to on-line materials and information. For this to happen, students must have access to proper infrastructure and properly-trained teachers. The legal framework enabling the implementation of media information-oriented activities has been adjusted in the first place.

Infrastructure

Examples of actions aimed at supporting local government in providing schools with proper infrastructure, in order to help them carry out media education:

Access to broadband Internet for every school

The aim of the project has been to provide free access to broadband Internet with a minimum bandwidth of 100Mb/s for every school in Poland. An important component offered by the project is a tool for advanced filtering of online content, used to grant students maximum security without endangering them by allowing for access to content that would put their mental and moral development at risk. The project received an award for best developmental project in 2018, given by a specialised United Nations agency (ITU – International Telecommunication Union). 1.5 billion PLN has been reserved for the implementation of this project (ongoing since 2017). Schools that will not enter the project will nonetheless have to meet the requirement of fast Internet on their own by 2021, according to the provisions introduced in the Act of 27 October 2017 on the Polish Educational Network (Ogólnopolska Sieć Edukacyjna, OSE).

An important element of the OSE ecosystem is the OSEhero initiative, which aim is to recognise the most active teachers who are using modern technologies in teaching. Their biographies and activities are presented on the osehero.pl website. The website celebrates their achievements, and provides contact information – as well as inspiration – for other teachers.

Nature labs – financed from the 0.4 special-purpose reserve

As part of the new criterion for granting funds to local governments under the special-purpose reserve from the state budget, it is possible to subsidise the provision of teaching aids necessary to implement the core curriculum in science subjects in primary schools (biology, geography, chemistry and physics). The four year-long programme offers financing of lab equipment. 1600 applications for funding were submitted in 2017. The total budget for the programme is PLN 320 million.

Mobile educational centre (MCE) – Foundation for the Development of the Educational System

The mobile educational centre is a training and didactic semi-trailer that can be visited by students and teachers in many schools in Poland. The aim of the project is broadly understood education, informing about contemporary teaching methods and the promotion of Erasmus+, the largest educational programme in the EU.

'Active board' government programme

The aim of the programme is to provide every primary school in Poland with multimedia boards, interactive screens and sound equipment. It also involves teacher training. A total amount of PLN 279.316 million is envisaged for the programme in the period 2017-2019. The programme is financed in 80% by the state, and in 20% by individual schools.

Educating and training teachers

The realisation of media education also requires the upgrading of approaches to teacher training.

Some changes have already been made, including the introduction of the requirement that teachers are trained exclusively by universities which meet the conditions described in the Act of 20 July 2018 on the Law on Higher Education and Science.

Teachers will be educated on the basis of new standards, in which theoretical education is much more focused on practical

teaching experience, and the training of early education teachers and specialised pedagogues – during uniform master's studies.

Presently, school principals commonly use information and communication technologies, similarly as teachers. However, in 2008-2011 in less than 12% of Polish schools all or almost all teachers used information and communication technologies; today this applies to almost 80% of schools (Bieńkowska et al., 2019, p. 26). According to data collected by the boards of education in 2019, computer science teachers often use information and communication technologies for didactic purposes (93%), as do teachers of foreign languages (79%), early school education (70%) and biology (66%).

When setting the priority of the country's educational policy every year, the Minister of National Education indicates the direction of activities desired by schools, and teachers are supported in these activities by training institutions which acknowledge the priorities when planning training programmes.

My analysis of the implementation of the priority of the state's educational policy by teacher training institutions in 2017/2018 entitled *Internet security. The responsible use of social media*, based on the data from Superintended offices, has proven the effectiveness of this tool, and it has been included in the training offer for teachers.

A study commissioned by the Ministry of National Education entitled *Competences in digital security in 2016/2017*, realised as part of the *Bezpieczna+* programme, concluded that in primary school forms 4-6 :

- there is significant lack of knowledge among students about copyright issues, including the problem of downloading and uploading files; the low test results on the subject (30%) is evidence of low competences on this issue (39% among teachers and 34% among parents);
- there is an urgent need to include parents in special actions oriented at shaping digital competences in the field of online image protection, copyright laws and technical security of electronic devices;
- there is a need among teachers to continue educating on problems connected with copyright laws and technical issues such as logging online and safe use of platforms with sensitive data.

This is also indirectly confirmed by the study *Evaluation of support in the field of education within the European Social Fund*, commissioned in 2018 by the Ministry of Entrepreneurship and Technology. According to the study, the topics covered during information and communication technologies training programmes most often relate to the use of digital tools and multimedia resources (77%), use of equipment (76%), teaching methods (72%). Teachers were far less often taught about safety issues or proper use of information and communication technologies (48%).

The study also shows that students were developing a broad set of digital competences during afterschool lessons financed by the European Social Fund. The ability to safely and properly use information and communication technologies was mentioned most often, which prompted the authors of the study to argue that schools are aware of the importance of safety issues in the use of information and communication technologies.

Conclusion

Selected fragments of the new regulations quoted above demonstrate that an appropriate legal framework has been created in regards to media education in Poland. However, preparing and training teachers remains a crucial element for these actions to be successful, and school administrations serve an important role in acknowledging this type of education as being one of the priorities of school education.

The successful realisation of media education requires the involvement of schools, non-government organisations, public administration and local government representatives. Every institution must play a different role. For instance, universities should educate future teachers on their crucial role in media education, while teacher training institutions should offer a training programme compatible with the core curriculum, and the Ministry must continue to acknowledge within the framework of educational policy those issues connected with media education.

It would be helpful if intermediate institutions would at least make available information about existing programmes or projects co-founded by the EU, as well as about teacher support networks, various contests or possibilities available at schools (e.g. photography studios, local radio stations, newspapers). The high number of schools taking part in different programmes such as

e-Twinning, *Internet Safety Day*, *New Technologies in Education Day*, *Schools with Class 2.0*, or the student contest *Exempt from Theory*, proves that there are many initiatives to choose from. Naturally, this does not mean that we can consider media education to be excellent in terms of quality, involvement of the entire school community or its national take up. However, it becomes apparent that with each passing year media education is better perceived – also by parents and students whose skills in information and communication technologies are increasingly higher. Teaching them how to safely and responsibly use these new technologies remains one of the biggest challenges for schools.

(trans. JB)

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Challenges of Raising and Educating Children in Slovenia to Be Smart About Digital Media

Introduction

As children are growing up, their use of TV, computers, tablets and mobile phones also increases. The popularity of paper media use cannot compete with the popularity of digital media use, as presented in Table 1, where the average times spent using selected media for different age groups of children in Slovenia are presented.

In 2015 and in 2016 we conducted surveys in Slovenia, collecting data on media habits of different age groups of children, as well as selected elements of educating children about media, either in home environment or in schools. In the case of collecting data on media habits of preschool children (Rek and Milanovski Brumat, 2016a) and primary school children (Rek and Milanovski Brumat, 2016b), we surveyed a national representative sample of their parents, who were asked to provide us data on their children's media habits as well as their own media habits and their behaviours and attitudes on educating their children about media. In the case of collecting data on media habits of high school children (Rek and Milanovski Brumat, 2016c), a national representative sample of high school students was surveyed. They were self-reporting on their own media habits.

Table 1. Average daily time spent using selected media for different age groups of children and youth in Slovenia (in minutes daily)

Age group	Watching TV	Listening to radio	Using computer or tablet	Playing video games on any device	Playing video games with violent contents	Reading magazines, newspapers	Using mobile phone without making calls
1-3	28	32	9	4	-	18	7
4-6	45	25	17	12	-	20	8
7-9	66	21	29	22	2	23	13
10-12	78	26	43	40	5	25	38
15-19	102	48	136	60	41	33	204

Source: Rek and Milanovski Brumat, 2016a, 2016b, 2016c

Information on the average digital media exposure of the different age groups of children presented in Table 1 can give us an idea about the trend of digital media use of differently aged children in Slovenia. But we should also stress that there are severe differences in media use within certain age groups that should not be neglected. In the tables below the variance in media exposure in the case of preschool children (aged 1 to 6 – age groups are combined) and in the case of high school students (aged 15 to 19) are calculated. In the first case, we divided our sample of preschool children into three groups similar in numbers (border framework 33rd and 66th percentiles): a) large media users (more than 2 hours of daily exposure to media, N = 370); b) medium media users (between 1h 15 min and 2 hours daily exposure to media, N = 360); c) small media users (less than 1h 15 min of daily media exposure, N = 357). The data provided in Table 2 shows that preschool children who fall into the group of large media users are on average exposed to the media almost seven times more compared to those in a small group of media users. They watch five times more television. Differences are severe in computer, tablet and mobile phone use.

Table 2. Media exposure of large, medium and small preschool children media users (in minutes daily)

	Small	Medium	Large
Live TV	13.94	28.48	65.51
Recorded video and DVD	11.14	20.66	50.15
Radio	6.3	17.04	59.23
Computer or tablet use	1.55	7.30	31.27
Video games	0.47	3.01	20.74
Magazines, newspapers	7.24	17.28	33.17
Smartphone without making calls	0.89	3.05	18.04
Sum in minutes	41.53	96.82	278.11

Source: Kovačič and Rek, 2018, p. 32

In the case of children aged 1 to 6 who fall into the category of 'small users' the exposure to electronic devices is low. Preschoolers who fall into the category of 'large users', on the other hand, spend more than four hours per day using various digital devices (Kovačič and Rek, 2018, p. 32).

Similarly, we divided data on the digital media use of high school students into three groups similar in numbers (border framework 33rd and 66th percentiles): (a) large digital media users (more than 10 hours of daily exposure to the digital media, N = 251); (b) medium digital media users (between 6 and 10 hours of daily consumption of digital media, N = 242); (c) small digital media users (less than 6 hours of daily digital media consumption, N = 313).

Table 3. Average time spent using digital media for small, medium and large high school student digital media users (in minutes daily)

	Small	Medium	Large
TV, video and films	56.15	97.08	166.32
Computer/tablet	61.80	128.65	233.62
Mobile phone	99.18	185.44	351.47
Video games (console)	21.13	42.95	122.24
Sum in minutes	238.43	454.12	873.65

Source: Rek, 2016, p. 130

If the high school student falls within the large digital media user group, they are on average exposed to digital media (TV, computer/tablet, mobile phone, consoles) 3.6 times more than small media users, as is evident from Table 3. On average, large digital media users are exposed to digital media for 14.5 hours daily (Rek, 2016, p. 130).

The presented data can provide an insight into children's patterns of media use in Slovenia, but the data does not give an insight into the broader media reception process, following media exposure. Our research (Rek and Milanovski Brumat, 2016a, 2016b, 2016c) was quantitative and did not attempt to respond to qualitative issues. The research results are in line with other scientific research showing that digital media are becoming increasingly an integral part of children's everyday life (see, for instance, Offcom, 2015; Holloway et al., 2013; Hesketh et al., 2013; Lemish, 2015; Farrell et al., 2016). Mass media have become an important agent in socialisation processes and at the same time a new challenge for other socialisation agents, such as family, schools or peer groups regarding their role in raising and educating growing up children on the smart way of using digital media, understanding content, making informed choices about media use, and living with the consequences of such choices.

As children grow, the capacity of digitalization to shape their life experiences grows with them, offering plenty of opportunities to learn, to create, to connect, to play and to have fun. But large, intense, reckless or uninformed use of digital media can also have negative effects. These can be related to media violence (Anderson et al., 2003; Kirsh, 2012), and the negative effects that extensive digital media use can have on psychological development (Subrahmanyam and Šmahel, 2011; Calvert and Wilson, 2011), learning abilities (Dunkels et al., 2011), health issues (physical activity, obesity, sleeping habits) (WHO, 2010; Stansburger et al., 2010), self-perception and interpersonal relationships (Andsager and White, 2009), the development of unwanted or delinquent behaviours (Anderson et al., 2009; Wakefield et al., 2003) and so on. Digital technology and interactivity also pose significant risks to children's safety, privacy and well-being, magnifying threats and harms that many children already face offline and making already-vulnerable children even more vulnerable (UNICEF, 2017). Discussions on the possible negative impacts of

increasing digital media use by children and teenagers are often accompanied by pessimistic forecasts.

Large media users in Slovenia spend significantly more time using digital media for learning or other work (Rek, 2016, p. 132), compared to small media users, which can be beneficial. However, they also spend significantly more time using media for entertainment. For example, secondary school students, who are large media users, on average play 1.3 hours daily more video games than those in a group of medium users, and 1.7 hours more than youth, who are small media users. Additionally, large media users play significantly more video games with violent content. On average they spend an hour and a half a day playing video games with violent content, which is an hour more than those who are medium media users and on average 1.3 hours more compared to small media users (Rek, 2016, p. 133). As the evidence shows, media exposure and the habits which children develop pertaining to the use of media is affected by the social status of the family (Rek and Kovačič, 2018), where large media use by children is more characteristic for families with lower social status and educational levels of parents, the amount of media use in children can be also placed in the discourse exploring causes of contemporary social inequalities. The aim of this contribution is to outline how we are, as a society (in the framework of our formal education system or civic activities) and individuals (as parents, educators), dealing with the increased digital media consumption of our children in Slovenia.

Introducing digital media in early childhood

According to data provided by the Statistical Office of the Republic of Slovenia, in the school year 2017/18, 93% of children aged 4 and 5 and 64% of children aged 1 to 3 in Slovenia attended kindergarten. Media education is an integral part of formal early childhood education system. The Preschool Curriculum in Slovenia (MIZŠ, 1999) sets goals to be followed in educating preschool children on media-related topics. Children are supposed to, age appropriate, learn about books, films, games, educational programmes, and television programmes for children and adults. They are supposed to observe, record, explore, identify and comment on media contents, take photos, use the media. Electronic media are intended for listening to fairy tales,

stories, puzzles, and songs; it is planned for the children to visit the cinema, watch cartoons, and listen to audio and watch video materials containing various literary texts for children. Children should also have an opportunity to, age appropriately, discuss prejudices, stereotypes, fashion trends, commercials, etc., which are commonly transmitted by media messages (Rek, 2019, p. 48). The Curriculum for Preschools is designed as an open syllabus and provides directions for content and objectives for separate fields of curriculum, but the number of daily or weekly hours and the frequency of learning activities in a particular field depends on choices made by preschool teachers (Zupančič, Čagan and Mulej, 2015). The inclusion of media education in the everyday practice of preschool activities is dependent upon the individual preschool teacher (her/his interests and motivation and knowledge on media related topics). Preschool teachers in Slovenia are relatively reserved when it comes to including electronic media into educational processes. The majority do not agree with the statement that children should learn how to use electronic devices in preschools (mean=1.88 on a 1-5 scale); 92.6% of preschool teachers also stated that a child would never be allowed to use an electronic device of their own in a preschool children's group (Rek and Milanovski Brumat, 2016). Research shows that children do not choose the activities connected to digital media in preschools very often (Rek, 2019; Lepičnik Vodopivec, 2011). And when they do, children mainly play a passive role (listening, watching of media contents), and only rarely engage in the active role of using an electronic device or discussing the media contents they have observed. Average daily exposure to screens in Slovene kindergartens is low (7.6 minutes). A common media related activity is listening to songs/music or using books and other print media (Kovačič and Rek, 2016, p. 252). The vast majority of digital-media related activities of preschool children take place in children's home environment. In our research (Rek and Milanovski Brumat, 2016), parents were asked if their paediatrician had ever discussed the topic of media-related effects on their baby's health and 95.5% claimed that this had never been a topic of their conversation. Knowledge on recommendations that children younger than 18 months should avoid use of screen media is mainly dependent on individual awareness and preferences of parents and is not a part of societies' common

sense' behaviour. A significant proportion of parents is present when their pre-schoolers aged 1 to 6 use media (mean 4.28 on a 1-5 scale, where 1 means never present and 5 means always present). Most of the parents set rules and restrictions regarding the content that their children can watch (mean 4.52 on a 1-5 scale) and they also talk to their children about media content, although to a lesser extent (mean 3.88 on a 1-5 scale). However, many issues concerning the parent-child correlation remain open to further research. Based on our quantitative research design we cannot provide claims about the nature and contents of rule setting and conversations parents have with their children. Such an insight would be valuable so as to be able to learn about the quality of contents to which preschool children are exposed. We also cannot make any claims about the kind of interactions preschool children engage in with parents and significant others (like educators in kindergartens, peers, grandparents), that may affect the child's media experience even more than the actual exposure times (Rek and Kovačič, 2019, p. 40).

In our survey we asked parents what they thought a daily screen exposure limit for up to 3-year-old children should be. Their results showed that a screen limit should be on average 46.71 minutes for children aged 1 to 3 and 55.43 minutes for those aged between 4 and 6. There is however a severe gap between parents' opinions on an appropriate screen limit for their young children and children's actual exposure to screens. An estimated average daily screen exposure limit for children aged 1 to 3 should be 46 minutes, which is much less time than they spend in front of screens (on average 72 minutes daily). The difference is even bigger with children aged 4 to 6, where an estimated appropriate screen limit was set at 55.43 minutes. However, the data on media exposure of this age category show that children are exposed to screens on average for 114.31 minutes a day, which is twice as much as an appropriate screen limit should be in their parents' opinion (Rek and Kovačič, 2019, p. 39). Parents of Slovene pre-schoolers do not have strong opinions on either the positive or negative effects of media on their children. They were asked to assess whether their children can learn useful things using media or whether the use of media can have a negative effect on a child's development, health or mood. Most of the responses fall into the middle of a 1-5 scale, where 1 means

that they strongly disagree and 5 means that they strongly agree (Rek and Kovačič, 2019, p. 34). We assume that they themselves do not reflect on the whole range of complex issues that may be connected to their child's media habits. Both parents and pre-school teachers in Slovenia, when educating their children about media, focus more on the skills of how to use various media, and less on their children's reception, analysis, reflection and evaluation of media texts.

Educating primary school children about digital media

Specific contents related to media education are integrated into various subjects throughout the duration of a nine-year primary education. Media education is also offered to pupils in the form of an elective subject. In last triad of primary school (grades 7-9) three elective subjects – Media Education: Press, Media Education: Television and Media Education: Radio (Košir, Erjavec and Volčič, p. 2006) – can be offered to pupils if the primary school has teachers educated in the field of media and is able to deliver the lessons prescribed by the curriculum. Another media related elective subject, which pupils can choose in the last triad of their primary schooling, is School Journalism. However, the list of possible elective subjects that primary schools can choose from and offer to their pupils is long and diverse and not all primary schools deliver all possible elective subjects. On the other hand, implemented media related subjects are not elected by all students, so we can make a claim that only a part of Slovene pupils in primary schools receive a focused, consistent media-related knowledge. The syllabus of elective subjects guide teachers to provide pupils with knowledge about using media, analysing, critically evaluating and producing various forms of media contents. Teachers are supposed to encourage critical thinking and reflection in the context of current social, economic and cultural trends. One of the biggest challenges in delivering media education in the framework of a formal education system is the very slow pace of change in formal curriculum compared to what is a very dynamic and rapidly changing media reality.

The media education delivered to pupils in the formal education system can very quickly become outdated. The syllabi for media education subjects delivered in Slovene primary schools was created in 1999. The media landscape has changed significantly

since then. It is no surprise, therefore, that the curriculum focuses mainly on traditional media: television, radio and the press, as in 1999 the Internet was not as present in our lives as it is today; there were no smartphones or digital social media at that time. The syllabi were updated up to a point in 2006, but in 2019 they have largely failed to address current issues children face in using media, as the bureaucratic procedures of curriculum adaptations to changing social and technological circumstances are slow compared to speedy technological and media development. This deficiency of the formal educational system is partly compensated by projects, activities and courses delivered by NGOs or other service providers, that primary schools can cooperate with to deliver up-to-date knowledge on media related topics (like safety on internet, film education etc.) to their pupils or in some cases also parents and teachers. However, not all schools in Slovenia engage in such activities. Especially in more rural areas, such cooperation with outside sources of knowledge on media is rare.

Parents' activities related to their children's habits start to change when their children reach a certain age. The parents of children aged 7 to 12 (first and second tirade of primary school) are less present when their children use media compared to preschool period. They still set rules and restrictions regarding the content which their children can watch (mean 4.48 on a 1-5 scale) and they do talk to their children about media content (mean 4.02 on a 1-5 scale) (Rek and Brumat Milanovski, 2016b, p. 29). A majority of the parents stated that they set rules and restrictions about the use of media content, that includes violence, cursing and 'bad language', nudity and contents related to sexuality; and they also discuss such content with children when they are exposed to it (mean 4.08 on a 1-5 scale). Only 11.6% of children aged 7 to 12 have their own social media profile, where they post information and photos of themselves, friends, family and thoughts on activities they are engaged in. A vast majority of children (88.4%) in this period are not actively engaged in posting information and interacting through their own profile on social media. This could explain why parents stated that they discuss inappropriate content which their children have seen in media more often (mean 4.08 on a 1-5 scale) than compared to discussing topics related to posting their own information on the

internet (mean 3.6 on a 1-5 scale). A relatively small number of parents stated that they check the history of webpages visited by their children, when using the internet (mean 2.6 on a 1-5 scale) or use services and apps for parental control intended either for television or internet (mean 3.2 on a 1-5 scale). With the growing age of children, parents become more relaxed in their restricting of media content to children's programmes, increasingly allowing a degree of autonomy in terms of their children's media choices.

Teaching digital natives to become media literate young adults

The role of parents and family in guiding children in their media use and reflection on media content is emphasized in childhood. As the child moves into adolescence the significance of peer groups increases. Peer relations become more autonomous of adult guidance and supervision (Kiuru et al., 2007). Individuals in this age period are particularly concerned about other people's opinions and their own popularity. Adolescents belonging to the same peer group closely resemble each other in terms of their behaviour. Their behaviour is strongly influenced by the attitudes of peers and dominant group norms, which can either encourage or discourage certain activities and attitudes (Kiuru, 2008). In Slovenia there is no research focusing on various properties of peer groups pertaining to the media literacy competences of adolescences. In terms of adolescence, understanding the mechanisms of peer acceptance or rejection, the dynamics of friendship relations, their roots in existing social and cultural circumstances and their effects on media choices, reception and interpretation processes, remains a task for future exploration.

School provides an important context for adolescents and youth. In high school, the information students are exposed to can have direct effects on their thoughts, ideas, and actions. Teachers in high schools can provide students with competences they need to manage in a media-saturated environment. They can develop students' skills of reading, critically assessment and their creation of a wide range of message forms, especially pertaining to image-based digital media. Teachers may also contextualise behavioural evaluation and action in

relation to media messaging, which student either are or choose to be exposed to.

In Slovene high schools there is no specific subject dealing with media education, one that focuses on the development of media literacy competences. However, specific aspects of media-related topics are an integral part of syllabus of various subjects covering either linguistic, social or psychological fields of knowledge, especially in general types of high schools called Gymnasiums (according to the data provided by the Statistical Office of the Republic of Slovenia, 27% of the secondary school population were enrolled in such programmes in the school year of 2017/18). Students are encouraged to practice critical thinking, reading, the observation of media texts and their critical assessment. Students should also reflect on media texts within the framework of their own as well as broader social and cultural values. They learn about the basic claims of media effect theories, discuss topics related to media and violence, and gain a basic understanding about the impact of media constructed representations on perceptions of reality. They also discuss mechanisms for the functioning of the media industry and media production. Compared to the Gymnasium, media education topics are far less a part of the educational processes in vocational or technical high schools, with the exception of high schools providing training for employment in mediasectors. One of problems in providing media education in vocational programmes is the reduction of media education to a form of technical training, wherein the 'critical' dimension of media theory is lost (Frau-Meigs, 2006, p. 15). Even in programmes in general high school, where critical dimension of media theory is integrated in curriculum, the actual media education implementation lacks this very important dimension of media education (Erjavec, 2009a; Dolničar in Nadoh, 2004; Vovk, 2014). As in preschool and primary education, the actual implementation of media education in the classroom depends on teachers' choices and competences and their knowledge of media related topics. This is interesting, as these same teachers have not been educated or trained in Media Studies, but in other fields. Teachers in high schools expressed their need for formal and permanent training on delivering media education to their students, especially in developing critical analyses of media texts and training on the production and integrational elements of popular culture in pedagogical processes (Vovk, 2014). Permanent

trainings, adapted to a rapidly changing technological and cultural media landscape, as well as the use of teaching materials that would equip teachers with a knowledge and skill to deliver a relevant media education, are a very important but a missing item at all levels of the Slovene educational system. Particularly in high schools, where media education topics are dispersed across curriculum, an old issue of coordination across several subject matters and across different subjects is still a major challenge in the actual implementation of media education. 'An issue that is every teachers' responsibility can quickly become nobody's responsibility' (Frau-Meigs, 2006, p. 13).

The past decade has seen a significant increase in projects, workshops, trainings, events, mobility opportunities designed by various stakeholders of civil society as well as media producers, aiming to raise awareness and provide media literacy competences amongst young people. They vary on the scope of competences they provide, ranging from very specific competences, like developing skills in photography, story-telling, journalism, film production etc. to raising awareness about safety and privacy issues on the internet, or skills, that help build resilience to negative phenomena, produced by the media landscape, like disinformation, hate speech or fake news, empowering youth to make informed decisions and take an active role in a society, either in political processes as active citizens or economical processes as conscious consumers. Many of these projects are delivered by trained professionals in mediarelated topics, address current topics and issues and are well adapted to the fast changes in media landscape. They address relevant social issues dynamically arising with the fast technological advancements. However, these projects usually have a very short life-span, and most of them reach only a small share of youth audiences, while the general youth population remains excluded from participating in these types of informal media education and projects.

Discussion

Media literacy entails the ability to access, analyse, and evaluate media in multiple forms and communicate competently within these forms (EC, 2011). 'Media education is the process of teaching and learning about media; media literacy is the outcome – the knowledge and skills learners acquire'

(Buckingham, 2003, p. 4). In Slovene society, the issue of media education and literacy is mainly centred around the issue of the ability to use various media. Cognitive, emotional and social competences related to media messages or the ability to create and focus on creative problem solving, which are also important competences of a media-literate person, are not strongly present in our discourse on the media. Accordingly, parents, when educating their children about the media, seem to focus more on the skills of how to use various media, and less on their children's reception, analysis, reflection and the evaluation of media texts (Rek and Kovačič, 2018, p. 40). The more parents communicate with their children about media messages and provide them with context, the more they participate in their child's media activities, using them to discuss the topic and influencing value judgments, the more educational value the media may hold. However, parents in Slovenia do not have strong opinions on either the positive or negative media effects on their children (learning opportunities, health, mood or speech development, etc.) (Rek and Milanovski Brumat, 2016 a, b). We assume that these same parents have failed to reflect on the whole range of complex issues that may be connected to their child's media habits.

School curricula on all levels of education include ideas pertaining to the active role of children and youth in learning how to use media. That said, age-appropriate teaching will help students to develop skills relating to the analysis of media codes, interpreting and evaluating diverse media meanings and messages, and develop an understanding of the constructive nature of media messages. By including explanations of how media work, children should be (age appropriately) introduced to the complex realms of the cultural and social implications of the mediated reality which they take part in on a daily basis. We could claim that experts who were creating curricula for a media education integrated all various aspects of media education needed to develop holistic media literacy competences. However, there is a gap between policy recommendations and the actual implementation of media education in classrooms. Teachers, in accordance with their professional capacity and autonomy, consider which goals from the curriculum will be included in teaching processes; they also determine both the timing and the manner of its conveyance.

They report on lack of their own skill in educating children on media and point to the need for formal and permanent teacher training in media education, especially in developing effective classroom learning strategies for critical analysis of media texts, as well as training on integrating elements of popular culture in pedagogical processes. They would also need contemporary teaching materials: up-to-date textbook or e-learning materials that would be available in Slovene language are virtually absent.

In the case of primary education, schools across the country differ in their capacity to deliver elective subjects dealing with media literacy and on all levels of education schools cooperation with outside stakeholders (media education related projects delivered by civil society or media producers), providing trainings for either children, teachers or parents, are incorporated to various degrees. Given these circumstances, we can conclude that not all children and young adults have equal access to media education in Slovenia's formal education system in Slovenia. Guidance on how to use, interpret and create media messages in their home environment is also highly dependant on factors like the level of their parents' education, the socioeconomic status of the family and the parents' media habits (Rek and Kovačič, 2018). Disadvantaged parents tend to be less involved in their children's media education for various economic and social reasons. Policies need to ensure that schools prioritise their links with parents and communities and improve their communication strategies to align school and parental efforts in media education. The more effective strategies target parents who are more difficult to reach and identify and encourage individuals from the same communities to mentor children (OECD, 2012). Building links with communities around schools, businesses and civic stakeholders, can also strengthen media-educational efforts.

Another broader matter in need of consideration is the actual ability of policy making processes and modern bureaucratic state systems to address liquid (Bauman, 2007) phenomena, including media reality. The dynamics of changing the syllabus or the use of official teaching materials in classrooms is just insufficient to enable timely addressing the learning needs of children and students. Formal and bureaucratic structures are rigid and slow, but stable, and can have a higher centralized impact on the population. We believe that the focus in formal education

systems should be on delivering more 'timeless' lessons, to include content and knowledge on media reality. Project-oriented organisations, teams and individuals are more flexible and can more easily adapt to the rapid changes taking place in the media landscape. Professionals working in such organisations are usually better equipped to provide lessons, contents, knowledge and skills aligned with current needs and developments in media landscape. We believe that media education would benefit from combining the qualities of both in providing up-to-date contents that would be relevant for children and young adults.

Finally, we should also acknowledge some shortcomings related to researching media literacy in Slovenia. We have already stated that in Slovene society the issue of media education is mainly centred around the issue of the ability to use various media. Much of our research efforts in this area have also followed this orientation. We lack a broader use of qualitative research methods that could provide us with a more in-depth insight into reception processes of media messages among children, their analysis, reflexion, and evaluation of media texts and the impacts of relations within families, school environments and peer-groups on behaviour of stakeholders in media education processes. Further studies, employing in-depth interviews or focus-group methodology, could provide more insights into these issues.

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**The Role of Libraries
in Media Education**

Introduction

As stated in *The Moscow Declaration on Media and Information Literacy* (2012) adopted, under the auspices of UNESCO and IFLA,¹ exactly thirty years after *The Grünwald Declaration on Media Education* (1982), ‘Media and information literate individuals can use diverse media, information sources and channels in their private, professional and public lives.’ Therefore, shaping these competences goes beyond the boundaries of formal school education and is combined with lifelong learning, in which an important role is played by libraries as modern institutions offering various forms of education in the informal system and librarians called educators more and more often, especially in Western countries.

However, the term ‘Media and Information Literacy – MIL’ was used for the first time in the Fez Declaration (2011), adopted during the First International MIL Forum, organised in Morocco (Fez, 15-17 Jun. 2011), in association with UNESCO, among other organisations. Since 2011, these two types of competence have been inseparable. In other words, there should be no considerations on media education without including information education.

¹ IFLA - International Federation of Library Associations and Institutions, <https://www.ifla.org> [Accessed 20. Nov. 2019].

The term is often translated into Polish, depending on the context, as 'Media and Information Competence' or 'Media and Information Education'. This is mainly due to translational semantic nuances. In the literal translation into Polish, the term 'literacy' refers to the basic ability to read and write. Which is why non-literal translations are used in Poland, and in several other countries, in more than one variant (Wiorogórska, 2014).

Media and information literacy – basic assumptions and definitions in the context of library education

The best-known definition of 'information literacy' dates back to 1989 and was authored by the American Library Association (ALA). According to this definition, 'to be information literate, a person must be able to recognise when information is needed and have the ability to locate, evaluate and use effectively the needed information'. After 26 years, this definition has been updated and supplemented with elements relevant to the use of modern information sources, so stating that 'information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning' (Association of College and Research Libraries, 2015). In the current wording, the description of information literacy is closer to the description of media literacy, defined, e.g. by M. Hoechsmann and S. Poyntz (2012, p. 1) as 'a set of competencies that enable us to interpret media text and institutions, to make media on our own, and to recognise and engage with the social and political influence of media in everyday life.' The same authors (2012, p. 14) define media education as an analysis of media content combined with the production of the same and add that this goes beyond the shaping of particular skills of the individual, but also is to serve the common good by enabling individuals to become engaged, active citizens, co-creators of the public sphere. In turn, W.J. Potter (2008) distinguishes seven skills shaped by media education. They are: analysis, evaluation, grouping, induction, deduction, synthesis and abstracting. He also adds that media education consists of three elements: personal locus, knowledge structures and skills. And individuals with extensive media literacy can see in a given message much more than those who are not media literate.

Visual literacy is also related to media and information education. This is worth mentioning because, firstly, it is a bridge between information and media literacy, secondly, the use of visual materials is an inseparable element of both media and information education, and thirdly, the standards for visual literacy have been developed by the aforementioned American Library Association (ALA), which may further support the role of libraries in the shaping of media literacy. In 2011, visual literacy was described in seven areas by the Association of College and Research Libraries as follows:

- (1) determining the nature and extent of the visual materials needed,
- (2) finding and accessing needed images and visual media effectively and efficiently,
- (3) interpreting and analysing the meanings of images and visual media,
- (4) evaluating images and their sources,
- (5) using images and visual media effectively,
- (6) designing and creating meaningful images and visual media,
- (7) understanding many of the ethical, legal, social, and economic issues surrounding the creation and use of images and visual media.

These considerations show that libraries have a good theoretical basis for conducting media and information education. In practice, such education has been taking place in libraries for many years, maybe not necessarily literally referred to as media or information education but containing elements of both. Importantly, it is an educational offer addressed largely to people who are no longer covered by formal education. Therefore, it prevents digital, media or information exclusion of these groups.

Media and information education is all embracing. If we assume that its basic elements are in the simplest terms both media analysis and media creation, then these two factors can have both formal and informal dimension. Education at school, covered by curricular requirements, is something different to improving one's professional competence in the workplace, and different to exchanging ideas and learning together in *makerspaces* or in 'third spaces', in Oldenburg's terminology (1989), which libraries undoubtedly belong to. If one of the tasks of media and

information education is empowering media-space users so that, equipped with critical thinking and analytical skills, they could become active citizens, engaged with their communities, then libraries are an ideal place to shape these competences. This is where libraries become places of education enshrining dialogue, where both the student and the librarian (educator) can learn by exchanging thoughts and ideas. This also arises from the shift in the educational paradigm. Currently, it is dominated, among others, by social learning; thanks to information technologies, the importance of group learning and the socio-personal perspective on learning has increased (Watson, 2010). Such concepts are easier to implement through informal education.

Libraries in Poland

Article 4 of the Library Act of 27 June 1997 describes the basic tasks of libraries. These include the collection, development, storage and protection of library materials, as well as user support, defined primarily as making collections available and conducting information activities. The legislator defines conducting educational or popularising activities as an optional task ('the library's tasks may also include'). Article 18 of the Act states that public libraries serve to meet the educational, cultural and information needs of the general public and participate in the dissemination of knowledge and culture.

It follows from the above that education is directly included in the tasks of libraries, so they have a mandate to conduct activities both supplementing the school core curriculum and those aimed at users who already are past their formal education.

There are thousands of libraries of different types in Poland (school, public, academic), with increasingly better infrastructure and qualified staff. For example – according to the latest CSO report (2018), there are 7,925 public libraries alone (as of the end of 2018). 65.4% of them operate in rural areas. This is the supply base and the potential to be drawn on when shaping national policy in the field of media and information education. In 2018, public libraries organised 271,100 cultural and educational events attended by a total of 7.1 million people. This is proof that a library is a stable partner and proven local organiser of events which are attractive to participants. It is a place of social inclusion that reduces social disadvantage and segregation. Simply

put, libraries make the opportunities more equal, particularly in the contexts of information overload, post-truth and fake news. The activities conducted by libraries for the development of media and educational competences, in the form of free discussion, the engagement of recipients in interaction with information and teamwork, adapting the message to different learning styles, proves that libraries are study spaces, able to adapt to the needs of each recipient (Montgomery and Miller, 2011).

Examples of Polish public library activities

For the purposes of this paper, I have chosen to discuss selected projects implemented in the years 2017–2019 in public libraries in: Gdańsk, Gdynia, Krakow, Lublin, Łódź, Olsztyn, Warsaw and Wrocław.² Library activities were classified according to three criteria: (1) training for librarians (similar to *trainings for trainers*); (2) offer for students; (3) offer for senior citizens. The focus was more on the general outlook of the activities of Polish public libraries in the field of media and information education, rather than on a detailed discussion of the undertakings of individual libraries (these can be found in their annual reports, available online).

Librarians (trainers)

The aforementioned Article 4 of the Library Act refers to instructional and methodical activities as being one of the possible tasks of a library. In practice, the structure of public voivodship libraries includes methodological and training departments whose task it is to train librarians from libraries reporting to the voivodship unit so that they can then introduce new developments to their place of work. These trainings relate to both changing legal regulations and cataloguing rules, as well as new forms of library didactics, including elements of media, digital or information literacy. This can entail training in making podcasts or media workshops for librarians, where ability to search and interpret media content is an important element (organised annually for library staff by H. Łopaciński Voivodship Public Library in Lublin). The Municipal Public Library in Wrocław referred to such trainings as 'The Competency'; and as part of its programme, the library offers the development of skills related to the use of new technologies or social media.

² A detailed list of libraries is included at the end of this paper.

Students

Students are a group of users of public libraries to whom the most extensive and systematised offer of group educational classes is addressed, in the form of lessons or library workshops. These classes focus primarily on the broadly understood promotion of reading, but recently there has been also an offer of media education. Based on competences to be developed, this offer can be divided into two types. The first one combines a deepening of information and digital competences – how to query online information resources, how to selectively choose searched-for information, how to create and publish internet content (vlogs, portals for sharing artistic creativity, portals for streaming games, creating animations), how to communicate online privately and publicly, or how to exist on the Internet, operate in social networks, while being safe on the web and consciously creating one's online image. The second type focuses on information and media competences – e.g. classes in journalism, showing how to create informational texts, or how to write blogs (implemented, among others, in Olsztyn). In Krakow and Wrocław workshops took place, which were devoted to the issues of credibility and manipulation, aimed at developing a critical sense with regard to sources of information or media news, encouraging the participants to reflect on their use of online information resources.

Senior citizens

Senior citizens are a group for which informal education has the most to offer. More than a decade ago, actions were initiated to eliminate the digital and social exclusion of seniors. The affiliated Universities of the Third Age immediately looked to develop digital, information and media competences amongst senior citizens. Various senior clubs were created, and city offices created on their portals platforms which brought together the entire offer of activities for this group.³ Libraries, in addition to the cultural offer, focused primarily on digital inclusion, offering IT support and many activities focused on searching for information on the Internet, setting up and operating an e-mail account, and digital security. With time, however, seniors became ready to deepen their technical computer skills with the creating and evaluating of digital content. For example, today libraries in the Lublin voivodship offer media technology training. In this

³ Cf. *Warszawa Senioralna*, <https://senioralna.um.warszawa.pl> [Accessed 20 Nov 2019].

context, it is worth highlighting the activities of the School of @ctive Senior Citizen⁴ in Małopolskie Voivodship, a programme which has been run by the Polish-German Society in Kraków and the Voivodship Public Library in Krakow for 12 years. The school offers intra-mural courses supplemented with e-learning on the popular Moodle platform. For example, the 'E-Culture' course comprehensively develops skills for the online searching of the cultural offer: from searching YouTube-like channels, using online TV or museum collections online, to purchasing electronic tickets for cultural events. Online courses not only complement and consolidate acquired knowledge, but also increase the digital skills of this group of users in a natural manner.

It is worth noting that the library educational offer for both students and seniors, in addition to elements of media, information and digital literacy, includes the development of so-called privacy literacy. These competences relate to the attitude of information users towards the collection, processing, distribution and use of personal data (Veghes et al., 2012); and in the context of the digital environment they can also be defined as a combination of actual or declarative ('know that') and procedural ('know how') knowledge of online privacy (Trepte et al., 2015).

The present and the future

Subsequent groups of users of Polish libraries are continuing to learn how to use information and media resources more effectively and critically. In fact, in May and June 2019, the Information Society Development Foundation (FRSI) organised a series of two-day trainings titled 'Click. Check. Understand' for the representatives of 25 libraries. The trainings, organised as part of the Library Development Program, an undertaking of the Polish-American Freedom Foundation, are free, but after they are completed, participants will conduct a minimum of two meetings on information education in their home library, based on the knowledge acquired during the trainings, using class scenarios provided by FRSI.

The Library Development Program implemented by FRSI is a very good example of cooperation between libraries and NGOs. One of many, because public libraries, as institutions subordinate to local government units, are often contractors of projects for which the local authorities have obtained grants. This is

⁴ Szkoła @ktywnego Seniora, <http://www.sas.tpnk.org.pl>
[Accessed 20 Nov 2019].

the case with the 'Me on the Internet' grant programme⁵, implemented by Legal Culture Foundation, whose goal, implemented through a series of trainings, looks to develop the competences necessary for efficient and safe functioning in the digital world. Libraries often carry out these trainings with the substantive support of the Foundation. So, libraries, as stated before, are proven partners for both institutions representing state bodies and NGOs.

Conclusion: Recommendations

Of course, we can wonder what other initiatives related to media and information education should be initiated in Poland, so that they are implemented at a higher level and in a more organised and systematic way. Below are a number of recommendations that, according to the author, could have a positive impact on the development of media and educational literacy in Poland and by inference elsewhere.

First of all, it is necessary to harmonise the terminology and definitions related to media education. Currently, it is evident that the representatives of various groupings (and it is not necessarily the ever-present division into theoreticians and practitioners in Poland) understand media literacy, its scope and activities, differently. This is also favoured by the project (fundraising) mindset rather than the long-term mindset – various groups adapt their ideas to the available grants. So, there is a lack of cross-sectoral cooperation. Meanwhile, more and more is being said about the aspect of sustainable development, because it is known that only such planning has a chance of real and long-term success. To sum up – it is necessary to activate various stakeholders and undertake cross-sectoral cooperation. Undoubtedly, it is also necessary to provide a stable source of funding for such an initiative.

Who should take the initiative in this regard? Since we are talking about *education*, it is worth establishing a team under the auspices of the Polish Ministry of National Education that would bring together specialists from various groups, including libraries. The word 'library' does not appear here unreasonably. The library activities for media and information education described in this paper have shown that this institution can be an equal educational partner, one that is able to reach all social groups.

⁵ Cf. *Ja w internecie* [grant programme], <https://jawinternecie.edu.pl> [Accessed 20 Nov 2019].

At the same time, it is worth emphasising here that librarians, despite their growing educational role, are not teachers. They are a separate group of educators. What's more, there are many librarians-researchers operating in international organisations, such as IFLA, who conduct research, following which the results are published by recognised publishers. So, librarians are not only professional but also research partners.

What could such a team do? In Poland, there is a need for guidelines or – even better – a framework for media education at various stages of education and – more broadly – life. The development of such nationwide standards could be achieved in two ways. Either using proven foreign experience or working out an original one. The first solution seems optimal; library environments have extensive experience in the successful adaptation of tried-and-tested patterns. In addition, in times of such technological progress and the 'flat world' (Friedman, 2006), there is no point in reinventing the wheel, especially since most of the developed standards or programmes are currently published under open licenses, even encouraging people to draw on them, with the possibility of modification.

Certainly, the role of a mediator could be played by UNESCO, which boasts a great deal of experience when it comes to organising so-called *Training for Trainers*. In the years 2008-2009 UNESCO coordinated a dozen or so workshops on information education in twelve countries on several continents. A decade after those trainings, maybe it would be worth considering another series of such trainings; and perhaps this time including *media and information literacy*.

(trans. MW)

A list of libraries whose activities related to media and information education are discussed in this paper:

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Municipal Public Library in Gdynia, <http://bibliotekagdynia.pl> [Accessed 12 Oct. 2019].
Voivodship Public Library in Krakow, <https://www.rajska.info> [Accessed 12 Oct. 2019].
Hieronim Łopaciński Voivodship Public Library in Lublin, <https://wbp.lublin.pl> [Accessed 12 Oct. 2019].
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1. Introduction – education and its future

Media education has been a hot topic for several decades, or for a time that would seem to have given room to real changes in the contemporary paradigm of universal education. However, such changes have never happened. Yes, media education has found its place in many enclaves of the universal education system, but these remain only enclaves. Meanwhile, communication techniques are creating a new social reality, without looking back at the pace of changes in education. It is worth stopping for a moment to ask a broader question about the place of education in the modern world, as well as its relationship with the technological changes characteristic of the world we live in. These changes are gathering apace; in any case such is the subjective feeling of many observers of social life. We are no longer talking about the media, as in the Grünwald Declaration, an international symposium of UNESCO in 1982 dedicated to media education, but about ‘new media’, or actually more and more new ‘new media’, about self-learning machines that are beginning to influence these media, about artificial neural networks whose internal processes can affect the circulation of information, and indirectly, but tangibly, also our image of the social world and our own decisions. Confusion

about the concept of truth, one of the basic concepts of individual and social existence, is not just a theoretical issue. The difficulty in distinguishing between truth and untruth has become commonplace for ordinary people: when making election decisions, but also more personal life choices, whether during daily shopping, when choosing a major at university, or, more broadly, when shaping one's own image of the world. The modernity of emancipated individuals is beginning to get bogged down in amorphous content constantly flowing from all around, uncontrolled, unchecked, or perhaps controlled by someone. And so, we may ask if there is a role for education here?

Fascination with the '4.0 Revolution', or the perspective of oncoming artificial intelligence, still makes us see the world around us in terms of continuous progress, although with greater fears than in the past. On a social level, this is an unusual revolution, it is not clear who has been set in motion and who has been stalled, without they even realising it. However, technological progress is a fact. The ability to encode information at a nanotechnological level has begun to point the way to next generations of faster and more efficient machines. And while we still have a reason to doubt whether artificial intelligence is a real prospect or just a metaphor and another exaggerated slogan to grab the attention of the public, the uninterrupted string of technological changes remains a fact affecting social relations in a quite real way. And social relations have long eluded earlier ideas about the continuous progress of humanity and about modernity, which on the one hand would ease the hardships of life, and on the other – would someday bring about a just social order; or at least a well-functioning system. The hardships of life were seemingly relaxed and re-emerged in new forms. The visions of a just order have blurred, and the system – like all systems – has started to generate more problems than it can solve. Education is immersed and enmeshed in such a reality today.

Contemporary education, especially universal, mass education (also higher education that has acquired mass characteristics), has stemmed from grand narratives of social progress and, as such, it is their inseparable heir. Mass education, accumulating many streams of social thought brought to life since the nineteenth century, contains a variety of messages that are not easy to reconcile: growing opportunities for the individual and equal

opportunities, going beyond existing restrictions and respecting the canon of heritage, individualised approaches and standardisation. Mass education is also an heir to the old idea of the need to fulfil in an exemplary fashion the tasks of the social machinery, animated, controlled and constantly reconstructed by the state, and it carries this burden, incapable of asking how far the idea of this machinery corresponds to the present reality.

In the nineteenth century, when mass education systems emerged, and in many countries also for many decades of the twentieth century, the primary objective was to educate future administration for the modern state. Education also harnessed a resource basis for technical development, creating a substructure for industrialisation. Regardless of the prevailing political system, mass education was intended to absorb technical progress and increase developmental opportunities. In the linear order of progress, mass education prepared the ground for the performance of relatively predictable social roles. It is worth noting that the education of the early modern era played a role in the generating of technological development. In this context, the need for a systemic approach to organisational changes was also realised. The period of transition of economic relations from craft to mass production found its clear reflection in education systems. Regardless of the ideology accompanying mechanisms for the exercising of power; and equally so for the emancipatory mission immanent to education, education systems were bunched into paired modes of mass industrial production, relating to both improvement and modification.

This clear link between economic growth, organisational and technological change, and broadly understood education systems, began to break down with the emergence of the recognition that industrial relations needed to be more flexible. The gradual departure from large-scale production towards an orientation that better recognised the expectations of smaller groups of recipients was a response to the economic crisis of the 1970s in the developed countries of the West, but it was also made possible by further technological changes. However, this was no longer reflected in the adequate transformations of education systems. On the one hand, they continued to depart from humanistic vision of man, on the other – they could not keep up with the accelerating technological progress. A false dichotomy emerged.

There are many indications relating to the ultrastability of education systems, confirmed, among others, by the state-sponsored idea of standardisation that promotes functional and technical approaches to educational tasks. But making the educational process more flexible, a process which unfolded over the course of several decades, was also hampered by complacent views on the benefits of the mass education systems of the West (or more broadly: the global North), which were held up as recommended patterns to the countries of the less developed South. The view of institutional isomorphism (Meyer et al., 1992) as a method of disseminating functional solutions all over the world, encompassed also education; but such approaches embraced petrification as opposed to the challenges of the future.

Stealthily, education became side-lined in the face of the economic and social changes that were taking place externally. It was no longer a 19th-century civilisational or emancipatory role, but the re-production of 'proven' schemes. The growing gap between traditional educational approaches and the rapidly changing social and economic realities was only taken seriously on an international scale in the 1990s.¹

Public debates and political discourse have not yet fully addressed the issue of deep sources of education being left behind in the race towards the future and the possibility of restoring education's agency in ongoing social processes. Here, however, there is room to emphasise an additional factor that is bound to spearhead the acceleration of educational processes – for example, by the changing attitudes of subsequent generations of young people and parents. Such is the wave of technological changes and the accompanying question of the relationship between universal education and (still fast) technological progress. It is also about the technological race that, like in the nineteenth century, is taking place internationally (Wojciuk, 2018), demanding the participation of a properly, but differently organised education. The thing is that the wave of new technologies is having

¹ The wide debate on the issue of unsatisfactory educational effects with growing expectations for formalised education systems, also in the most developed countries, has given rise to international studies on school achievements conducted by institutions such as IEA (e.g. TIMSS, PIRLS) and OECD (PISA, then also PIAAC). However, media education, as a field not easily subjected to methodologically correct measurements, even more internationally comparable ones, has not become the domain of such research. As a result, it has not been to the fore of wider debates.

and will continue to have a significant impact on the transformation of social and political relations, also through newer and newer media; touching upon the crucial aspect of the functioning of societies and political systems, and the sphere of social communication. Is there something to do for education here?

2. Media education as a part of the broader problem of education

The UNESCO message from January 1982 gave an early diagnosis of the broader problem of education. The Western world was not yet ready to draw sufficiently deep conclusions from this message. Today it is different, a lot has changed, and the pressure for further changes is incomparably greater. However, we are still operating within the classic education paradigm created in early modernity (sometimes called traditional and sometimes even canonical). It is worth taking a closer look at the Grünwald Declaration so as to take note of a universal element, and then ask about the features of modernity, which at first so fruitful, later hindered the reformulation of universal education.

The diagnosis contained in the Declaration referred to the perspective of a comprehensive solution to the issue of media education.

Media education will be most effective when parents, teachers, media personnel and decision-makers all acknowledge they have a role to play in developing greater critical awareness among listeners, viewers and readers. The greater integration of educational and communications systems would undoubtedly be an important step towards more effective education (Grünwald Declaration, 1982).

The authors of the declaration saw a need to develop a critical attitude of listeners, viewers and readers to the media, and wanted to harness this need by animating adequate processes involving all social stakeholders, including decision-makers. However, they referred to the perspective of 'integrating educational and communications systems', which could not have happened at the time, and also seems unlikely today. This is a trace of a rather mechanistic view pertaining to social processes, with the vision of an integrational 'system' in which all problems can be solved. Today we know that education and social communication have parted ways. And so, it is education that must respond to the

changes that the media are undergoing; and it is education that must gain a completely different perspective for incorporating media experiences into its own processes. The diagnosis of the main need, however, is a salient point, and well made. 'Critical awareness', being aware of what we receive through the media: a critical attitude to the message, an awareness of the contexts in which an information game takes place, keeping consciousness of mind are skills that already several dozen years ago, mainly under influence of the growing strength of electronic media, were signalled as factors of effective education. Today, the concept of critical thinking is most commonly used. It brings together the necessary competences that are useful in all kinds of communication relations, but also, going beyond the issue of the media, refers to the much broader issue of subjective being in the world. Thus, it touches upon the main problem of mass education. 'Too often the gap between the educational experience they [educational systems] offer and the real world in which people live is disturbingly wide' (ibid.). The timeliness of these words after almost 40 years is disturbing. The gap between educational experience and experience preparing for current challenges has not narrowed. The experience offered in educational systems is still extracted in isolation from real relationships. And therefore, questions should be asked about the deep causes of those beliefs that maintain the status of educational experience. In a clash with new media, its edifice crumbles. Parents are not always aware of this, whereas schools do not often take this into account; and yet, preparation for life is the responsibility of schools and families.

School and family are responsible for preparing a young person for life in the world of powerful images, words and sounds. Children and adults must be proficient in all these symbolic systems, and this will require a reassessment of educational priorities. Such reassessment may result in an integrated approach to teaching language and communication (ibid.).

Powerful images lie at the core of more and more dominating iconic culture, a culture, that young people are at home with, but whose symbolic power is not always realised by adults. In this respect, everyone needs reaching beyond the previously established horizons of meaning resulting in 'functional illiteracy'. Real

social relations, including power relations, to a large extent take place beyond those horizons, being different from those which existed in earlier educational systems. Whether such relations are better, it is not known, but that have real consequences for everyone, whether they are aware or unaware of the ongoing transformations. Therefore, already in 1982, appropriate media 'literacy' programmes were postulated, from pre-school education to university education and lifelong learning. Their goal involved critical thinking in relation to all kinds of message transfer – a task formulated universally.

At the time, the crucial place of the educational system was well recognised – the development of teachers' competences appropriate to the challenges – placing proper training as a key postulate:

develop training courses for teachers and intermediaries both to increase their knowledge and understanding of the media and train them in appropriate teaching methods, which would take into account the already considerable but fragmented acquaintance with media already possessed by many students (*ibid.*).

In principle, today there is no need to add anything to such a formulated task, nor can anything be excluded. Everything is up to date, even the diagnosis of the students' condition.

Why, then, is the education system, created to exist in modernity, changing so slowly and so inadequately to the expectations of the modern world? What allows the current status quo to persist despite the 'gap between educational experience and the real world' experienced and competently signalled since at least the early 1980s? Are these the universal features of educational systems, or is Polish education following a separate trajectory? Why do we have reasons to revisit the January 1982 assessment after nearly 40 years?

It is true that for Polish education this was a special time. Because of the previous long experience of the Iron Curtain, the period of the mass social 'Solidarity' movement (which was also marked by a revival in education and higher education), the experience of martial law and apathy of the 1980s, the universal diagnoses regarding education, especially those formulated in the context of the most advanced countries in the world, did not appeal to the imagination of of the Poles. This, of course, only

partly explains the belated dynamics of school reforms, frequent, but with some exceptions, not touching the heart of educational problems, staggering around for the next 30 years. However, it is worth recalling the accurate observations of a person significantly involved in the process of political transformation in education after 1989 in order to better understand the gravity of certain emotional states affecting perspectives on education. Anna Radziwiłł (1994, p. 34), a long-time history teacher, then deputy minister and adviser to subsequent governments since 1989, begins her assessment as follows:

Education in 1989 faced the same dilemmas as Poland, and what happened and did not happen in education in the following years largely reflected what happened and did not happen in all areas of Poland's political, social and economic life.

Radziwiłł notes the existence of conceptual barriers for the reform of education and states:

There was no clear awareness that the problems of the educational system's imperfections were mirrored in almost all countries of the world, that they were typical for the civilisation of the late twentieth century. So an attempt should be made to solve them, without euphoria and without frustration (Radziwiłł, 1994, p. 35).

The mixture of euphoria and frustration characterised the early years of the transformation, but this duality often returned over the course of the following decades and is still present today. Indeed, it also applies to media education. Anna Radziwiłł's observations were not limited to the general characteristics of the deficiencies in early reform ideas. They also touched upon the concrete issues which have continued to affect the educational system, one of them being: upbringing. The way in which children are reared also has an impact on the perspective of adequate inclusion in the educational process of media education, which, by the nature of the skills to be developed, is largely carried out in the sphere of nurturing. Developing communication skills, the responsible use and creation of information, but also pro-social behaviour, which are part of the postulated media, information and digital literacy (MIDEM, 2019) may not take place at school, if at the same time the school endeavours (informally) to avoid involvement in the sphere of upbringing. Let me remind you that

upbringing via schooling has been a field of ideological violence for a long time, strongly experienced by the majority of teachers, as well as many parents, which is why they eagerly agreed to waive this kind of school duties after 1989. 'At the same time, a legitimate postulate for making schools less ideological, unfortunately led schools and teachers having diminished responsibility in terms of the upbringing of young people in their care,' Anna Radziwiłł concludes (1994, p. 35). This pertained not only to the informal minimisation of the upbringing function of the school that is a burden of the past; but the empowering mindset often follows in the footsteps of previous experiences, which are of inglorious provenance. Ideological violence is easy to bring to the fore when formally looking to strengthen the upbringing role of the school. It is much more difficult to develop a different school culture in which there is room for crossing one's own horizons of meaning. However, it is only then that we can talk about shaping young people's ability to communicate with others, be it through the media or directly, and preferably both.

The ambivalent attitude to upbringing and the historically perpetuated burden of the lack of openness to the bottom-up approach in the sphere of upbringing in schools' relations with parents and the youth themselves is an additional point of resistance on the part of the school, to including media education in the school bloodstream. It overlaps with the above-mentioned civilisational tendencies, the effects of which in education began to be more clearly visible in the last decades of the twentieth century and also determined the impetus behind the Grünwald Declaration. They are more universal than some accepted approaches to upbringing. They go far beyond the issue of media education and even education itself, for which they form an overwhelming and inevitable context. They give rise to the general question which has been posed for a long time pertaining to the depletion of the modernity paradigm in the face of the transformation of the civilised world, taking place before our very eyes. Changes in the media and ways of communication are playing a significant role in this regard. In such a broad context, it is worth synthetically bring together three observations.

First of all, we should note that media pluralism in a broad sense is not an invention of recent years and decades, or even, as it sometimes seems, the effect of modernity, but 'a fact that

reaches back to early conditions of culture' (Sloterdijk, 2010, p. 5). Humanity's awareness of the coexistence of multiple levels of meaning, the need to see other people's horizons, broadening horizons, and thus also crossing their own horizons, the horizon of their own homes, was the cornerstone of the 'political world' (Held, 2012),² which for its very existence had to be pluralistic. The fact is, however, that mass education systems, set up many centuries later, were mainly aimed, at least in the early stages, at binding earlier subjects to the dominant ideology of rulers. The subsequent totalitarianisms of the twentieth century tried scrupulously to use this feature, but it had been encoded in education systems before. Pluralism in a school environment is therefore, contrary to the much deeper experience of culture, something relatively new; and schools are not sufficiently prepared for it. What is more, regardless of the attraction of ideological violence '[m]odernity has invented the loser. This figure which one meets halfway between yesterday's exploited and today's and tomorrow superfluous' (Sloterdijk, 2010, p. 40), an equivalent to an ancient slave. Superfluous people today are the spectre of the future, a reflection of artificial intelligence. Who they will be, and how they will exist, will depend on such things as their communication skills, their ability to cross their own horizon and perceive the horizons of others, and their openness to the immanent pluralism of the political world in which the game of the future is taking place.

Secondly, the question arises about the relationship between modernity and mass education, along with its general effects and costs. In the background there are also more fundamental questions: how come emancipatory modernity, freeing the individual from traditional social bonds, has led more and more clearly to 'finding oneself part of a mass' (Burszta, 2019, pp. 35-36), to increasing, not decreasing - as the idea of linear progress in modernity seemed to provide - the fear of an individual experience of freedom? How is it possible that today's 'masses' are a side-effect of the business model (*ibid.*); but also, more broadly, a response to the growing uncertainty of the future, an uncertainty that most modern methods can neither cultivate nor reduce to a calculable risk? Wojciech Burszta accurately quotes the view referring to

² Held develops the concept of Husserl's horizon by analysing the emergence of the political world and pluralism.

Ortega y Gasset that 'a mass becomes a mass precisely because of this need for security'. Educating the masses has always been conducive to their emancipation, however its effects appear to be somewhat ostensible today. In view of the impossibility of creating a 'global' ethos and the blurring of the old ethos of culture '[a] new, radical idea of society is born - a mass of people engaged in never-ending cultural wars' (ibid.), a kind of secondary tribalism. Of course, education is not the reason for these sharp divisions, but at the same time, it is not prepared to counteract them. Secondary tribalism goes hand in hand with functional illiteracy, which 'modern' education does not address well. The modern education was designed in early modernity for different purposes and circumstances, and now it does not know if it is allowed to move away from the previous project in order to focus its activities on completely new social tasks. It remains in earlier modes of operation, although it would seem that what is most important today, is self-evident and lies within reach. This task and the goal of today's education is to prepare people to cope with a rapidly changing reality that is increasingly difficult to predict. Meanwhile, the general effect of mass education is merely a support for the process of the emancipation of individuals by introducing them to a solid world of knowledge and skills, good for the times of stability. But the transition to universal education, which would also prepare for life in unstable times, is difficult due to the costs which mass education previously incurred.

What are the costs - this is the third observation. The social costs of modernity have undermined the foundations of universal education. The social environment of early modernity offered social bonds developed over centuries. Educational systems could largely draw on them. There was something to free oneself from, but it never occurred to anyone to question local ties or, even more so, intergenerational ties. However, subsequent generations - not education alone - have systematically worked to weaken social ties. The above-mentioned totalitarianisms have a stake in this, but so too did the market logic of economic development, which gradually spread to other segments of social life. In Poland, this was experienced abruptly after 1989, an un-freezing of stasis, which favoured extremely individualistic attitudes. In the aforementioned sphere of upbringing of the new generation, two mutually reinforcing tendencies overlapped:

the individualism of parental approaches and the withdrawal of school from their previous upbringing positions, having been stripped of a clear social mandate. The slogan of returning to 'normal' did not fill it with specific content and did not provide a basis for everyday practices. In this way, the social costs of modernisation after communism indirectly penetrated education in the form of a further weakening of social bonds. The schools, either with the willing consent of the more active parents, emphasised the individual development of the child in one way or another, or without asking parents for their opinion; making recourse to a typical, 'traditional', levelling approach to the student 'mass'.³ New technologies and new ways of communication have started to interfere with these processes.

Media education, like the sphere of upbringing, in which its most important achievements would inevitably be included, is an integral part of the broader problem currently encountered with education, and even more broadly, the problem encountered with modernity, which on the one hand continues to generate selective progress, and on the other is having to come to terms with the obsolete nature of previously adopted solutions. The obsolete nature of education is contained in the word 'system' along with its Luhmannian autopoietic tendency. Although the educational system does not correspond to reality and has largely lost its former civilisational mission, it endeavours to thrive in its paradigmatic sense. The educational system does not reflect the fact that it has evolved from the primary convictions about the nature of the human being, declared and practiced in 'pre-system' education. That said the educational imperative – not without a reason – has given in to technical and pragmatic requirements, trying to keep up with the changes in the world. Meanwhile, both aspects of human education obtain, but modern education has not managed to balance both of these perspectives. Consequently, education has become removed from the social world, co-determined by newer generations of technological development, today mostly communication technologies. The problem with education is the difficulty to formulate its new social tasks in a form sufficiently robust to make it appear appealing beyond the notion of the 'emancipated egoism' (Sloterdijk, 2010,

³ Of course, there have always been schools that did not give in to either trend, but they have remained exceptions to the rule.

p. 26) of modernity. It is not enough for education to be a postulated project, but it must consider actual social forces. Perhaps the diagnosis: from masses to masses, has given grounds for this, addressing the general effect and cost of modern education, to apparent emancipation or its fragile foundations, and anti-social being in the mass.

3. Social deficit: Is technology an opportunity for education?

Emancipated egoism does not populate all modernity; there is also room for opposing tendencies, but the former is strong enough to lead to a social deficit, undermining the foundations of modernity itself. In education, this social deficit is manifested in various forms. The problem is that, at best, the ideal of individual development and self-realisation applies, and although it is rarely implemented, it represents a signpost for educational aspirations and expectations. Such expectations, especially among parents, favour a petrification of the system. In this respect, mass education systems have always been shaped quite unilaterally. Education is not aimed at recreating, generating or experiencing social bonds. In early modernity, this was not an issue, there was no social deficit, but also the reproduction of bonds to some extent arose from the spontaneous involvement of the main actors, without the need for coordinating and 'standardising' these types of educational activities. Therefore, the structured tasks of mass education could have been focused on gradual technical coordination of activities. In this sense, standardisation could have been perceived as a lever of progress, and this would not have violated the balance between new developmental tasks and social needs.

Today, we are wondering whether new technologies atomise people or, conversely, create new social bonds. It goes both ways, and indeed technology itself is always pulling in opposite directions. It never ceases to be an ordinary tool in the hands of people, their augmented intelligence, which can be used for various purposes. Treating modernity and the generated 'development' as a one-way traffic always leads to the choice of the wrong path.

Education, as well as modernity itself, easily succumbs to the simplified illusion of the explicitness of the modernitas message. Meanwhile, we cannot and do not need to escape from its ambivalence (Berman, 1982), from the duality of each message and the

effects of each action. The duality of new media is nothing new; nor should it be surprising. An integral understanding of modernity cannot do without its dark sides. 'Everything is burdened with its opposite', as Agata Bielik-Robson emphasised (2006, p. XII), citing Berman. 'Modernity emancipated and uprooted at the same time' (Bielik-Robson, 2006, p. XIX), it empowered and alienated. A one-sided emphasis on formal rationality brings about 'a sad Kantian-Weberian routine' (*ibid.*, p. XXIII), wording which in relation to education speaks vividly to the imagination. The routine of education is firmly embedded in the routine activities of unilaterally understood modernity, with its formal rationality, literal reading of the law, bureaucratic mechanism or standardisation as not so much a lever of progress as of control.

Meanwhile, as Marshall Berman argues, modernisation has two faces, one of adventure and the other of routine; in the first one there is authenticity, and in the second – dispassion and mechanisation (*ibid.*, p. XXIX). But we cannot be of the illusion that we can bring out one and destroy the other. Such attempts have resulted in the confusing mix of euphoria and frustration mentioned by Anna Radziwiłł. Because in the field of education, concepts and actions unilaterally referring to such notions are constantly clashing, wherein an 'opposite' is considered a source of risk. Meanwhile, it is the imbalance between them that is risky.

Modernity, along with the education for all it created, promised a recipe for continuous success, but this promise was based on a one-sided perception of modernity, definitely more in the categories of Weberian formal rationality than in the categories of 'adventure' recalled by Berman, and therefore uncertainty and risk. Meanwhile, new opportunities, so characteristic of the modern times, resulting from the constant crossing of borders are eventually transformed from possibilities into imperatives. If you can do something, it must be done in such a way that your initiative is not overtaken or encroached upon. Berman reminds us that the durability of experience-ambivalence is an indispensable feature of modernity; modernity does not release us from the need for 'crossing and finding borders at the same time' (*ibid.*, p. XXX). Let me add that this is not a specific feature of modernity itself, but rather a feature of human existence not related to any specific historical period. But with modernity people began to succumb to the illusion of freeing themselves from the

inevitable uncertainty of their existence. The restoration of the ambivalence and uncertainty of our times can become a new assumption for the educational paradigm; and for education this is not something foreign, although it has not been systemically established either. Dream of 're-empowering an alienated human being' (ibid., p. IX) will remain closed in its one-sidedness if it is not filled with a vivid experience of social bonds. This is now the main task of education. New media, like all technology, can promote both empowerment and reification. Associating them with direct social relations increases the chances of the former.

The place of education in the modern world is different than it was at the dawn of the system of the widespread 'promotion of literacy' in the nineteenth century and the first half of the twentieth, it also has other social tasks to fulfil. As already mentioned, it is to foster a preparation for a life of uncertainty and changeability, and to achieve this instead of focusing on 'individualisation' or, worse, operating on a levelled student 'mass', it must convey an experience of authentic, real social ties; and it must intentionally contribute to the reconstruction of social bonds.

One might think that such tasks are utopian, that education is defenceless today under the pressure of 'emancipated egoism'. One can partially agree with this. Opposing individualistic pressure requires either the individual resistance of teachers to various external factors, or it may entail a completely different school organisation and culture, which in turn sets out high demands on its leaders. This is happening at the microscale, but without proper systemic support it cannot occur universally.

However, late modernity also provides other experiences that make the restoration of the meaning of social relations more realistic. There are more and more of them. Science, art and technology require the building of teams with a very unusual composition, equipped with an ability to cooperate and communicate well, as well as the abovementioned ability to cross one's own horizon of meanings, including one's own discipline, and learned conduct. Interesting search directions can be found with teams of artists and scientists, 'art [...] is structurally and conceptually integrated with scientific research' (Kluszczyński, 2019, p. 143).

For a long time in the social sciences, one of the main concepts used to explain the dynamics of actions is the category of social networks. Cognitive theories go further and consider such

concepts as distributed cognition or extended mind, which indicate if not the dispersion of causative subjectivity, then at least the key importance of relationships between subjects, between people, and also between people and objects. More and more efficient technical devices 'augment' our human intelligence and provide new stimuli; and by using them much greater cognitive capabilities can be achieved. This does not diminish the importance of relationships with other people, in the cooperation between people and devices new quality can be achieved. Artists have long been aware of this, seeking new quality in interdisciplinary teams. The same applies to the most dynamic scientific disciplines.

Perhaps cognitive theories or artistic tendencies are not yet grounded well enough to be the foundation of a large and by nature a somewhat sluggish organism of education. But these trends are also present in less radical environments that also strive to achieve new quality. A well-known example is the IT environment together with its social deficit noted some time ago. This field used to belong to skilful IT specialists-individualists, but not anymore. Serious software is too big an undertaking to be carried out by a single person. Team communication, flexibility of relationships, a non-hierarchical way of cooperation are the features of good IT teams that appreciate the importance of relationships and social ties. The IT environment is symptomatic because it directly contributes to the emergence of new communication technologies. It is not without reason that IT specialists began to perceive a broad issue of social communication as a part of their own field of interest; they were also able to overcome social deficit in their conduct. Also, in most other industries, teamwork is one of the most-valued skills. So why is teamwork, as a way of conducting cognitive processes, building knowledge and shaping skills, so hard to establish in education?

Education, if it is to regain its place in the game for the future, must abandon its unjustified habit of unilateral perception of the civilisational processes, including its way of understanding scientific knowledge and science itself. It must give up the sense of 'certainty' that shaped it and accept the uncertainty that arises from the need to constantly combine the 'modernisation of routine' and the 'modernisation of adventure'. In fact, it is not about 'modernism' as such, but about the inalienable ambivalence of

routine and adventure, the hardships of everyday individual decisions at the micro-social level, constantly seeking a balance between spontaneous action and certain standards of conduct. Those who work directly with young people know perfectly well what the problem is, but they are also aware of the weak support from the system. The latter persistently maintains the position of restoring an illusory 'certainty'.

The game for the future also has its international aspect. Those societies that will more efficiently open their education systems to overcome the social deficit, to include spontaneous social relations in education processes, will also achieve a better international position on a macro scale, just as the massification of education was such a lever in the nineteenth and twentieth centuries. However, the international effect can only be worked out on a micro scale, in the everyday relations of teachers and learners. The game for the future is taking place on a microscale – as long as it is not inhibited by macro-system conditions.

Media education is an irresistible field which entails the seeking of a new balance between adventure and routine. Visual literacy (Starakiewicz, 2019, pp. 82-89) today is an indispensable factor in the ability to interact and, more broadly, interpret the world. Without it, we fall into functional illiteracy. The message contained in the image or the imaging of the message accompany most social activities. The immersion of young people – but also gradually the generation of parents – in new media is at the same time a challenge, a necessity and an opportunity for education. This is a factor forcing a change in the universal education paradigm, a departure from the illusory certainty based on 'traditionally modern' control practices, the formal rationality contained in the bureaucratic mechanism. Media education, as shown, is an integral part of education as a whole, along with its indispensable role of shaping attitudes and induce activities. It is not an easy, but all in all graceful field of transcending one's own cognitive horizon. Technical devices of ever-newer new media have been left to atomised individuals; even more, an amorphous 'mass' will begin to dominate, imperceptibly taking subjectivity away. The same devices included in a network of social connections and in ever-newer team activities expand the intelligence of individuals and give them a sense of agency. Contemporary social stratification has created these two opposing scenarios for

the use of new technologies. The first is surrounded by the spectre of superfluous people, the second restores the importance of individual development, experienced and shared with others. The former foregrounds the illusory possibilities of the modern world, along with its gadgets. The latter acquires characteristics of collective intelligence (Kluszczyński, 2014, p. 198) and leads the networked individuals to further discoveries, while on a macro scale, it builds a competitive advantage.

Overcoming the gap between the traditional educational experience and today's world, citing the Grünwald Declaration, consists in building relationships with other people, educating through relationships, and the inclusion of new media in the conscious creation of social bonds and team activities. The goal is much deeper than just using new media in the educational process, although it creates an opportunity for education to change its basic paradigm of action. 'Rather, the goal is to develop criticism to all types of messages that reach us, coupled with a willingness and ability to ask questions' (Starakiewicz, 2019, p. 89). It is the willingness and ability to ask questions, including the posing of questions without answers, questions from learners – not just questions asked by teachers – that is the missing link. The presence and validity of such questions in education is the basis for creating a new paradigm. The vivid experience of openness to one's own questions, listening to others and teamwork depend on educational work aimed at crossing horizons and being open to the horizons of the others.

(trans. MW)

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Annex
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Introduction

New technologies and digital media entail not only universal access to information, ever newer devices and faster Internet access, but also related to communication and social processes, as well as life and ethical choices.¹ All over the world, along with their development, unprecedented opportunities have been presented, but also commensurate challenges have been posed in almost all areas of social life, largely regarding education and including entire education systems. Facing up to these opportunities and challenges requires, first and foremost, the development of awareness and competences amongst everyone concerned, and especially those who influence the awareness and competences of others. This group undoubtedly includes teachers and all those whose decisions shape both the content and quality of education at various levels of power and impact. It is worth emphasising here that in this regard a lot has been done, also in Poland, since the issues of education focused on developing media, information and digital literacy have begun to be more widely noticed.

However, due to the continuous, rapid development of information and communication technologies and digital media, and the

¹ Deuze, M. (2011). *Media Life, Media, Culture & Society*, 33(1). Available at: <https://journals.sagepub.com/toc/mcsa/33/1>

dynamics of their impact on societies – probably for a long time the belief that a lot remains to be done will be stronger than satisfaction with achievements.

The dominant mindset in our education system about preparing young generations to live in the modern world still places insufficient emphasis on shaping media, information and digital literacy. This is especially evident when it comes to a critical understanding of the media environment, of the cultural, economic and technological factors affecting the use of media, of the rules that govern the world of new media, and the way in which we use them for our own expression. It can also be perceived when the community and participative nature of digital media is ignored as well as the relationship between media, information and digital literacy on one hand, and creativity and the ability to understand and respect cultural diversity on the other; and finally, when an urgent need of today is neglected: to develop critical thinking skills – not only in relation to media messages or sources, but also to the technology itself. It is true that the general provisions of the core curriculum emphasise that the teacher should devote a great deal of attention to media education, and one of the tasks of the school is to prepare students: 'To make informed and responsible choices when using the resources available online, critical information analysis, safe surfing on the Net, including establishing and maintaining mutually respectful relationships with other network users.'

However, teachers do not receive sufficient didactic support to enable them to conduct media education in schools, which makes the implementation of the assumed curriculum a challenge.

Provisions relating to various elements of media, information and digital literacy can also be found in the detailed requirements relating in particular to subjects such as: the Polish language and culture, social studies, computer science, culture studies, history, safety education or ethics. However, they are not highlighted enough – with the exception of computer science. Therefore, initiatives that provide real support for teachers in the field of media education are all the more important.

The implementation of the specific requirements in the core curriculum for digital literacy should as broadly as possible take into account social and cultural contexts, including the reality of the increasingly 'mediatised' everyday life of young people.

Difficulties in introducing media, information and digital education (MIDE) at school have also arisen from the fact that many definitions and concepts in this field have partly overlapping connotations. In the Media, Information and Digital Education Model (MIDEM), we have endeavoured to treat the issue of media, information and digital literacy in a coherent and comprehensive way. We look to organise the complex reality of functional competencies related to the world of media and digital technologies, and propose actions that can be quickly incorporated into the everyday practice of a Polish school.

Therefore, we postulate that with significant expansion and the visibility of issues related to the understanding, selection and creation of information, broadly understood digital competences (that is media, information and digital ones together) should be one of the foundations for the organising and building of curricular coherence on the level of core curricula and their implementation, as well as – more comprehensively – one of the priorities for education in contemporary Poland. This is all the more necessary because in many EU documents (which are discussed below) and in strategic national documents, such as Integrated Skills Strategy 2030 these skills are considered indispensable for meeting the challenge of nowadays.

Who are we doing it for?

We have prepared the Media, Information and Digital Education Model (MIDEM) mainly for teachers, but also for all those engaged in formal education: school principals, curators, employees of teacher training centres and managing authorities. The detailed professional and personal competences proposed in this document can also be used (which we encourage) by all entities which organise education and training for teachers, including cultural institutions. We would like for MIDEM solutions to inspire them and become a basis for creating new programme and training proposals on this topic.

MIDEM can also be used by anyone interested in developing the competences of people teaching others, both in the areas of formal, non-formal and informal education, i.e. representatives of HEIs, libraries and cultural institutions, NGOs, informal groups and parents. Each time this will require, of course, an informed selection of competences and possible supplementation

with additional skills, as well as the development of ways to build them up. The set of personal competences is particularly suitable for a wide range of applications in many different professional and educational contexts.

At this point it is worth emphasising the role of public and school libraries in the process of media, information and digital education. Libraries are institutions that supplement formal education and offer the shaping of MID (Media, Information, and Digital) literacy for user groups who have completed their formal education. Often, besides home and work, public libraries are called the 'third places' of socialisation, education, and personal development. They play an important role in non-formal and informal education, have extensive infrastructure and qualified staff, and their offer is directed to organised school groups as well as entire local communities. They have the potential to become places of social inclusion and mediate collective learning and digital dialogue. They are looking to harness and hone MID literacy, and at the same time help users become active citizens in their communities. School libraries, on the other hand, should act as media, information and digital centres supporting the educational process and the work of teachers and students.

The indirect recipients of the model are also government institutions involved in education, teacher training, science, education, culture, digitisation or market (especially the labour market) development and entrepreneurship. One of the problems for the Polish school system and wider Polish society is that various useful and legitimate initiatives in the field of new media and technology have not been properly interlinked. Therefore, the authorities and institutions responsible for them do not cooperate and communicate sufficiently. At the time of preparing this model, the Ministry of Digital Affairs has been working on introducing a comprehensive digital competence development programme. At the same time, at the request of the Ministry of National Education, the Educational Research Institute (IBE) has carried out work on an Integrated Qualifications System and has drawn up an Integrated Skills Strategy as part of Poland's partnership with the Organisation for Economic Cooperation and Development (OECD). In turn, the Committee of Pedagogical Sciences of the Polish Academy of Sciences has been working on the principles of educating future teachers in the field of broadly

understood digital literacy. We hope that our model will prove useful for schools entering the National Education Network (OSE) launched in 2018 and currently being developed by a national research institute NASK. We want to create a perspective that is complementary and not competitive in relation to the above-mentioned initiatives.

We consider the comprehensive development of media, information, and digital competencies in the education of children and youth, as well as teachers and all educators, as a necessary and key element of the success of the development strategies currently being prepared in Poland.

What do we want to achieve?

The model that we have developed assumes and promotes a broad understanding of media, information, and digital literacy. Its purpose is not to develop the technical skills, e.g. enabling using a computer, projector or smartphone (although they are necessary), but mainly to support a critical understanding of the media and the entire media environment in response to the technological changes taking place in today's world and the resultant social and cultural changes. Key here is the ability to use technology and the media in an informed, critical, mature, active, and creative way, as well as to develop the competencies necessary to acquire knowledge independently and jointly with others, and to use the media and new information and communication technologies in social, cultural and professional life. We completely agree with Michał Klichowski² and other experts, that teachers require a new model of knowledge and competences that will simultaneously take into account the need for substantial knowledge, pedagogical competences – and media, information and digital literacy. MIDEM is tailored to help effectively include the latter group of competences in the education of teachers.

We indicate specific actions that should be taken in schools and in decision-making centres and institutions responsible for education, such as local governments and HEIs.

However, primarily, we want the model we have created to be a useful tool used by teachers, facilitating their professional

² Klichowski, M. (2015). Model TPACK. *O potrzebie technopedagogicznego podejścia do wiedzy i kompetencji nauczycieli*. In: J. Pyżalski ed., *Nauczyciel w ponowoczesnym świecie. Od założeń teoretycznych do rozwoju kompetencji*. Łódź: theQ studio, p. 86.

development and daily work in a best suited way to their capabilities – to guide them in an exemplary fashion.

We have no wish for MID education to be a lesson in the form of a multimedia presentation or the launching a film from the Internet, but rather a joint search for the best ways to use the possibilities opened up by the technology- and media-mediated communication. We desire for MID education to harness critical conversation about the role of new technologies and the media in our lives.

The model presented here may need to be developed in the course of further work, especially in the sphere of didactic solutions that can be quickly employed in Polish schools and other educational institutions. This pertains to both the building of long-term teaching strategies (e.g. using media, information, and digital competencies in inclusive education), in-class (or other groups of learners) work formats that have the greatest development potential (e.g. team educational projects with a strong MID component) as well as specific tools or their categories, which somehow induce the development of MID literacy (e.g. applications for creating texts and messages in social media, teamwork or creating educational games), and encourage self-assessment for this type of competence.

We are convinced that when working on strategies and methodology, international models should be used, including UNESCO publications and materials prepared by the European Union experts, such as the European Digital Competence Framework for Citizens³ or DigiCompEdu⁴, which are focused precisely on education. At the same time, it is worth referring to the rich experience of Polish institutions and organisations, which for years have been dealing with the development of various competences: IT (including programming and computational thinking); informational (including critical information assessment); and media (including reception and creation of messages). The list of related materials and projects is so long that they should be included in a separate study. In the final part of the book, we have included only a dozen or so selected examples, hoping that in the near future an extensive library will be created, including all interesting and valuable initiatives (e.g.

³ <https://ec.europa.eu/social/main.jsp?catId=1315&langId=en>

⁴ <https://ec.europa.eu/jrc/en/digcompedu>

as part of one of the Operational Programme Digital Poland (POPC) programmes or on the OSE platform).

The system, under which media, information and digital literacy is developed in Poland, should not be centralised, but rather distributed among many different entities (institutions, organisations, etc.) at various levels and in different educational contexts. This, of course, does not exclude the need to diagnose ‘white spots’ on the map of competences, as well as the central initiation of programmes for their creation in schools and other institutions, to encompass organisational and financial support and the monitoring of this same process. It is worth recalling here the diagnosis and documents developed by central institutions, including the Framework Catalogue of Digital Competences by the Ministry of Digital Affairs (2016).⁵ We consider its functional and relational approach to digital literacy to be exceptional, and the list of competencies needed for those involved in education was created on the basis of this approach. MIDEEM also refers to an earlier study of the Modern Poland Foundation and the National Audiovisual Institute: Catalogue of Media, Information and Digital Literacy (2014).⁶ The assumption of media convergence and competency adopted in this instance constitutes the structural framework of the presented model.

Elsewhere in this publication, we formulated initial postulates addressed to several major stakeholders responsible for the development of MID literacy in Poland. The main recommendation is common to everyone (including the authors of this publication): we urgently need to leave the ‘silo’ mindset of separate sectors and programmes and turn to discovering and building connections between them. Indeed, the connectivist paradigm is best suited to the development of media, information, and digital literacy, because it is only in the process of communication that institutions, experts and users together create knowledge and valuable practice. A platform for systematic exchange of information and experience between all institutions involved in building modern Media, Information, and Digital Education will be conducive to the same goal. It should operate both online and in the form of face-to-face meetings of decision-makers, experts

⁵ <https://mc.bip.gov.pl/rok-2015/ramowy-katalog-kompetencji-cyfrowych.html>

⁶ http://edukacjamedialna.edu.pl/media/chunks/attachment/Katalog_kompetencji_medialnych_2014.pdf

and practitioners. Attempts at join-up thinking and action have already been taken - by such integrators as: Broad Agreement on Digital Skills in Poland, an informal Coalition of Media and Digital Education, conferences and meetings organised by the Polish Information Processing Society, the 'Cities on the Internet' Association, the Orange Foundation, the Information Society Development Foundation, NASK and the Empowering Children Foundation and many other social organisations (we cannot list all of them), as well as HEIs and even international corporations operating on the market of new technologies and media. The parent organisations of the authors of this publication have also taken such initiatives: The Polish Association for Media Education, Polish National Commission for UNESCO, National Film Archive - Audiovisual Institute, Modern Poland Foundation, Digital Dialog Association, Centre for Civic Education and The School with Class Foundation. We believe that such activities should continue and with re-doubled efforts so as to truly forge 'digital dialogue' in Poland.

Therefore, we treat this material as an introduction to the further work of all stakeholders, especially those who deal with education - formal, but also non-formal and informal. It does not contain, of course, all the elements that a complete MID literacy development model should be equipped with. We hope that in the near future, studies on various skill development strategies shall emerge, wherein the implementation of MIDEM shall prove useful and inspire practical activities involving various sectors, raising the level of 'digital+' competence in the whole of society.

MIDEM can be further developed, e.g. with tools enabling self-assessment of competencies, and supplemented, e.g. with further best practices and inspirations from all over Poland - and the world - allowing a better answer to the question of what works and what is less effective. We want to widely disseminate MIDEM in cooperation with public, social and private organisations dealing with formal, non-formal and informal education. We also count on the cooperation of the media interested in propagating competences necessary for effective and mature functioning in various areas of life in the digital age.

What will teachers gain from MIDEEM?

Teachers will learn what individual and team competencies they can develop and how to achieve this on a step-by-step basis. We point to practical activities that can easily be applied in school, the classroom, or in extra-curricular classes, so that together with other teachers and students, media, information and digital literacy can be effectively acquired or honed. At this point it is worth emphasising that our approach is not about a one-sided message from the teacher to the students. On the contrary, this approach represents the creating of a 'community of practice and knowledge' together with students, i.e. mutual learning from each other, a joint search for the best forms of communication both at school and outside, useful educational apps or sources of information and knowledge so as to facilitate learning, collaboration and work in either the classroom or in extracurricular classes.

In the presented model, we see on the one hand a chance to strengthen the role of the teacher as a guide in the world of information overload, and on the other hand - the role of the student as an expert in the field of educational and life needs.

As the Polish 2019 EU KIDS online research project illustrated,⁷ Polish teachers rarely talk to students about what young people do in the digital world: what makes them tick, or what amuses or worries them. As a result, an artificial barrier is created between the online and offline world. Teachers can and must study together with students, sometimes even profiting from their hints or technical support. New media and technologies are at the same time a platform that allows us to break the prevailing one-way and hierarchical knowledge transfer for education open to dialogue and exchange with learners, even if much younger ones.

We do not want to stop at just what is worth pursuing at this given moment in time. In the section on best practices we also indicate (although out of necessity – to a limited extent) what work has already been done, what are the strengths of the actions taken, and what should be monitored further. We see here a serious task for research institutions that will have to analyse the rapidly changing educational needs of young people and

⁷ Pyżalski J., Zdrodowska A., Tomczyk Ł., Abramczuk K. (2019). *Polskie badanie EU Kids Online 2018. Najważniejsze wyniki i wnioski*, Poznań: Wydawnictwo UAM. Available at: https://fundacja.orange.pl/files/user_files/EU_Kids_Online_2019_v2.pdf

teachers on both an ongoing basis and in close contact with schools. Our approach to media, information and digital literacy is holistic – we take into account various aspects of education, the teaching process itself and the professional development of teachers, affected by new technologies and the media.

The point is for teachers of all subjects, at all educational stages and ages to see not only the need to use new media and technologies and the resulting benefits, but also to understand the point of continuous, in-depth conversation about their specificity, the economic, political and cultural dependencies they are subjected to, and finally – about their potential and related threats.

Thanks to this, teachers can become the co-creators of a modern ‘extended education’, and not mere witnesses – or even victims – of technological change.

The assumptions presented in this document have been discussed and consulted within a milieu of institutions dealing with media, information and digital education. Many thanks to everyone who submitted their comments and suggestions for changes, in particular representatives of NGOs and educational institutions who took part in our MIDEM workshop organised in the National Film Archive – the Audiovisual Institute on April 25, 2019, as well as the participants of the meeting of the Polish Committee of UNESCO Information for All Programme (IFAP) at the Polish National Commission for UNESCO, which took place on May 23, 2019. Separately, we would like to thank the Ministry of National Education for numerous comments on this document. Special thanks go to: Aleksandra Czetwertyńska, Sylwia Galanciak (Ph.D.), Karol Jachymek (Ph.D.), Marcin Kostecki, Dorota Lipowska, Magdalena Maziarz (Ph.D.), Danuta Morańska (Ph.D.), Katarzyna Ślaska, Zuzanna Wiorogórska (Ph.D.), Kamil Śliwowski, Grzegorz D. Stunża (Ph.D.), Alicja Witkowska, Patryk Zakrzewski, Lidia Zamecka and all those who contributed their comments anonymously.

Why 'Media, Information and Digital Education'?

In the second half of the 20th century, due to the dynamic development of mass media in the world and the increase in their importance as the main source of information, knowledge and entertainment, researchers and practitioners dealing with the issues of media and mass communication drew attention to the urgent need to develop among children and young people (as well as among other age groups) an ability to understand how the media work and how media messages are created and disseminated. As a result of the debate, held across an international spectrum with the support of organisations such as UNESCO, a new area of interdisciplinary practical knowledge called media education was established in the early 1970s, which clearly defined its goals and subject matter. At the time, media education referred to the all-powerful mass media and focused on areas such as media history, ways of their informed and creative usage, their assessment, understanding the place, impact and reception of media in society; and access to media and their role as creative tools⁸.

With the spread of the Internet, video games, new information

⁸ *Media Studies in Education* (1977). Paris: UNESCO, p. 8. Available at: <https://unesdoc.unesco.org/ark:/48223/pf0000023803>

and communication technologies, social media and the emergence of new media practices (relating to ways of using the media for various purposes and in different areas of life), the interest of researchers, practitioners and policy makers in mass media (television, radio and press) diminished, and their attention was increasingly focused on new tools of social communication, or digital media. At the same time, mass media underwent the process of digitisation, often in a chaotic and hasty way, which was accompanied by the convergence of traditional and digital media, clearly observed also in Poland. This led to a situation where, at the same time, various bodies such as the European Union, state and international institutions, academia, and practitioners began to create and disseminate their own definitions related to media, digital and information education, with the main emphasis being on the different skills needed for using new information and communication technologies and media, which also encompassed the digital component.

The multidimensionality and diversity of competences as well as the dynamically growing consumption of digital media have also forced the media education researchers and practitioners to adapt their area of activity to the changing social and cultural realities; especially since relatively long – as Kathleen Tyner pointed out already in the late 1990s – they focused more on traditional media and their impact, while ignoring digital media and technologies.⁹ Only at the beginning of the 21st century did propagators of media education begin to discuss the inclusion of the Internet and social media in this area. This state of affairs caused that various models of competences necessary for effective functioning in an information society developed simultaneously, and largely independent of each other: media literacy, information literacy and digital literacy / digital competence.

Over time, it has inevitably turned out that the semantic fields of these concepts overlapped, which even today hinders the understanding of the concept of media education. John Potter and Julian McDougall state that it is not even the issue of disagreement (because at least some of these groups are potential allies), so much as it is a way of working in which theories and knowing about the world are in parallel, but apparently invisible

⁹Tyner K. (1998). *Literacy in a Digital World: Teaching and Learning in the Age of Information*. New York: Routledge.

to each other.¹⁰ This ‘overlap’ of different concepts of competencies, however, highlights one important thing: and that is their close relationship. This should come as no surprise, especially with information circulation, knowledge sharing or communication with others having become almost completely mediated – not only and not always through the media in the strict sense, but also via technologies and by those who with their help, at various levels, enable communication and social interaction (software providers, search engines, digital platforms, portals, algorithms, etc.).

The multitude of definitions (having different roots and created in different periods of technological development) may give the impression of terminological chaos, hardly comprehensible for a person without specialist knowledge. For example, in school practice, the term ICT is commonly used to mean Information and Communication Technologies; due to the time of creation and the scope of meaning it can be identified with the concept of ‘media’, while it is an umbrella term for a family of technologies that process, collect and send information in electronic form.¹¹ This definition prompts us to understand the issues related to new technologies both in a technical way (computer, Internet, files, e-mails, cloud, applications, network resources, smartphone, software, etc.) and in terms of tools. This second perspective dominates when we focus mainly on using technology to search or analyse information as a tool for acquiring and consolidating knowledge, its presentation, sharing it or facilitating cooperation and communication between users. Due to this fact, some teachers and other people dealing with competencies related to knowledge acquisition, social communication, digital technologies and the media sometimes identify media education with the use of new technologies in the educational process.

Based on the assumption that the digital media environment is an extremely important place for our social and individual experience and that it can be treated as an expanded communication

¹⁰ Potter J. W., McDougall J., (2017). *Digital media, culture and education. Theorising Third Space Literacies*. London: Palgrave Macmillan, p. 2.

¹¹ Cf. Ostrowska M., Sterna D., (2015). *Technologie informacyjno-komunikacyjne na lekcjach. Przykładowe konspekty i polecane praktyki*, Warszawa. Centrum Edukacji Obywatelskiej, Available at: https://glowna.ceo.org.pl/sites/default/files/tik_na_lekcjach_2015_06_02.pdf

reality, we want to propose a coherent definition of media, information and digital education for MIDEM.

We do so in order to be able to look at this issue from a broader perspective, including technological, social, cultural and ethical issues, as well as to adapt it to everyday teaching practice in schools. This definition, which unites the three perspectives of media, information and digital (technological) looks to aid in an understanding of the world of the media and to help teachers introduce issues focused on developing related complex competencies pertinent to children and youth.

The definition we propose corresponds to the documents of European Union bodies published in recent years¹² and refers to documents promoted by organisations such as UNESCO and recent research work. One of the most important documents of this kind was the Fez Declaration of 2011 on media and information literacy, in which we read that ‘today’s digital age and convergence of communication technologies necessitate the combination of media literacy and information literacy in order to achieve sustainable human development, build participatory civic societies, and contribute to the consolidation of sustainable world peace, freedom, democracy, good governance and the fostering of constructive intercultural knowledge, dialogue and mutual understanding.’¹³ At European Union level, in the Council Conclusions of 30 May 2016 on developing media literacy and

¹² Cf. Directive (EU) 2018/1808 of the European Parliament and of the Council of 14 November 2018 amending Directive 2010/13/EU on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the provision of audiovisual media services (Audiovisual Media Services Directive) in view of changing market realities (2018/L 303/69); Council Recommendation of 22 May 2018 on key competences for lifelong learning (2018/C 189/01); Council conclusions of 30 May 2016 on developing media literacy and critical thinking through education and training (2016/C 212/05); and in the context of counteracting organised disinformation: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions – Tackling online disinformation: a European Approach, of 26 April 2018 (COM(2018) 236 final); European Commission and High Representative of the Union for Foreign Affairs and Security Policy: Joint Communication to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions: Action Plan against Disinformation (Brussels, 5.12.2018, JOIN(2018) 36 final).

¹³ <http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/CI/CI/pdf/news/Fez%20Declaration.pdf>

critical thinking through education and training, media literacy was defined as ‘all the technical, cognitive, social, civic and creative capacities that allow us to access and have a critical understanding of and interact with both traditional and new forms of media.’¹⁴ The document emphasises that ‘these capacities allow us to exercise critical thinking, while participating in the economic, social and cultural aspects of society and playing an active role in the democratic process. The concept covers different media: broadcasting, video, radio, press, through various channels: traditional, Internet, social media and addresses the needs of all ages.’ This understanding of media literacy was strengthened by the Audiovisual Media Services Directive (AVMSD) amended in 2018. It is worth quoting the fragment of recital 59 of the Preamble to the Directive:

‘Media literacy’ refers to skills, knowledge and understanding that allow consumers to use media effectively and safely. Media-literate people are able to exercise informed choices, understand the nature of content and services and take advantage of the full range of opportunities offered by new communications technologies. Media literacy should not be limited to acquiring knowledge of tools and technologies, but should be aimed at equipping citizens with critical thinking skills necessary for making assessments, analyzing complex realities and distinguishing opinions from facts.¹⁵

Recommendation of the Council of 22 May 2018 on key competences for lifelong learning however, defines digital competences as the confident, critical and responsible use of, and engagement with, digital technologies for learning, at work, and for participation in society. It includes information and data literacy, communication and collaboration, media literacy, digital content creation (including programming), safety (including digital well-being and competences related to cyber security), problem solving and critical thinking.¹⁶

Whereas in the following paragraphs of the quoted above

¹⁴ [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016XG0614\(01\)&from=DE](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52016XG0614(01)&from=DE)

¹⁵ <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018L1808&from=MT>. Cf. footnote 12. NB, Article 33a of the amended Directive obliges Member States to promote the development of media literacy, apply measures in this respect, and report on this subject.

¹⁶ <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32018H0604%2801%29>

Conclusions of the Council, digital competence was presented as an essential part of media literacy, in the Recommendation of the Council on key competences, media literacy and information and data literacy¹⁷ are one of the constituents of digital competences.

Particular attention is paid to the social significance of media, information and digital literacy, especially the first one, although not named in this paragraph, in the part of the Recommendation that concerns citizenship competence, where it is noted that:

Skills for citizenship competence relate to the ability to engage effectively with others in common or public interest, including the sustainable development of society. This involves critical thinking and integrated problem solving skills, as well as skills to develop arguments and constructive participation in community activities, as well as in decision-making at all levels, from local and national to the European and international level. This also involves the ability to access, have a critical understanding of, and interact with both traditional and new forms of media and understand the role and functions of media in democratic societies.

It is also worth noting that the Recommendation of the Council on key competences, in addition to digital competence, lists 'literacy competence', which is referred to as 'the ability to identify, understand, express, create, and interpret concepts, feelings, facts and opinions in both oral and written forms, using visual, sound/audio and digital materials across disciplines and contexts.'

The comparison of various documents cited clearly shows a close relationship between media, information and digital competences as well as an important place they occupy among skills enabling personal and social development as well as social participation. Therefore, the model presented here adopts a holistic perspective on education related to these three types of competence.

We thus define media, information and digital education as an interdisciplinary area of practical activities, aimed at training competences enabling the conscious, active, responsible, pro-social, critical and creative use of all types of media for various purposes. And an inseparable element of such use is an

¹⁷ Cf. The Prague Declaration of 2003: Towards an Information Literate Society, Alexandria Proclamation of 2005 on Information Literacy and Lifelong Learning.

understanding of the functioning of these media (both so-called traditional and digital) and their impact on various areas of human activity.

In today's world, media, information and digital literacy that we want to develop and strengthen are necessary for personal development, efficient functioning in society and building relationships, but also have a major impact on other areas of life, such as job search and employment, circulation of information, learning, knowledge sharing, participation in social, civic or cultural life.

On the other hand, in the collective dimension, the quality of public life, the stability of democracy, the development of societies, and even collective security – as is evidenced by the often observed helplessness against disinformation – depend more and more on such competences.

Media, information and digital literacy are the foundational basis of MIDEM, which aims to support teachers and students in:

- analysing, critically evaluating and creating various media messages (text, sound, visual, audiovisual, iconic, etc.);
- identifying sources of media coverage and their political, social, economic and/or cultural conditioning, interests and contexts;
- interpreting messages and values present in various media and disseminated through various channels, by various entities (professional, amateur, commercial);
- choosing the right medium to communicate one's own message or story and being able to reach the intended group for a specific purpose;
- demanding access to the media in order to receive and create media messages;
- taking care of the independence, objectivity and diversity of content in the media, including social media platforms;
- supporting others, especially children and youth who may feel lost in the information chaos, and helping them to use the media sources of information and knowledge safely and in an informed way;
- learning from each other, including adults from children and youth understanding and taking into account the needs (one's own and those of others) met by new media and technologies.

Research review

Changes in the practice of using digital media and ICT are best seen in research. Below, we discuss the results of quantitative research published in 2019 and relevant to the issues discussed.

1. Pyżalski, J., Zdrodowska, A., Tomczyk, Ł. and Abramczuk K. (2019). 2018 Polish EU Kids Online. Research Survey: Major Results and Conclusions. Poznań: Wydawnictwo UAM.¹⁸

Research sample: a group of 1,249 students aged 9-17 from all stages of education.

Young media users connect to the Internet on a daily basis or more often than once a day, mainly via smartphone/ mobile phone (82.5% of respondents). As for the skills of respondents related to using the Internet, the vast majority of respondents declared that they know how to install applications on a mobile device – e.g. a phone or tablet (74.8% of respondents) and how to remove people from their contact lists (74.6% of respondents). Cognitive skills are worse: related to the use of key words in finding information (37.6% declare that they can easily do it) and checking whether the information they found on the Internet is true (only 31.9% of

¹⁸ https://fundacja.orange.pl/files/user_files/EU_Kids_Online_2019_v2.pdf

respondents). An equally low percentage of respondents declare that they can edit or change online content that others have created and posted online (only 24% of respondents). Interestingly, young people do not distinguish between functioning online and offline; both realities interpenetrate and appear as a single whole.

Most often, the Internet is used by young people for entertainment purposes (e.g. watching films, using social networking sites). Equally often, digital media are used to search for information (over 40% of teenagers search for information from the world at least once a week or more often). Also, the use of digital media to communicate with friends and family is very common among young people. Only slightly more than 8% of surveyed students declared that they do not use digital media at all.

The surveyed students least often use the Internet to protest, share their own art, conduct discussions on important social or political topics, or participate in hobby-related online communities.

The intensive use of new media (once a week or more often) usually involves: using mobile applications, sending and receiving information (approx. 60%), sharing information found online with friends (over 50% of respondents). Over 16% of teenagers on a daily basis comment on materials posted online by their friends; every fourth one regularly plays online games at least once a week or more often. More than half of the respondents did not create anything using a mobile app and did not share photos or graphics of their own authorship during the month preceding the study.

2. Bochenek, M., Lange, R., eds. (2019). *Teenagers 3.0. A report from a Nationwide Survey*. Warszawa: NASK – Państwowy Instytut Badawczy.¹⁹

Research sample: a group of 1,173 students from all stages, a heterogeneous sample (elementary school – 531, junior high school – 25, high school – 456, technical school – 161).

The respondents most often use the Internet at home (95.4% of responses). As much as 60% use the web when travelling and commuting (e.g. on the way to school). Almost half of the respondents (41.2%) use the Internet at school. Definitely the most popular devices with which teenagers connect to the Internet are mobile phones and smartphones (nearly 94% of responses).

¹⁹ <https://www.nask.pl/pl/aktualnosci/wydarzenia/wydarzenia-2019/1539,Mlode-smartfony-jak-sie-zyje-z-internetem-w-kieszeni.html>

Laptops came second (60% of respondents).

For young people, the Internet is mainly an entertainment and communication medium (recreation and affiliation segment). They most often use it to listen to music (65.4%), watch films and series (62.1%), play online games (40.8%), contact friends and / or family via messengers and chat (61%) and social networking sites (59.4%). Interestingly, half of the respondents also most often use the Internet to do homework (50.6%). Few respondents use the creative and community (participative) potential of the Internet. Only 8.3% declare using the Internet to create graphics, music, films, photo processing, and 6.6% of respondents to browse and / or participate in forum discussions.

94% of respondents most often use YouTube, followed by Facebook (83.4% of respondents), while in relation to the second medium, youth in upper secondary schools use it more often than younger students. Snapchat and Instagram are less popular social media, used by 67.9% and 67.7% respondents respectively.

Interestingly, both Snapchat and Instagram are more often used by girls than boys. In social media, respondents most often share their profiles photos and / or videos of themselves and other photos (58.8% and 44.5%, respectively). Own stories, opinions and comments are shared by a small group of teenagers (18.6%).

It may be disturbing that almost 25% of respondents share content that is visible to everyone and do not see the need to protect their privacy (28.4%).

Most teenagers point to a number of benefits associated with expanding knowledge related to personal interests via the Internet. The most frequently mentioned thematic areas include: music (73.3%), films, series and theatre (56.4%), beauty, clothing and style (52.1%) and knowledge of the media (48.4%), sports (48.4%), social affairs, history and politics (44.0%).

Teens are aware of the limitations of network activity. Only 19.8% of respondents agreed that 'on the Internet you can express your opinions and not bear the consequences'. In turn, the desire to transfer as much of life as possible to the virtual world was evident in a small proportion of students - 4.6% of respondents want it. Only 8% of young people declare that they try to spend as much of their free time on the Internet as possible.

Regarding the use of the Internet in the classroom, the

respondents indicated that their teachers most often screen films (81.2%), display presentations (77.6%) and use educational software (60.6%). Most often they do it in computer science/computer skills classes (68.9%), foreign language (47.5%) and Polish (46.7%). On the other hand, it is rare in culture studies classes (17.2%), civic education (17.8%) or education for safety (14.5%), that is classes in subjects in which issues of media education should be discussed. Nearly 40% of teenagers said that school education did not prepare them well to function in a world based on Internet technologies.

When it comes to basic sources of knowledge helpful in preparing for classes and tests, the largest group of respondents use Wikipedia (76.3%), Google search engine (62.6%), the Ściąga [A Crib] portal (51.9%) and YouTube (47.5%). Internet sources of knowledge, such as the Wolnelektury [Free Reading] portal, PWN encyclopaedia, e-textbooks, Khan Academy, Interklasa.pl unfortunately are not very popular among students.

3. Newman, N., Fletcher, R., Kalogeropoulos, A., Levy, D.A.L. and Kleis Nielsen, R. (2018). *Digital News Report 2018*. Oxford.²⁰

In connection with the development of broadband Internet and the drop in prices of mobile devices and Internet access, there has been a dynamic increase in the number of mobile media users and a significant change in the consumption of information.

The vast majority of respondents (65%) prefer indirect access to the news – via social media, aggregators, Internet search engines or mobile applications – while only 32% of respondents receive information via publisher websites.

There is a clear differentiation in the consumption of messages by media channel in different age groups: the younger the respondents were, the more often they declared access to the news via social media and search engines (53% and 43% of respondents aged 18-24, respectively). In turn, older respondents (over 45) preferred direct access to the news. Another noteworthy observation related to message consumption is the increase in popularity of video content. Most of this content is consumed outside of publisher websites (51%), with 33% on Facebook and 25% on YouTube.

²⁰ <http://media.digitalnewsreport.org/wp-content/uploads/2018/06/digital-news-report-2018.pdf?x89475>

The Psychological and Cognitive Aspects of Using MIDE M in Education

Research conducted on MID literacy focuses mainly on didactic and methodological aspects, but we would like to include a psychological perspective in our model; that is to highlight and analyse the fact that people in their daily activities (including educational ones) process information in a strictly defined way. New media and technologies affect cognitive competence and we would like to refer to this knowledge.²¹ As Dr. Dorota Żelechowska from the Adam Mickiewicz University writes: ‘at present, the challenge for people is not so much to gain access to valuable information as to carry out an efficient mechanism of its selection, understanding, evaluation; followed by the taking of adequate action’.²²

From the perspective of MIDE M’s creators, it is necessary to

²¹ Cf. Francuz P., Pisarek J. (2015). Wpływ sposobów korzystania z mediów na poznawcze i emocjonalne funkcjonowanie dzieci i młodzieży. ‘Cyfrowi tubylcy’ z psychologicznej perspektywy. In: *O Potrzebie edukacji medialnej w Polsce*, ed. M. Fedorowicz and S. Ratajski. Warszawa: Polski Komitet do spraw UNESCO, Krajowa Rada Radiofonii i Telewizji, pp. 145-180.

²² Żelechowska D., *Znaczenie szkoleń psychologicznych w edukacji medialnej na przykładzie programu szkoleniowego ‘Człowiek 2.0’*, written after the conference ‘The Need for Media Education’, organised by Polish National Commission for UNESCO, FINA and the Academy of Fine Arts in Warsaw, 15 Nov. 2018.

include proposals resulting from research related to the impact of technology and digital media on the process of information processing and assimilation both in the creation of the document itself and in the implementation. From research conducted by Greenfield²³, among others, it follows that, although the Internet allows us to process more information at a superficial level, it does not contribute to our understanding more or incorporating more into our knowledge structure.

An infoglut that reaches us every day can also cause cognitive overload, sometimes manifested by frustration, an increase in aggressive behaviour, etc.

The proper use of the media should therefore be supported by the ability to recognize and properly respond to problematic aspects of this sphere of human activity.

The experience resulting from a three-year long programme for teachers: *Pracownia 2.0* (Workshop 2.0) at the National Film Archive – Audiovisual Institute (FINA), which combined instrumental and psychological aspects, revealed that such an educational approach could be beneficial for both teachers and students. MIDE should connect people and the context of their activities in the media world, and not deal with technology as such. Another aspect is the deepening and developing awareness of and reflection on the social world and our activities within the same.

The media, information and digital professional and personal literacy of teachers. What we need for teaching and learning from others

Education is undergoing a revolutionary change, and schools and teachers have ceased to be the only, or even the main, source of knowledge. We learn not only throughout life (Lifelong Learning - LLL), but also actually all the time (Worldwide Learning - WWL), consciously or unconsciously using the various sources, tools and situations available. Digital media and technologies go deep into our lives in such a way that being in the real world can no longer be separated from participation in the online world. This is clearly seen in situations when respondents are specifically asked about the time they spend using the Internet. Most of them are unable to tell how long they are online: for them, it is not important because the time of being online depends on their needs at a given moment.²³

Media and new information and communication technologies are also becoming an indispensable tool for teachers at all stages of education, in all areas of teaching, to encompass upbringing and school life. This does not mean that the personal dimension of the teacher / educator's relationship with the student is diminished in any way. On the contrary, according to many experts and researchers, the personal dimension remains –

²³ Greenfield, P.M., (2009). Technology and informal education: What is taught, what is learned. *Science*, 323(5910), 2009, pp. 69-71.

and will always remain – the foundation of the teaching and learning process in schools, kindergartens and universities. Tools cannot do everything for the teacher. Without the teacher's subject-knowledge and methodological competence, they become useless at school, and can even be counter-productive, because using them takes much time and creates the veneer of 'modern teaching'. With MIDE, we focus on knowledge and skills directly related to the effects of media and information and communication technology development. So what competences are needed to teach and work with children and youth?²⁴

Searching for the answer to this question, we made recourse to two important documents: standards included in The European Framework for the Digital Competence of Educators (DigCompEdu)²⁵ and European Media Literacy Standard for Youth Workers (EMELS)²⁶. To this end, we modified, supplemented and expanded the framework content proposed by the authors to suit the Polish educational context and strengthened the importance of social and civic competences. In this way, a list of competences was created, which comprises two parts:

- professional media, information and digital literacy of the teacher, and
- personal media, information and digital literacy of the teacher.

Personal literacy can also be useful in professional work. In fact, they actually constitute the foundation of professional capacity, because without such competences it would be impossible to develop or use digital skills in any profession.

Moreover, personal media, information and digital literacy are often easier to convey to children and youth because they involve ordinary, daily activities. It is important to be ready and able to include them in teaching practice and educational relations, to share them with students, as well as to learn from them.

Today, MID literacy largely determines the professional development of teachers. Without MID literacy it is impossible to do well at universities, supplement knowledge or develop new

²⁴ Cf. Pyżalski J., Zdrodowska A., Tomczyk Ł. and Abramczuk, K. (2019). *Polskie badanie EU Kids Online 2018. Major Results and Conclusions*, Poznań: Wydawnictwo UAM. Available at: https://fundacja.orange.pl/files/user_files/EU_Kids_Online_2019_v2.pdf

²⁵ <https://ec.europa.eu/jrc/en/digcompedu>

²⁶ <https://emels.eu/>

didactic and educational skills at a later stage.

In our perspective, MID literacy is more than the ability to use media and digital technology, it is also an awareness of social including ethical contexts. On the one hand, this means prudence in the use of media within the educational process, and on the other a mindfulness in perceiving the challenges that children and youth face in the mediatised world on a daily basis. As it is clear from the already cited research, adults too rarely talk with youth about their use of digital media and technology, they are not interested enough in it and rarely ask the youth about it – how do they communicate with each other, what do they watch and listen to, what social media are they active in, what do they like and fear in them...?; and how they do or do not manage in this world. It is also important not to be solely theoretical, but to engage young people vis-à-vis the practical incorporation of digital media in various areas of human activity, for example, in solving relevant problems and discussing matters of vital importance for them. And again – to make it working, it is important to talk. In the digital world, authentic relationships and conversations are still the most important, hence the clear need for media education using learning-by-doing activating and problem-based methods; and taking into account constructivism as a concept of learning when organising classes.

It should be noted that the list of professional competences is long and detailed, and may be supplemented further. We are convinced that at the present stage in the development of education in Poland, such a set is more useful than general formulations. People often think they are proficient in digital competences because they know how to operate a smartphone or use e-banking. However, it is only when they realise how many other things they can still learn that the illusion of digital omniscience is broken.

We all have to constantly learn because digital technology is developing at an amazing pace.

Agnieszka Ogonowska and Grzegorz Ptaszek referred to this phenomenon as ‘media re-education’. It occurs when ‘there is a need to educate an individual whose previous competences and knowledge about the functioning and consumption of media cannot be applied to the new reality’, and its specificity is ‘the need to design activities for the continuous improvement of

media (information, digital) literacy in response to the challenges of modern media civilisation.’²⁷ An example of such activities is the so-called algorithmic awareness related to algorithm-managed online presence or the modification of default privacy settings on devices or social media platforms.

So, how to systematically acquire, develop or improve specific media, information and digital literacy in teaching practice? What to do if you realise that neither you nor your fellow teachers have the competences listed and there is no way of acquiring them quickly? Firstly, it is worth realising that a first step has been made towards including information and communication technologies in your professional work. Many teachers already use e-registers, e-mail, and when preparing for classes, they use search engines, open educational resources, books and teaching aids available online or in an electronic version, make multimedia presentations, participate in e-learning and e-coaching, share online issues relevant to fellow teachers and students. Secondly – there is no reason to worry that we do not know something and do not do everything that could be done. The list of competences prepared by us represents a signpost for orientation purposes rather than a barrier at the border. We would like it to be useful to identify in which direction to go, and not to be perceived as a kind of prescription that says what ‘should’ or ‘must not’ be done. It was created with an awareness that its content can be supplemented, verified, modified along with changes in the needs related to media, information and digital literacy and resultant from those comments made by MIDEM users. Thirdly and most importantly – as in any learning process – it is best to introduce new elements in small steps, to get to know piece by piece, practice and then check with students’ new tools and modes of operation. MID literacy not only enrich the teacher’s toolbox, but also allow all of us to develop as citizens and participants of social life.

The principles of shaping media, information and digital literacy, among both teachers and learners, are in our view consistent with the recommendations of modern pedagogy, such as:

²⁷ Ogonowska, A. and Ptaszek, G. (2015). (Re)edukacja medialna. Nowe spojrzenie na edukację medialną. In: A. Ogonowska and G. Ptaszek, eds., *Edukacja medialna w dobie współczesnych zmian kulturowych, społecznych i technologicznych*. Kraków: Oficyna Wydawnicza Impuls, p. 13.

- emphasis on the learning process and not only on the teaching process;
- a constructivist approach, considering previous experiences and the cognitive structures of learners;
- functional teaching, referring to real problems and the life needs (including educational) of learners, not an abstract, imposed plan;
- consideration of social and emotional determinants of the learning process, including the creation of a safe learning environment;
- the use of teamwork methods, and not only individual work, including peer learning (learning by sharing of knowledge);
- combining online teaching / learning with face-to-face teaching / learning, including tutoring and mentoring; supporting mechanisms of self-education, self-diagnosis and – self-assessment, as well as peer review, and not only external supervision or control;
- in the teaching and learning process, using the knowledge and skills of those more advanced in the field of various competences (e.g. school or class ‘experts’, school ‘MID literacy emergency’, which, if necessary, helps to solve problems, not only technical but also subject-matter or safety related);
- building a ‘community of practice’ at school, i.e. a team of learning teachers and inter-school professional development networks.

Professional media, information and digital literacy

Professional Development

1.1 Communication at school

Using digital technologies, I strengthen communication at school between learners, their parents and others.

I take part in the joint development of communication strategies at school.

I regard communication using new information and communication technologies as an important part of building relationships with students, parents and others.

1.2 Collaboration

Using digital technologies, I cooperate with other teachers and educators, share and exchange experiences, knowledge and introduce them, together with others, in the teaching work.

1.3 Reflective practice

We think individually and together, critically evaluate and create digital practices – our own ones and those of our educational environment.

1.4 Digital improvement

I use media and digital resources for systematic professional development.

I use available online resources (e.g. tutorials, forums, portals, webinars, etc.) to learn how to use new tools.

I use the good practices of other teachers and proposals of social organisations and public institutions related to media education.

I use students' help and guidance.

I participate in training to improve MID literacy regarding educational, technical, artistic or legal issues, as required.

I look for information on new tools, including apps, in various sources, e.g. appstores, blogs, profiled groups on social networking sites.

Use Of Media, Information and Digital Resources**2.1 Search and selection**

I search, evaluate and choose digital resources for teaching and learning.

When choosing digital resources and planning their use, I consider the specific learning objectives, context, pedagogical approach and needs of the learners.

I critically assess the educational value of the materials found.

I look for inspiration in various sources or areas of life (e.g. in film or journalism) and fields of knowledge (e.g. in materials for other subjects), and I also use them when planning educational activities.

2.2 Creating and modifying

I modify existing resources with an open license, and other resources if consent has been given.

I create and co-create new digital educational resources, as well as initiate such activities in my environment.

When creating digital resources and planning their use, I consider the specific learning objectives, contexts, pedagogical approaches and needs of the learners.

I can create open educational resources and mark them properly.

2.3 Organisation and protection

I organise digital content and make it available to learners, parents and other educators.

I effectively protect confidential digital content.

I respect and correctly apply the principles of privacy and copyright.

I know how to use resources under open licenses, including recognition of their authorship.

When searching for teaching aids on the Internet, I use legal sources.

I can distinguish between legal sources (where copyright is respected) and illegal sources.

2.4 Sharing

I share the educational resources I create with other teachers, I share the experience of using them in working with students.

I actively use new digital technologies to share with others digital educational content that I or others have created.

Teaching and Learning

3.1 Teaching

I plan and incorporate digital devices and resources into the teaching process so that it is effective and interesting.

I choose the right modes of work and organise my digital skill set.

I experiment (using digital technologies) and develop new forms of work, teaching methods and pedagogical approaches.

3.2 Supporting

I use digital technologies and services to develop interaction with learners – individually and in a team, during and outside classes, while respecting the right to privacy – my own and that of others.

I use digital technologies to provide learners with ready and personalised tips and support on how to use digital media and resources.

I experiment and create new forms and formats of counselling and support.

3.3 Learning in collaboration

I use digital technologies to support and develop learner collaboration.

I enable learners to use available digital technologies as an important element of group work, a tool facilitating communication, cooperation and building collective knowledge.

3.4. Enabling monitoring of the learning process

I use digital technologies to monitor the learning process, for example, to plan, to track how children and youth learn, and to reflect on these processes.

I look for evidence of learning outcomes, I share my thoughts and develop creative solutions to problems.

Evaluation and Assessment

4.1 Assessment strategies

I use digital technologies in formative assessment (i.e. ongoing assessment, during the performance of tasks) and summary assessment (final assessments).

4.2 Analysing learning evidence

I create, select, critically analyse and interpret digital manifestations and evidence of learner activity (multimedia and film works and projects, online materials, etc.), consider their outcomes and student progress to look for information on the process and the effects of teaching and learning in my/our classes.

4.3 Feedback and planning

I use digital technologies to give learners timely and personalised feedback.

I adapt teaching strategies and provide individual support based on data generated using digital technologies (test results, progress history, sample work).

I help learners and their parents to understand information obtained through digital technologies and apply them, e.g. when making educational or professional decisions.

Empowering Learners

5.1 Availability and inclusion

- I make educational resources and activities available to all learners, including those with special educational needs.
- I consider learners' expectations related to information and communication technologies, their skills, ways of using technology, misconceptions, as well as contextual, physical or cognitive limitations in their use of these technologies in order to respond to their needs, including them in the learning process.
- I use digital technologies so as to respond to the diverse needs of learners, to allow them to develop at different levels and at a different pace, to follow individual learning paths, and to pursue their own goals.

5.3 Engaging learners

- I use digital technologies to stimulate active and creative involvement of learners in specific issues.
- I use digital technologies in pedagogical strategies that support transversal competences, including collaboration, communication, critical and analytical thinking, and the creative expression of learners.
- I open the teaching process to new, real contexts that engage learners in practical activities, research and comprehensive problem solving, or otherwise increase learning commitment to complex issues and topics.

Developing Media, Information and Digital Literacy of the Learners

6.0 Understanding the media activity of children and youth

- I know how young people use media and what probability and kinds of risk are associated with it.
- I learn how children and youth use media in educational and social situations, e.g. in classroom, on breaks, while studying at home, spending time with friends or in free time.
- I talk with students about how they use different media, also in the learning process – at school and at home (e.g. I ask about their favourite websites, social media, YouTube channels they follow, what do they use smartphones for etc.).
- I use the results and conclusions of research on media activity of children and youth.

I can constructively answer the concerns of fellow teachers and parents regarding the use of media.

6.1 Use of information and content

When conducting educational classes, I use such tasks and assessment methods that learners can express their information needs.

I teach how to search for information and resources in a digital environment, how to organise, process, analyse and interpret information, acquire and use content without infringing copyright, as well as compare and critically evaluate the reliability of information and its sources; in particular, where was it published, its purpose, and the cultural, social and political contexts in which it appeared.

I help to distinguish informational texts from texts containing opinions and emotionally marked.

I pay attention to the persuasive elements of the language, including the characteristics of propaganda messages.

I discuss ways of textual, visual and audiovisual manipulation.

6.2 Communication and collaboration

When conducting educational classes, I use such tasks and assessment methods that learners are able to effectively and responsibly use digital technologies for communication, cooperation and social and civic engagement.

6.3 Content creation

When conducting educational classes, I use such tasks and assessment methods that learners can use digital media to express themselves and modify and create digital content in a variety of forms.

I teach how copyright and licenses relate to digital content, how to refer to sources, and assign licenses.

6.4 Responsible and safe use

I take actions that can provide learners with physical, mental and social well-being in connection with the use of digital technologies.

I teach risk management and the use of technology and digital media in a safe and responsible manner.

I encourage young people to talk about the proper and improper use of various media. Together with these young people, I set limits on the use of media and how to comply with these same limits.

- I talk to young people about the dangers of unlawful content on the Internet, and content adversely affecting the development of children and young people, referring to current trends popular among young people (e.g. 'pathostreaming', i.e. sharing pathological content on the Internet).
- I recognise the signs of excessive media use and know how to respond in such a situation.
- I care about the safety of children and youth and talk to them about the protection of privacy when using digital devices and media, including social media, as well as the effects of its absence.
- I know the legal regulations and resulting obligations related to the protection of children and teenagers.
- I can choose an activity and educational game suitable for a given age group (e.g. using PEGI rating).
- I can install filtering software to reduce the risk of access to harmful or dangerous content and contacts, having at the same time the awareness that technical security, due to the constant development of technology, can be relied on to a limited extent and that they are not able to replace conversations with minors, developing their personal awareness of threats, the ability to avoid and act on them in the event of their occurrence.

6.5 Problem solving

- Conducting educational classes, I use such tasks, resources and digital media, as well as assessment methods, so that learners are able to recognise and solve substantive and technical problems.
- I show how to transfer and use in a creative way technological knowledge in new situations.

6.6 Civic and social involvement

- By using digital media, information and tools, I facilitate students' civic engagement in matters of the school, municipality, region, Poland, as well as Europe and the world.
- I show how one can influence the life of the school and the local community and activate them with the help of digital media and ICT (e.g. co-organise a public event, petitioning, elections, surveys).

Personal media, information and digital literacy

A. Use of media and digital devices

- I use various technical devices, e.g. camera, multimedia projector, video game console, mobile device (smartphone, tablet).
- I use software and applications needed to implement media projects, e.g. photo, audio, video editing programs, office packages, and game development software.
- I create and edit information for the needs of various media channels, taking into account their potential and limitations, as well as the needs of the target group (e.g. friends, fellow teachers, students, parents).
- I can create media messages in various forms, e.g. Facebook post, blog entry, YouTube video, podcast.
- I solve simple technical problems, and if necessary I know where to look for help (e.g. on a dedicated forum).
- I experiment with new technologies and with innovative use of media (e.g. I introduce coding or remix elements in educational classes).
- I can use the Internet creatively to share my passions and interests, as well as sharing the results of creative work, e.g. by making an online portfolio of my artistic or musical works.

B. Use of information

- I use various sources to search for information. I analyse, compare and critically evaluate them.
- I assess the credibility of information, paying attention to: the author and their knowledge of the subject, the institution publishing the information, references to other sources, time of publication, linguistic correctness, user ratings and comments, etc.
- I am aware that some people intentionally post false and/or biased information (including fake news). I can recognise it and understand the mechanism of its dissemination online. I can indicate the possible motives behind the introduction of false content into the media circulation.
- I use the effects of the work of organisations dealing with the verification of messages published online and the statements of public figures (fact-checking).
- I consciously use various Internet search engines: I can create a search phrase; I use keywords, I know what determines the position of a page in the search results list.

I know how information bubbles arise and work. I take into account the fact that the information we access through search engines and social media depends on many different factors, including user's preferences (settings), searched keywords, online activities, algorithms and history of browsed pages, which means that different users systematically reach different bundles of information.

C. Critical reception of media messages

I am critical towards all media messages (e.g. texts, films, photographs, posters, video art, memes), I ask myself and others questions, formulate doubts, confront messages with reality, look to interpret the message in proper contexts.

I know that different forms of media expression have their own genres (e.g. cinema, television and the Internet have created different genres, such as feature films, documentaries, comedies, thrillers, live shows, reportage, science fiction) which use specific style and convention.

I take into account the fact that written forms have certain features (a blog entry differs from an article in a weekly and popular science publication, e-mail or Facebook post).

I express my own opinion and undertake discussions on the media's message, e.g. film storyline, meaning, the use of sounds and images, as well as additional means of expression such as music, acting, production design.

I create conditions for conducting discussions and expressing different opinions among members of a social or professional group.

I know that media messages present only a segment of reality, and reflect the cultural context and historical period in which they arose (e.g. the reporter selects the interviewees, the filmmaker composes the frame, which can reveal or hide information).

I am aware that the settings and mediums I use (e.g. watching a film alone, in a group or in a public place, reading information on Facebook or in a newspaper) have an impact on the way I receive a media message and on how I share my opinion about the same.

I understand various business models of the media and I know what role advertising and collecting user data play.

- I know that companies pay film and game producers and amateur content creators for showing items with a visible logo.
- I recognise sponsored content. I know that printed and online newspapers often display sponsored content and news articles in a similar way.
- I know that portals publish content that arouses emotions and curiosity, so that users want to click on a given link, for which the portal gets money from advertisers. I understand that such content is often of low quality.

D. Safe use of the media

- I know the risks associated with using media and I can take care of my own safety.
- I understand and can recognise situations where social media are used to isolate, bully, harass and abuse others. I encourage young people to ask for help in such situations.
- I recognise the dangers of misleading or incomplete information that are to build anxiety or encourage negative reactions. I know how important a critical approach is to the motivations of people met on the Internet in order to avoid manipulation or phishing (impersonating someone for obtaining information or inducing certain actions).
- I know that there are organisations, institutions and movements that call for conflict and hatred for political gain. I can resist these practices using reliable sources of information. I help others recognise the messages of such groups or people.
- I know that computer programs can simulate human interaction and disseminate false information automatically, impersonating people.
- I use anti-virus software, spam filter, plug-ins blocking ads and tracking files or encrypting communication, etc. I know that using such tools may affect the time it takes to load the website and the way the content is displayed.
- I consciously choose software and websites that I want to use, including the security criterion (e.g. I avoid logging in to my accounts in public places).
- I comply with the law when using the Net (e.g. copyright, data and image protection). I do not publish photos of other people and I do not tag other people in photos

without their consent. I know that parent/guardian consent is required for minors. I use materials with open licenses. I can find such materials.

I describe other people's materials that I use in my work (e.g. I attribute photos used in a presentation, including the author, link to the source and license).

I read the terms of use of the websites I use – especially the provisions regarding the protection of privacy and personal data collected.

I know that portals such as Facebook collect data about each click and use this information for marketing and the personalisation of content. I can find this information in the website's terms of use.

I use browser settings, I know what cookies are and the history of websites visited, and I know how to delete them.

I can modify privacy settings and access to specific information on social networks or in the settings of downloaded applications.

I know how to access data about myself from a Facebook account and Google services.

I adhere to netiquette and ethical standards in communication.

I know that publishing hateful, stereotyping or stigmatising messages is inappropriate. I actively care for friendly communication, e.g. I report offensive content and hate speech to administrators.

I respect the opinions of others and I am open to dialogue, also with people with different views.

I consciously decide what I communicate in public and what I share only with a specific group of recipients. I protect my privacy.

I know that when I publish something online, I have no control over it. Such information will never be completely removed and it can be associated with me for a long time.

I regularly check and adapt to my needs the privacy settings.

I choose strong passwords and take care of their safe storage.

I know that devices can track my location even when the location feature is turned off.

I am aware of the risks associated with misleading information at the individual level, e.g. dishonest selling, developing fears, etc., and at the community level, e.g. disruption of the election process, mass disinformation, etc.

E. Active use of the media

I get involved socially through the media.

I use the media to look for reliable information about social, political and economic issues relevant to me and my community.

I react to the promotion of fake news, the spreading of false information on social media or hate and hate speech.

I recognise cases of mass misinformation or disinformation and anticipate their effects on the community (e.g. disruption of the electoral process) and individuals (e.g. exclusion).

I report all such cases to administrators or relevant state authorities.

I participate in public debates, e.g. on social media, forums, and in public consultations.

I join and/or organise social actions on matters relevant to me and my community. Managing people's work, I use properly selected media, software and tools.

I find support for issues relevant to me, e.g. by setting up an online petition, organising mailing campaign, fundraising, promoting actions undertaken by others.

Core recommendations for institutions involved in media, information and digital education

1. Schools – Principals, Teachers, Students, Librarians

Including MIDE in the development of annual preventive and educational programmes and curricula for subjects not included in the core curricula (e.g. pedagogical innovations) and competence classes.

Creating a teacher-and-student-friendly digital environment at school, including providing a broadband Internet connection; equipping the school with educational devices and applications with the support of school authorities.

Organising subject, project and extracurricular activities with elements of MIDE.

Creating scenarios of classes in various subjects in a modular form – so as not to suggest and provide ready-made solutions, but to enable the creation of original paths based on modules.

Inclusion of school libraries as potential MIDE centres – development and supplying equipment instead of shutting down.

Using the didactic offer for schools prepared by public libraries.

Supporting the systematic acquisition of MID literacy by teachers: primarily various forms of external training, in-school teacher training (training of boards of teachers) and self-education, including methodological support offered by pedagogical libraries.

The introduction of soft tools to diagnose the needs of students and teachers and to evaluate their progress, mainly in the form of self-assessment and feedback.

Using digital media in communication with students, parents and all school stakeholders, while maintaining security principles.

Support for intergenerational volunteering at school, including, for example, conducting individual consultations on new technologies by teachers and students for the benefit of seniors living in the community.

Development, promotion and implementation of effective educational solutions in schools, e.g. mobile labs, Bring-Your-Own-Device, useful educational apps and portals (websites).

Appoint a school leader (one or more persons) to cooperate with a school counsellor in the event of dangerous situations and to support and motivate teachers in implementing MIDE in their daily work.

Including activities that develop MID literacy of teachers and students when granting a motivational supplement or/and a principal's award.

2. School Authorities (Municipalities and Districts and Non-Public Authorities), Local Teacher Training Centres

Supporting the activities of local schools, NGOs, local media, e.g. through grants for media, information and digital education, as well as training sessions conducted by competent trainers who have experience in working with teachers.

Separation of funds in funds for teaching aids for schools for the development of competences in MIDE.

Creating and supporting local training and self-education groups in the field of media education and the use of digital media, including the provision of public space and equipment for this purpose.

Organising and/or facilitating cooperation of schools with institutions supporting the development of education, such as teacher training centres, psychological and pedagogical counselling centres, pedagogical and public libraries, community centres.

Professionalisation of training activities of teacher training centres in the field of MIDE, e.g. through peer learning and the creation of networks for exchanging information and resources (such as Superbelfrzy), as well as through collaboration with experts, including journalists.

Employing methodological advisors in the field of MIDE, as well as using the support of local digital activists – parents, IT professionals or enthusiasts of new media.

3. Parents

Close and authentic contact with the child, building the relationship and everyday conversations about their problems, discoveries and difficulties.

Interest in what the child does online (regardless of age) and how they use media and digital devices, with regard to child's privacy rights (but also an exchange of information: 'I will show you what has been important to me lately and you show me'). Focusing on dialogue, explaining the world together and attempting to understand new media phenomena and practices. Establishing contact with children in an atmosphere of mutual respect, support and joint solutions. Avoiding treating digital super-control as being the best tool to ensure child's safety, bypassing the educational approach.

Spending time together using new technologies – e.g., taking photos and videos together, and then preparing a family archive, playing video games, learning simple coding.

Joint analysis of media messages by adults and children: e.g. wondering what results from some advertisement, what is true in a fairy tale, compare what different media say about the same event (which media say or show what and how).

Searching for inspiration on how to use media tools in various aspects of family life (what can be useful at school, while travelling, and what in getting around the city).

Cooperation with the school (kindergarten) in strengthening of the media, information and digital literacy of children,

including conversations with teachers and educators. Involvement in the school community and animating activities that build the school community.

Mindfulness and responding to situations that can be dangerous/threatening. Flexible use of various strategies and forms of response (parental 'catalogue' of possibilities, best developed together with other parents, teachers, psychologists and children themselves).

Parental support through courses, workshops, meetings and conversations that help to recognise disturbing signals and situations related to the use of new media. Increasing the sensitivity of parents and guardians to topics about which they may not have adequate knowledge.

4. Ministry of National Education and Boards of Education

Making media, information and digital literacy an educational priority, in line with the assumption of these competences' growing role in the development of young people and responsible functioning in society and the state.

Developing guidelines for the authors of school textbooks, with a condition regarding the formulation of exercises, tasks and instructions developing various media, information and digital literacy.

Putting greater emphasis in school textbooks on the use of open educational resources (OER) and reliable and legal Internet sources of knowledge and information.

Amendment to the Ordinance of the Minister of National Education on the admission of textbooks to school use (Regulation of the Minister of National Education of March 1, 2017 on the admission of textbooks to school use – <http://prawo.sejm.gov.pl/isap.nsf/download.xsp/WDU20170000481/O/D20170481.pdf>): to include in the regulation a condition regarding the development of exercises, tasks and instructions to train media, information and digital literacy in relation to content in all subjects.

Development of media-education expert guidelines for substantive and didactic appraisers on the evaluation of school textbooks in terms of the selection of educational exercises that train media, information and digital literacy as well as content in this area.

Systematic development of existing educational resources, and the creation of new, open and free educational resources, also in the portal <https://epodreczniki.pl/>.

Supporting educational projects of a local, regional and national nature, focused on developing media, information and digital literacy among teachers and students.

5. Ministry of Culture and National Heritage

Support for educational projects in the field of MIDE in the form of open-grant competitions and their systematic evaluation in terms of achieving the set goals consistent with the current state of knowledge in the field of media education.

Supporting educational projects engaging participants, pro-innovation and departing from the traditional, 'direct-instruction' method of knowledge transfer.

Supporting cultural projects extensively using digital technologies, while maintaining care for the development of the social and ethical sphere, including an analysis of current MIDE projects and an assessment of their effectiveness in selected areas.

Educational support for smaller centres in which there is no daily access to cultural goods and cultural institutions, by co-financing activities that use new technologies for the promotion of culture and opening access to it, as well as indicating the possibilities already existing online (for free).

Improvement and unification of regulations and projects regarding the digitisation of the institutions' resources and care for including an educational component in cooperation with formal and non-formal education institutions.

Organising copyright issues of digital collections of cultural goods and their dissemination on the Internet.

Cooperation between the Ministry of Culture and National Heritage in the field of MIDE with the Ministry of National Education and the Ministry of Digital Affairs, creating long-term programmes based on the exchange of information and experience as well as cooperation between professionals from various fields.

MIDE as a priority action, and not only an addition to the activities of institutions subordinate to the Ministry of Culture and National Heritage: recognising it as an indispensable factor in building civil society and equalising opportunities

in the case of significant differences in cultural and social capital.

Film education as a type of media education. Substantive and financial support for educational projects conducted in schools by institutions dealing with film culture.

6. Cultural Institutions, Including Public Libraries

Opening the space of cultural institutions for the media activities of students, teachers and parents.

Creating projects responding to the needs of target groups – examining the expectations and problems faced by recipients in terms of access to resources and developing MID literacy.

Developing principles, in consultation with the Ministry of Culture and National Heritage, in the field of digitising and sharing collections so that they are easily accessible to various groups of recipients – taking care of the appropriate formats, quality, preparation of educational materials accompanying the collections (e.g. lesson plans).

Cooperation with the Ministry of National Education in the field of adapting cultural and artistic education curricula to the core curriculum (applies to projects and activities for school groups – there is no need for such in the case of individual recipients).

Preparation of MIDE classes for teachers, animators, the staff of community centres and librarians, so that the largest number of recipients involved in teaching others can access modern professional education.

Financial and organisational support of MID projects that take into account the social and cultural context of a given city or region.

7. Ministry of Science and Higher Education and Universities

In connection with the amendment to the regulation of the Ministry of Science and Higher Education on the standard of education preparing for the teaching profession (<https://legislacja.rcl.gov.pl/projekt/12321600/katalog/12585964#12585964>) separating classes devoted to MIDE in the standard of education for the teaching profession (subject teacher, teacher of theoretical vocational subjects, teacher conducting classes) and teachers of kindergarten and early school education (grades 1-3)

along with specifying the number of hours and thematic scope for these classes.

Developing media, information and digital literacy of future teachers and preparing them to work with students in this area by introducing the subject/MIDE block in study curricula at teacher faculties in first and second cycle studies.

Development and improvement of the skills of professionally active teachers through e.g. post-graduate studies in the MIDE area or certified programming courses.

Including in the higher education curricula, in all fields of study at the undergraduate and graduate level, in the block of compulsory classes, a course on MIDE as one of key importance for shaping the competences of the future.

Promoting interdisciplinary research and scientific projects (also international) in MIDE in competitions announced by the National Science Centre, in particular, on the practices of using digital media, measuring and diagnosing media, information and digital competences, mechanisms and forms of disinformation, online activity, and the creative use of media.

8. Ministry of Digital Affairs

Explicit inclusion of media and information literacy in the digital literacy development programmes among all target groups (and especially young people).

Supporting projects that make extensive use of digital technologies, including the development of the social sphere and ethical reflection.

Financial support in the form of open-grant competitions, programmes and projects, which consider the convergent and comprehensive nature of digital competences.

Supporting research diagnosing the level of MID literacy for all target groups.

Creating good quality public e-services with simultaneous support for various categories of users.

Establishment of a platform/repository of educational materials (under open licenses) enabling the self-development of MID literacy for all social groups (including support for parents).

Systematic and ongoing cooperation in the field of MIDE with the Ministry of National Education and the Ministry

of Culture and National Heritage, i.a. creating long-term programmes based on the exchange of information and experience between institutions and professionals from various fields.

Recognition of MIDE as one of the key mechanisms for the development of the state and economy as well as civil society, including the addressing of differences in educational, cultural and social capital.

9. Non-Governmental Organisations

Sharing information, good practices and resources by institutions implementing MIDE projects in order to avoid duplication of activities/ideas.

Creating a database of good MIDE practices together with teaching aids, courses (on- and off-line) and methodological support.

Planning and conducting partnership projects, both with the participation of public partners, schools and educational institutions, as well as other social organisations.

The use of open licenses in MIDE projects.

Conducting project evaluations and assessing the effectiveness of undertaken actions.

Designing activities based on research results and reliable diagnosis of beneficiaries' needs.

Integrating MIDE elements into projects from other thematic areas (e.g. environmental, intercultural, historical projects, etc.).

Examples of best practice

The examples of best practice presented here illustrate how to endeavour to successfully develop competences that we consider as being fundamental to the development of MIDE. Various educational projects are featured here: trainings, workshops, courses, programmes, websites, etc. Although each of them concerns slightly different aspects of MID literacy and the use of different tools and methods, together they present a picture of the Polish experience in this area. We hope that this is the first small step towards gathering the experience of various Polish organisations and that this list will be supplemented with further good practices. We welcome your contribution!

Title: The University of a Young Explorer – The Young da Vinci

Organiser: Humanitas University with funds from the National Centre for Research and Development

Target group: students from 4th, 5th, 6th, 7th grade of primary school and parents of children participating in the project – a total of 256 children from 7 cities and 64 parents

The ‘Young da Vinci’ project looked to prepare children and youth for learning by way of ICT, including virtual reality. It included the preparation of methodological materials for teachers and the implementation of classes with students including activities developing key competences and universal skills in the field of mathematics and natural sciences, including fast-learning methods. Classes were carried out in three blocks: the YOUNG GENIUS block included memory techniques, speed-reading techniques and problem methods conducive to the development of creativity and teamwork skills, the YOUNG PROGRAMMER block included robotics and programming workshops, the YOUNG RESEARCHER block included workshops in mathematics and science with the use of virtual reality, laboratory methods and educational trips.

Strengths:

- stimulating children’s cognitive curiosity, including developing social competences and attitudes,
- inspiring creative thinking and developing interests,
- promoting the culture of innovation through the use of problem methods and modern technological solutions,
- integration of the local community around academic centres by creating conditions for conducting organised, extra-curricular educational classes.

MIDE M competences reference: all areas. Link: https://www.humanitas.edu.pl/Aktualnosci/?id=14779/Mlody_daVinci_-_innowacyjne_zajecia_dla_dzieci_i_mlodziwie

Title: Aces of the Internet (Be Internet Awesome Poland)

Organiser: School with Class Foundation as part of cooperation with Google

Target group: primary school teachers (mainly 4th to 6th grade)

Free programme for primary schools across the country. Its purpose is to shape competences regarding cybersecurity and

online citizenship based on 5 attitudes, to be: smart, alert, strong, kind, brave. The programme consists of teacher training, a set of 20 lesson plans and an online game Interlandia. Teachers trained in cybersecurity and modern methods of teaching and engaging students are to support students in organising social campaigns that meet the needs of their own or of a group of their choice (e.g. parents, local community, younger students). The main method of work is design thinking, used to study the needs and joint design of social campaigns. Projects implemented by students and teachers can take part in a mini-grant contest to scale up the best ones.

Strengths:

- deliberate use of the design thinking method in education,
- strengthening the sense of agency in students,
- cyber security narratives based on positive values,
- the possibility of conducting media classes without using computers and Internet access.

MIDEM competences reference: all areas. Link: <https://asylinternetu.szkolazklasa.org.pl>

Title: Mind Over Media, Ethical Journalism

Organiser: Centre for Citizenship Education as part of the 'Mind over Media in EU - Analyzing Contemporary Propaganda' project, initiated by the Evens Foundation (Belgium) in cooperation with partners: Association for Media and Culture (Croatia), Finnish Society of Media Education, MEC / Mediawijs (Belgium), Associata MediaWise Society (Romania) and the Media Maker / StreetPress organisation (France). Mind over Media in EU is a Media Literacy for All pilot programme financed by DG Connect

Target group: teachers, media educators

The programme allows the interpretation of media messages using five questions for analysis and four media propaganda techniques. The programme is based on research and aids developed by prof. Renee Hobbs from the University of Rhode Island in the United States. Part of the programme is its crowd-sharing platform, where users post and interpret examples of media propaganda using techniques developed by Renee Hobbs. Messages can also be evaluated for social harmfulness, commented and discussed. The site has been translated into many European languages.

Strengths:

- the programme is not limited to fact checking, but encourages the in-depth interpretation of media messages,
- ready, simple and accessible tools enabling understanding of the media and analysis with students in the classroom.

MIDEM competences reference: Professional competences:

6.1 Use of information, 6.2 Communication and collaboration, 6.3 Content creation, 6.4 Responsible and safe use, 6.5 Problem solving, 6.6 Civic and social engagement

Link: <https://mindovermediasite.wordpress.com/2018/11/02/mind-over-media-in-eu-where-are-we-now/>

Title: DEMolka – Home Media Education

Organiser: Medialab Gdańsk at the City Culture Institute in Gdansk. Grzegorz D. Stunża and Justyna Zborowska-Stunża

Target group: parents of children and teenagers

The project consisted of five meetings with parents, devoted to new educational trends, technologies, safe use of the network and building relationships with children with the use of new digital tools. The main goal was to debunk stereotypes associated with the negative perception of technology and bypassing the social causes of some media practices. The parents got to know technical innovations, discussed difficult situations and arrived at possible solutions, tested some of the new educational tools and debated about the communication channels and applications used by young people for joint family activities. The assumed effect was to raise social, media and digital literacy of all people involved in joint activities.

Strengths:

- verifying myths and stereotypes about digital technologies,
- indicating the possibility of involving all household members in family life by using available technologies,
- promoting positive practices and examples of educational media use in family life.

MIDEM competences reference: Professional competences:

2.2 Creating and modifying, 2.3 Organisation and protection, 3.3 Learning in collaboration, 5.1 Availability and inclusion, 5.3 Engaging learners, 6.0 Understanding the media activity of children and youth, 6.4 Responsible and safe use

Personal competences: A: Use of media and digital devices, B: Use of information, C: Critical reception of media messages, D: Safe use of the media, E: Active use of the media – competences from all the selected areas to varying degrees

Link: <http://ikm.gda.pl/projekt/demolka-domowa-edukacja-medialna/>

Title: Programming the Future

Organiser: Orange Foundation and the Coding Masters Association (POPC)

Target group: teachers of 1st to 3rd grade, rural and rural-urban communes and their students

A project thanks to which over 18,000 pupils in grades 1-3 of primary schools from small localities have learned programming basics and developed digital skills in practice. 1,200 teachers were involved in the project and took part in a training programme on digital education in work with the youngest students. Teacher support included live workshops, webinars and mentoring programmes. In addition, the workshops were directed at the employees of community centres, libraries and teacher training centres to help them be ambassadors of digital education in their own communities and work environments. Schools received educational kits: robots, mechatronics kits, tablets for teachers and students to learn programming, and mats for coding without electricity.

Strengths:

- the programme was constantly evaluated (evaluation carried out in 3 stages),
- teacher support at every stage,
- equipping schools.

MIDEM competences reference: Professional competences: 1.2 Collaboration, 1.3 Reflective practice, 1.4 Digital improvement, 2.1 Search and selection, 3.1 Teaching, 3.2 Supporting, 3.3 Learning in collaboration, 5.1 Availability and inclusion, 5.2 Diversification and personalisation/customisation, 5.3 Engaging learners and Area 6: Developing media, information and digital literacy of the learners

Link: <https://www.zaprogramujprzyszosc.edu.pl>

Title: Workshop 2.0 (until 2017), Human 2.0 (after 2017)

Organiser: National Audiovisual Institute, then National Film Archive – Audiovisual Institute

Target group: teachers, school librarians, employees of community centres

A modular course for developing digital and media literacy necessary in the teaching process. As part of the psychological module, issues related to knowledge about human and universal mechanisms explaining their behaviour – also in a digital context – were broadened and organised. The aim of this module was to create by participants a ‘scaffolding’ for knowledge and competences developed during the didactic, more tool-oriented part of the series. During the classes, lectures, discussions, exercises, and demonstrations, as well as typically training forms and work on participants’ own experiences were used. Participants had the opportunity to expand their awareness (and self-awareness) in the field of ‘how people work’ (both students and teachers), what psychological mechanisms can reveal about our thinking, feeling and behaviour, and how this can translate into opportunities, threats and challenges related to new technologies. As part of the didactic module, participants learned about digital tools that could make their classes more attractive and help in achieving educational goals. Two key principles were taken from the design thinking methodology: a readiness to test one’s ideas and solutions; and a willingness to share the results of these tests with others.

Strengths:

- classes supporting teachers at the level of personal and professional competences,
- openness and honesty in communication - on the part of both the trainers and participants,
- debunking myths about learning, creative processes, the impact of technology on people and their environment,
- presence of a psychological component and support in this area.

MIDEM competences reference: The trainings covered all competences included in the Model, with an emphasis on personal competences and the ability to use them in school.

Link: <https://www.nina.gov.pl/projekty/czlowiek-2-0/o-cyklu/>

Title: Fact-Checking Academy

Organiser: Demagog Association from the funds of the Stefan Batory Foundation and the National Freedom Institute

Target group: school youth (from 7th grade in primary school) and college students; to a limited scope also teachers

The Academy organises workshops focused on fact-checking and fake news. The participants of the classes work in groups on the critical reception of media messages. Through the exercises and discussions provided for in the scenarios, they learn to use various sources of information and assess them, as well as to recognise false information. They increase their awareness of the deliberate posting of false information and ‘click bits’. They learn about the activities of fact-checking organisations.

Strengths:

- workshops respond to the actual needs of students and teachers,
- classes conducted by people dealing with fact-checking on a daily basis,
- use of activating methods,
- the possibility of conducting classes in the classroom without a computer,
- the opportunity to modify the scenario depending on the degree of experience of the leader (using real examples or ones developed for the purposes of the class).

MIDEM competences reference: Professional competences:

6.1 Use of information, 6.2 Communication and collaboration, 6.3 Content creation, 6.4 Responsible and safe use, 6.5 Problem solving, 6.6 Civic and social engagement

Link: <http://akademia.demagog.org.pl>

Title: Digital Toolbox

Organiser: Panoptikon Foundation with public (Ministry of Culture and National Heritage, Ministry of Digital Affairs) and private funds (Velux Foundation, Samsung, donations from private individuals)

Target group: teachers (from the 4th grade of primary school and secondary schools), librarians

Digital Toolbox is a programme for teachers and librarians from all over Poland, shaping competences in the field of media education.

The programme consists of:

- website *cyfrowa-wyprawka.org* with educational materials and advice. Its main part are lesson plans divided into educational stages and three categories: safety, law, and ethics and values. Each of them contains knowledge ‘in a nutshell’ and a glossary of terms prepared in formats

that allow for adapting to the needs of the educator. All materials are available under an open license;

- card game Dataquake for adolescents and adults. The game was created as a result of searching for methods that will easily explain the threats caused by our data circulating on the Internet. It does not require advanced technical knowledge from players. It shows who can use information about us and suggests how can we protect our privacy;
- Digital Toolbox Academy – a series of free trainings for people working with children and youth, focusing on a conscious and critical approach to new technologies and practical methods by which this knowledge can be passed on to others.

Strengths:

- addressing legal issues occurring in the context of new technologies,
- publishing materials under an open license,
- trainings conducted by experts,
- specialised in the right to privacy.

MIDEM competences reference: Professional competences:

1.3 Reflective practice, 1.4 Digital improvement, 2.1 Search and selection, 3.1 Teaching, 6.0 Understanding the media activity of children and 6.1 Use of information, 6.4 Responsible and safe use

Personal competences: B: Use of information, C: Critical reception of media messages, D: Safe use of the media.

Link: <https://cyfrowa-wyprawka.org/>

Title: Media Education website

Organiser: Modern Poland Foundation, mainly from the funds of the Ministry of Culture and National Heritage

Target group: teachers, librarians, culture animators

The Media Education website contains scenarios, exercises and materials for conducting classes in schools, community centres and libraries. There are 250 scenarios consisting of knowledge 'in a nutshell', a description of the course of classes, monitoring tasks and a glossary. The materials were created on the basis of the 'Media, information and digital literacy competencies catalogue'. The scenarios were divided into educational stages (from kindergarten to secondary school)

and 10 areas of media education: use of information, relations in the media environment, language of the media, creative use of media, ethics, safety, law, economic aspects of media activities, digital literacy and mobile security.

Strengths:

- wide range of issues discussed,
- scenarios designed to require minimal teacher preparation,
- the possibility of freely combining scenarios in series and programmes,
- materials available under an open license.

MIDEM competences reference: Professional competences:

1.4 Digital improvement, 2.1 Search and selection,
3.1 Teaching, 3.3 Collaboration, 5.3 Engaging learners,
entire Area 6 and Personal competences – all areas.

Link: www.edukacjamedialna.edu.pl

Title: Social Media Literacy for Change

Organiser: European Schoolnet Academy as part of the pilot programme 'Media Literacy for All' financed by the European Union

Target group: school heads, primary and secondary school teachers (especially those working with young people at risk of social exclusion), people preparing themselves to the teaching profession.

The goal of the project is to develop a strategy for using social media at school in order to: a) understand ways of using social media by community members, b) identify major challenges, c) respond to the needs of the community in an inclusive and encouraging way and d) monitor and evaluate the effectiveness of the actions taken. The project uses the Selfie questionnaire developed by the European Commission (https://ec.europa.eu/education/schools-go-digital/about-selfie_en) and a MOOC (Massive Open Online Course).

Strengths:

- international nature of the project - enables the exchange of experiences and looking at issues from many perspectives,
- involvement of the entire school community,
- the possibility of adapting the questionnaire to the needs of the school,
- free online training.

MIDEEM competences reference: Professional competences:

1.1 Communication at school, 1.3 Reflective practice,
1.4 Digital improvement, 5.3 Engaging learners, 6.0
Understanding the media activity of children and youth.

Link: http://www.eun.org/documents/411753/2161560/sml4change_presentation_letter_school_final_2409.pdf
and: <https://www.europeanschoolnetacademy.eu/courses/course-v1:sml4change+SocMedLit+2019/about>

Title: MegaMission

Organiser: Orange Foundation in partnership with the Modern Poland Foundation, the Gerere Foundation, and the University of Warsaw - Centre for Media Analyses

Target group: early education teachers, educators working in school common rooms, children aged 6–9

‘MegaMission’ is a nationwide programme that includes schools and school common rooms in the development of digital competences. During the ten-month series of classes based on a digital laboratory narrative, children learn through play about the creative, conscious use of the Internet and multimedia. Educators conduct classes based on the scenarios proposed by the Orange Foundation and together with students win awards for their schools. So far, 800 schools from all over Poland have participated in the programme, 32,500 classes have been conducted, with 21,000 children.

Strengths:

- programme comprehensiveness,
- use of gamification tools,
- an innovative formula and an engaging way of communicating content.

MIDEEM competences reference: professional competences – Area 6: developing learners’ media, information and digital literacy, as well as personal competences – all areas.

Link: www.megamisja.pl

Title: INDID Media Watch

Organiser: Institute for Discourse and Dialogue

Target group: graduate, doctoral, and high school students

‘INDID Media Watch’ is a long-term programme under which graduate and doctoral students from various academic cities in Poland come together as volunteers in order to analyse media messages, examine their bias, and capture manipulations,

unreliability, hate speech, fake news. The messages of various media are analysed: Internet portals, television information programmes, radio stations, the press. This is done online using a unified methodology that does not favour any medium. The results are summarised in an annual report. Volunteers also conduct workshops on media education for young people, using a board game developed on the basis of previously carried out analyses of media messages.

Strengths:

- inclusive approach to education,
- learning by doing,
- making use of volunteer work.

MIDEM competences reference: Professional competences:

- 6.1 Use of information, 6.2 Communication and collaboration, 6.3 Content creation, 6.4 Responsible and safe use, 6.5 Problem solving, 6.6 Civic and social engagement.

Link: <http://indid.pl/indid-media-watch>

Title: Digital Didactics Laboratory for schools of the Lesser Poland Voivodeship

Organiser: 'Cities on Internet' Association and Lesser Poland Teacher Training Centre (April 2013 - June 2015)

Target group: teachers and principals from junior high schools and high schools in the Lesser Poland voivodeship

As part of the DDL project activities, workshops, trainings, demonstration lessons, open lessons and conferences were held, and teaching aids were prepared. As a result, an innovative system of educational activities was developed, leading to the conscious, effective and intensive use of information and communication technologies (ICT) by adult employees entitled Factory method of digital education [<https://mwi.pl/uploads/filemanager/publikacje/metoda%20fabryczna.pdf>].

The essence of the Factory Method is to connect social interactions taking place in the learning group with deep immersion in the technological environment. It allows for a better understanding and acceptance of the opportunities created by ICT, raising the level of practical digital competences, as well as the development of teamwork skills using ICT, with particular emphasis on working in the so-called cloud computing.

Strengths:

- focusing not only on shaping knowledge, but also the attitudes of the participants,
- emphasis on the conscious and wise use of ICTs – treating technologies as tools that can improve the quality of life and effectiveness of people,
- emphasizing the role of curiosity and readiness to experiment - it is impossible to prepare class participants for everything that technology can give them, which is why the Factory Method awakens curiosity and an openness to the new ways offered by the Internet and electronic communication tools,
- learning from each other – knowledge sharing is a key element of the course using the Factory Method.

MIDEM competences reference: Professional competences: 6.1 Use of information, 6.2 Communication and collaboration, 6.3 Content creation, 6.4 Responsible and safe use, 6.5 Problem solving, 6.6 Civic and social engagement.

Link: <http://www ldc.edu.pl>

Title: School of Education of the Polish-American Freedom Foundation and the University of Warsaw

Organiser: The leading institution is the Good Education Foundation. The school was founded on the basis of an agreement concluded between the Polish-American Freedom Foundation and the University of Warsaw

Target group: Postgraduate studies are addressed to future teachers. Graduates or teachers with work experience of up to 10 years are invited to the School of Education. Since 2016 Polish Studies and Mathematics have been taught.

Two new majors have been launched from 2019/2020: history and biology

The programme was created in cooperation with the Teachers College of the Columbia University. Studies are in a day-time format, and an integral component is daily teacher-training placement in schools. After completing 10 months of education, graduates receive a diploma from the University of Warsaw and teaching qualifications in the selected field. During the course, students learn about various proven methods of working with students. When designing the curriculum, a fundamental role was awarded to research results proving the effectiveness of the solutions. The curriculum also relates to key

competences of the 21st century, including media, information and digital competences.

Strengths:

- combining theory with school practice,
- individual learning process – working with tutors and mentors,
- seeking answers to the challenges of the modern world,
- using the best domestic and foreign solutions,
- teaching staff – experienced in working at school, representing various academic centres.

MIDEM competences reference:

Professional Development

1.1 Communication at school, 1.2 Collaboration, 1.3 Reflective practice

During the courses at the School of Education, students develop their competences in building effective circles of cooperation with other professionals, share their experience, and carry out peer evaluation of their work. Thanks to the individual support of a tutor, they can subject their practice to reflection, with the aim of self-improvement.

Use of Media, Information and Digital Resources

2.1 Search and selection, 2.2 Creating and modifying,

2.4 Sharing

Graduates understand the importance of the independent and critical selection of materials for working with students. They are aware of the richness of sources and inspiration, and thanks to learnt self-evaluation strategies and feedback, they can adapt them to the needs of students.

Teaching and Learning

3.1 Teaching, 3.2 Supporting, 3.3 Learning in collaboration,

3.4 Enabling monitoring of the learning process

The learning process at the School of Education is focused on practice; students themselves experience what their students will experience later. They work in teams, in a workshop model, so they may understand the importance of group learning. They share experience from internships and jointly develop the most effective solutions. Thanks to working in student pairs and cooperation with teachers-mentors in apprenticeship schools and tutors in the School of Education, they receive feedback that serves their development. Thanks to this, they better understand

the value of the continuous monitoring of their students' learning process.

Evaluation and Assessment

4.1 Assessment strategies, 4.2 Analysing learning evidence, 4.3 Feedback and planning

Didactic design (the art of teaching) trains the ability to set didactic goals, appropriate to the needs of students. This facilitates the selection of the most effective strategies for assessing student progress. Strategies that allow students to take responsibility for their own learning are promoted. In this process, the teacher supports development at every stage. , and not barely watches over progress and accounts for results. Thanks to various techniques for analysing learning evidence (e.g. group analysis of student works), the teacher fosters an authentic and constant insight into the development of their students. Students learn various strategies for monitoring student work and giving feedback.

Empowering Learners

5.1 Availability and inclusion, 5.2 Diversification and personalisation/customisation, 5.3 Engaging learners

Modern learning requires teachers to respond flexibly to the diverse needs of students. During classes, students learn to diagnose these needs and plan their classes in such a way that they develop the different talents of students. Subject teaching shows how to use various non-educational materials to support learning and strengthen students' competences. Thus, the classroom becomes a 'real life' laboratory, where one can discuss and analyse vital problems and challenges in a safe environment. Students design lessons in which intellectual and cognitive commitment is evident at all times. This is due to the practical use of taxonomic tools for cognitive activities of B. Bloom and T.W. Webb.

Developing Competences Of The Learners

6.0 Understanding the media activity of children and youth, 6.1 Use of information, 6.2 Communication and collaboration, 6.4 Responsible and safe use, 6.5 Problem solving, 6.6 Civic and social engagement

21st-century teachers must be aware that their accountability does not end with providing students with the subject knowledge. Graduates of the School of Education understand that the school is also a place where young people prepare for social life. Social skills should be developed both in the real and digital world.

During the classes on educational and communication competences, students learn how to respond to educational challenges, how to counteract aggression, violence, exclusion, and discrimination. Thanks to psychology classes, they learn about various challenges and threats related to the functioning of children and young people in various environments. They learn how to strengthen their civic activity and support their skills to discuss, debate and make decisions.

Personal competences:

A. Use of media and digital devices, B. Use of information, C. Critical reception of media messages, D. Safe use of the media, E. Active use of the media.

An important place in the training curriculum for teachers of Polish is to develop the ability to understand messages, work with false or questionable messages, and critical reception of various texts that children and youth encounter on a daily basis. It is not enough to embrace technology in classroom to support students in using it wisely and purposefully. The founders of the School offer students the use of IT that is purposeful, appropriate to needs; and, above all, supports cognitive involvement.

Link: <http://szkolaedukacji.pl/>

About the Authors

Dorota Górecka-O'Connor – a sociologist by profession. Until June 2019, she was the Vice President of the Modern Poland Foundation, where she was involved in media education for 7 years. She co-created the first ‘Catalogue of media and information competences’, the website edukacjamedialna.edu.pl and the Great Media Education Tournament (later the Digital Olympics). She coordinated the project ‘European Media Literacy Standard for Youth Workers’. Previously involved in many educational projects, conducted among others by the Polish Humanitarian Action and the Copernicus Science Centre.

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Ewa Korzeniowska – Senior Research and Development Specialist at the National Film Archive – Audiovisual Institute. Philosopher and culture expert, completed post-graduate studies in project management. She implements educational projects in the field of media, digital and information education. Author of the concept of FINA publications on re-use in education and cultural institutions. Coordinator of many conferences, workshops and seminars, including the conference ‘On the Need for Media Education’ with Polish National Commission for UNESCO and the Academy of Fine Arts in Warsaw.

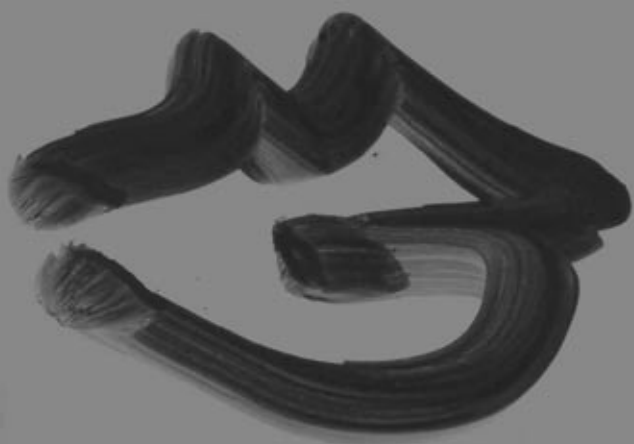
Barbara Krywoszejew – sociologist, mediator and NGO manager, media education trainer and expert. For over a decade, she has been involved in the promotion of media and digital competences, as well as in activities for human rights and building a multicultural society. Initiator and implementer of many educational projects, creator, co-author of educational scenarios, coordinator of author teams. Co-creator of the European Model of Media Education for Youth Workers EMELS. She has cooperated with a number of non-governmental organisations: ‘Polis’ Young Journalists Association, Helsinki Foundation for Human Rights, Modern Poland Foundation, School with Class Foundation, Digital Dialogue Association, and the Forum for Dialogue Foundation.

Alicja Pacewicz – educational expert and civic activist. Co-founder of the Centre for Citizenship Education and the School with Class Foundation. Initiator and co-author of numerous educational programmes: ‘Civic Education at the Local Government School’ (KOSS), ‘School with Class 2.0’, ‘First Class Teacher’, ‘Traces of the Past’, ‘Young People Vote’, ‘Solidarity School’, ‘Night of the Libraries’, ‘Join In. Youth andMedia’, ‘School Film Archive’, ‘Action!’ et al. Expert and trainer in effective instruction and assessment methods, professional development of teachers and open learning environments. Author of textbooks and guidebooks for social studies, citizenship and entrepreneurship education. Co-organiser of international projects, including the Networking European Citizenship Education (NECE) network. A member of the Historical and Programme College of the European

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Grzegorz Ptaszek – Associate Professor in Communication and Media Studies, media expert, psychologist and linguist, works at the Faculty of Humanities of the AGH University of Science and Technology in Krakow. Author of the monograph *Media education 3.0. Critical understanding of digital media in the age of Big Data and Algorithmisation* (2019) and *Talk show. Honesty on the screen?* (2007), co-editor of several collective monographs and several dozen articles devoted to media education and various aspects of the media, including: *Media literacy in Poland* (with Marta Łysik) and *Media Literacy Outcomes, Measurement* [in:] *The International Encyclopedia of Media Literacy* edited by Renee Hobbs, Paul Mihailidis, New York 2019, Wiley-Blackwell and *Media Education 3.0? How Big Data, Algorithms And AI Redefine Our Thinking About Media Education*, [in:] *The Handbook On Media Education Research* (2020). President of the Polish Association for Media Education (www.ptem.org.pl), member of the Polish Communication Association and the European Communication Research and Education Association (ECREA).

(trans. MW)



We still need this kind of work, certainly to be read, and in the case of many texts simply used in education, especially school education. [...] The authors of individual chapters present both theoretical discussions and practical applications. This doubtless proves the pragmatic usefulness of this work.

Prof. Dr hab. **Stanisław Dylak**

The monograph *Media Education as a Challenge* shows a different, deeper layer of knowledge about the media and their impact on society and individuals, which is slightly more difficult to grasp. [...] media education is a challenge to educational authorities and all those people who, being aware of the great contemporary role of the media in learning about the world, want to understand this world better and participate in it more fully.

Dr hab. Eng. **Janusz Morbitzer**

IT networks and their resources developed today must face security threats that may be ideological and cultural, but also economic, political and even military. Keeping your eyes closed to the status quo and growing educational needs is too dangerous. [...] [the publication] seems not only a sign of the times, but will hopefully meet the expectations of academic circles educating students in social sciences and the humanities. At the dawn of the Fourth Industrial Revolution, media education has become one of the priority goals in the development of contemporary information society.

Dr hab. **Maciej Tanaś**

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