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THE ROLE OF NEW MEDIA IN SHAPING A CREATIVE ENVIRONMENT FOR REGIONAL DEVELOPMENT

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Abstract. Progressive technologization of society has an impact on an innovative approach to art and culture. New media play an important role in this context by shaping the environments of creative people who refer to regional resources in their work. The main purpose of the paper is to analyse selected theoretical concepts covering the issues of the use of new media art in the context of a symbiotic relationship with the creative environment of the region. The authors use the method of literature analysis and an interdisciplinary synthesis of the achievements of social sciences and humanities. The theoretical assumptions presented before are illustrated by the reference to a part of wider authors' sociological research – expert debates in the environment of regional creators of new media art. The conclusions indicate potential development trends and especially promising directions for further activities in the field of using new media in shaping the creative environment.

Keywords: creative class, creative milieu, creativity, new media, new media arts, region, technology.

Introduction: the purpose and methodological approach

The article was inspired by the theoretical reflection on the role of new media in shaping the creative environment for regional development. Shaping these environments and their impact on regional development is clearly related to many practical activities. In view of this, it is worth looking at the consequences of the simultaneously progressing process of society technologization, which has an impact on an innovative approach to art and culture. At the same time, attempts are made to search for innovative sources of inspiration for the creation of artworks that convey a new message.

Appreciating the previous analyses of new media issues, an attempt is made to approach art innovatively by referring to regional resources – the region's heritage, potential and the social environment.

The purpose of the paper is to attempt to combine conclusions stemming from the analysis of selected theoretical concepts covering the issues of shaping the art of new media in the

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context of a symbiotic relationship with the creative environment of the region. The article consists of three parts. The first part briefly discusses selected theoretical concepts devoted to new media. This concept is currently appearing in various areas of scientific discourse, but it is not explicitly defined. Threads concerning the artists themselves as well as their relationships with environment will be emphasized. An area requiring separate analyses includes other significant threads such as reception of particular works, meaning of technology and recipient experience. In the second part, the concept of creativity in a regional context is presented. Based on selected theoretical concepts, the concepts of human and social capital and the creative class is introduced. The multidimensional nature of the issues related to the impact of new media on the shaping of the creative environment of regional development determines the methodological approach in this part of the study. The need of an interdisciplinary approach – a synthesis of the achievements of social sciences and humanities – seems to be a *sine qua non* condition for fortunate decisions. The third part is an empirical illustration of the theoretical assumptions presented before. It presents a fragment of the research, the conclusions of which aim to indicate potential development trends of creative environments connected with new media and a particular region.

1. New media: a short description of the ambiguous concept

The universal access and use of new media with the simultaneous weak presence of new media art in artistic life and, more broadly, in social and cultural circulation is a certain paradox related to the sphere of contemporary art and culture. A relatively small community of creators use new media of creation in their activities, while for the majority of consumers, viewers and participants of cultural life, this area appears to be a kind of ghetto for initiated experts in the latest technologies, primarily computer technologies. Contacting with them (apparently) is surrounded by a wall of necessary competences – for example related to the knowledge of digital technologies, programming, information technology (IT) tools – which is a commonly repeated myth.

An area requiring separate analyses includes significant threads such as reception of particular works, meaning of technology and recipient experience. Questions concerning the significance of dynamic development of technology and possible deeper emotional experiences will be discussed on another occasion. Taking into consideration the objective set for our analysis we focus on the definition of new media as well as on presentation of new media artists and their relationships with the place they create in.

It is undeniable, however, that the very notion of new media raises a number of doubts to this day, if only because its origin is rooted in the 1960s, when the progenitor of contemporary media research, McLuhan (1994), referred this phenomenon to expansive development of television; a little later it started to be associated with the development of video, and even later the Internet. It is also worth noting that a lot of McLuhan's key concepts need reinterpretation from a present-day perspective. A good example of such a critical attitude is reinterpretation of the concept of "global village" which, as Jovilė Barevičiūtė argues, is self-contradictory and hence should be replaced by the concept of "global city" (2010, p. 192).

Today's findings regarding the phenomenon of new media could be presented as a kind of map covering research in the field of media archaeology which, abandoning a brief historical perspective, turns towards a past much more distant from our times (Zielinski, 2006). The emergence of the new media era is a process definitely stretched over time, and effective thinking within the framework of some successive "turns" seems to be little justified in this context.

Therefore, instead of looking for historical turning points, it is worth considering important features that may constitute the basis for creating a somewhat ahistorical definition of new media. This can be found in the propositions of Lev Manovich. Perhaps it is not about a literal definition, but rather a sketching of certain boundary conditions, a set of features that allow given objects and projects to be included in the area identified with new media. Manovich draws attention to the fact that the dynamics of the emergence of this phenomenon should be deduced from two basic processes that, combined with each other, determined the formation of new media: computing techniques on the one hand, and media technologies on the other. According to Manovich, the basic set of concepts that can be used to determine the field of references includes five categories, including numerical representation, modularity, automation, variation and transcoding. It should be added that not every new media object must fulfil all these conditions (Manovich, 2002).

However, there arises a question, if the list is not too narrow, or whether it lacks concepts specifying the typology presented above that appear very often in practice and in theoretical discourse? Therefore, another theoretical proposal can be presented as a development and supplementation. Its authors perceive the concept of new media, as

"those methods and social practices of communication, representation, and expression that have developed using the digital, multimedia, networked computer and the ways that this machine is held to have transformed work in other media: from books to movies, from telephones to television" (Lister et al., 2009, p. 2).

It is important that the phenomena from the sphere of new media are not identified here only with digital media, but there are other six features, such as: digitalism, interactivity, hypertextuality, virtuality, networking and simulation. Both presented sets of concepts could be supplemented with other ones, such as hypermediality, non-linearity, hybridity, telematics or a database. More important is the observation that this way of presenting the properties of new media – as opposed to some form of a closed definition or creating a linear interpretation of the historical development of media with some breakthrough point (new – old) – gives the opportunity to describe specific media and technological phenomena as a specific set of paradigmatic features which, of course, does not have to be fully met by a specific medium in order to be considered new.

It should also be noted that in such an optics, subsequent theoretical propositions, such as the one presented by Levinson (2013) in the book *New New Media*, in which he discusses such "new media" as blogging, *YouTube*, *Wikipedia*, *the Free Encyclopedia*, *Digg*, *Myspace*, *Facebook*, *Twitter*, *Second Life* and podcasts, do not undermine the previously presented criteria. The legitimacy of considering the above-mentioned practices as media is another subject because this is a problematic issue, and it is a topic for a long dispute. The recently developed reflection that poses questions about the cognitive performance of the concept of new media,

which is expressed in the trend of post-media reflection should also be mentioned (Celiński, 2013; Apprigh et al., 2013) and the belief expressed by some researchers that the term of “new media art” should now be abandoned and a new language of description of such practices should be sought, as if “beyond new media art” (Quaranta, 2013). Using the term leads to a kind of alienation of the art using new technologies from the wide field of modern art world. However, it seems that this is a one-sided opinion, the conceptual apparatus itself used for the description does not have the exclusive power, although undoubtedly the convergence and coexistence of the “Duchamp Land” (art applying traditional media) and “Turing Land” (art applying new media) are not natural yet, primarily due to the lack of acceptance and understanding for the actions of new media artists on the part of the conservative establishment of contemporary art.

In this context, attention should also be paid to a significant shift which in the reflection on new media could be described as a shift from new media theory to software theory (Mulder, 2004; Manovich, 2013). This is especially important for creative artists who develop their own tools which today are most often comprised of digital technologies serving specific projects and implementation of original works. New media art is very often an activity based on cooperation of artists, scientists, and programmers, which is expressed in such genres as interactive art, robotic art, bio art, net art, generative art, software art, virtual art, computer animation, digital music, to name a few examples (Tribe & Jana, 2006; Wands, 2007). Creativity in the environment of new media artists is based on creative exploitation of the potential of individuals who unite in order to realize specific projects. This results from several reasons: increasing specialization in using specific media technologies, belief in the need for transmedia and intermedia activities, requirement for synergistic cooperation between representatives of the world of art and the world of science, which is most visible in the art and science trend. Not coincidentally there are so many creative groups in new media art, a few of the most famous ones include: *Blast Theory*, *Critical Art Ensemble*, *ART+COM*, *Knowbotic Research*, *etoy*, *Symbiotica*, *Graffiti Research Lab*, *Transmute Collective* or the artistic duets: *Tissue*, *Culture & Art Project*, Christa Sommerer and Laurent Mignonneau, Monica Fleischman and Wolfgang Strauss, *Jodi* (art collective), *Art orienté objet*, Eva and Franco Mattes. Cooperation, collaboration and co-creation is the essence of creative activities of new media artists. The issue of new media used in contemporary artistic practices can only be signalled here, while pointing to the enormous potential that lies dormant in this type of creativity; it is in a special way related to the issues of creative environments presented later in the paper.

2. Creative environment: origin and selected concepts

Attempts to organize the analysis of problems accompanying the development of creative environments have been undertaken by many authors since the 1950s, when significant changes and revaluation in the everyday life of big cities began to be clearly emphasized, which was related to the advent of the post-industrial era (e.g., Toffler, 1986; e.g., Bell, 2020) and the growing role of knowledge workers (e.g., Castells, 2008). The contradictory considerations

of two mid-20th-century authors – Whyte and Jacobs, who inspired Richard Florida half a century later can be an example of lively discussions at that time:

“When you look closely at their publications, the relationship between them becomes evident. Whyte deplored the emergence of an organizational society and the alienation, isolation, and conformism it brought. Jacobs pointed to the possibility of an alternative – the existence of an environment in which differences, nonconformity and creativity can flourish” (Florida, 2010, p. 60).

Florida is considered to be the creator of the concept of the creative class. He put forward a number of theses related to its activity, but considering it not from an economic perspective, *i.e.*, from the point of view of capital ownership or means of production. The connecting element is

“a shared ethos of creativity that values creativity, individuality, difference and merit. For members of the creative class, all aspects and manifestations of creativity – technological, cultural or economic – are intertwined and inseparable” (Florida, 2010, p. 31).

The creative class consists primarily of scientists, engineers, designers and architects, various types of creators: entertainers, actors, poets and novelists, and representatives of opinion-forming circles. They are the super-active core around which creative professionals work in knowledge-intensive fields – such as the high technology sector, financial services, legal professions as well as healthcare and business management.

According to Florida, the place is the factor determining creativity, which he strongly emphasizes. The quality and importance of the place affects the ability to generate and absorb new ideas and solutions for building the urban fabric. It also contributes to the creation of favourable conditions for investment and the development of modern institutional and technical infrastructure, constant investment in science, culture and education, and promoting care for the research and development sector (Marszał, 2012). The triad of three factors in the model of three Ts proposed by him – technology, talent and tolerance – is closely related and mutually conditioning each other (Florida, 2004). Technology drives economic development which, however, directly depends on human capital. This, in turn, associated with talent, accumulates its potential in places characterized by tolerance, *i.e.*, community openness to differences, a culture favourable to all kinds of diversity, open to the exchange of ideas, places of residence of artists or homosexual people, as well as creating the possibility of racial integration. It is a self-accelerating mechanism thanks to which personalities – individuals with rich artistic expression skills, come to cities (Florida, 2010). In such a city, creative industries which generate, mobilize and attract new technologies and new talents develop. The co-presence of people who form the creative class generates competition and cultural diversity of artworks created in this environment. New media, which are the means of expression of artists, shaping the creative environment and the relationship between creativity and technology are involved in this development.

The techno-cultural paradigm is founded on the creative use of new technologies, today primarily digital. Postman’s (1993) pessimistic vision of technopoly as “the surrender of culture to technology” is a negative point of reference for seeking a different understanding of the relationships that exist between culture and technology. It must be replaced with a new project of synergistic cooperation between culture and technology, which is observed now

and is reflected in the latest studies on the subject (Zawojcki, 2016b). New technologies cannot be regarded as a threat or a destructive force in the face of processes of enriching the power of social creativity. On the contrary, technology is a kind of integral human equipment, one could say that it is a kind of cultural software that has never functioned outside the weave of the natural and the cultural (nature – culture). Today's experience of reality is embedded in the integral, holistic treatment of nature and culture, reality and virtuality, realness and simulation, biology and technology, which once used to be seen as contrary.

When analysing the concept of the creative environment, Florida's achievements cannot be ignored, but a lot of time has passed since his first publications on these issues, and his critics developed this concept drawing various inspirations from it. It is worth paying attention to three dimensions of the analysis, which are a continuation of Florida's considerations – the importance of place, the concept of creativity (including the search for innovative solutions) and institutional supporting creative environments. This is well depicted by the following diagram which shows that these dimensions overlap and, under proper conditions, form the basis for creative environment (Figure 1).

The concept of creative place is particularly interesting in the case of post-industrial areas that are intentionally or spontaneously reclaimed through bottom-up urban movements, where it becomes possible to present, for example, the technological history of a given region. Shaping the creative environment is also associated with unusual artistic events in such spaces where viewers are involved, *i.e.*, participants often become actors and co-creators of artistic events.

However, based on Polish research conducted in the Silesian Voivodeship (SV), Poland on the transformation of an industrial region into a region of knowledge, it can be stated that representatives of various sectors of the economy, politics and the world of experts had difficulty in explicit description of the creative class existing in the region. More often they emphasized that these are simply active people who “want to do something”. The initiatives and ideas of these people are often nipped in the bud by the bad law, which expands official

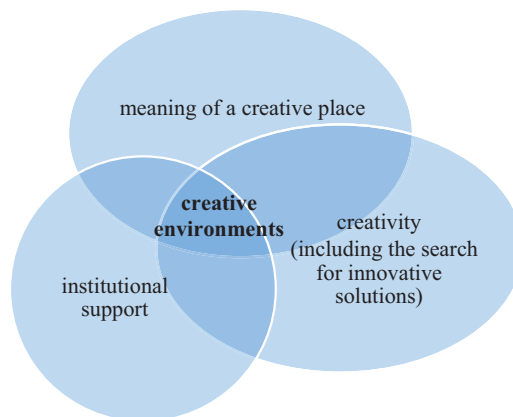


Figure 1. Meaning of a creative place, category of creativity (including the search for innovative solutions), and institutional support for forming the foundations of creative environments (source: created by authors on the basis of Florida's analyses (2004, 2010))

procedures, increases bureaucracy and thus limits the perspective of the very innovative activity (Suchacka, 2014). The sources of barriers to the development of creative attitudes in the SV were sought mainly in the relationships between the economy and politics – and thus in the economic monoculture, but also in the specificity of human capital oriented in its qualifications towards industry, in the mentality of the inhabitants, their multiculturalism and historical determinants. These determinants were previously described as the arms of the regional anchor, which in the context of regional development can symbolize a dynamic balance only if they are anchored in values supporting the development (Suchacka, 2009).

Referring to the concepts of creativity and innovation previously described by other researchers, the differences between the two concepts should be emphasized. Creativity can be considered as a source of innovation and then it can be treated as an individual resource of an individual, but nowadays it is more and more often perceived as a result of a collective process. Creativity is therefore the result of the interaction between concepts and ideas, and the socio-cultural context. In the analysis of the relationship between creativity and innovation, it is impossible to ignore the achievements of Charles Landry and Franco Bianchini. According to these authors, creativity and innovation are explicitly connected. Creativity is about creating a new idea, and innovativeness is about putting it into practice (Landry, 2008). The creation of innovations is supported by creative milieu – *i.e.*, creative environments concentrated in cities or specific places with characteristic – soft infrastructure (cultural norms) and hard infrastructure (cultural institutions, meeting places in public space). They allow to generate the flow of ideas and thoughts (Landry, 2008, p. 133). It is precisely those places where innovations are born at the level of direct, often spontaneous interpersonal relations that have a chance to strengthen creative attitudes.

In one of the latest approaches to this topic, a group of researchers gathered around the Observatory of Urban and Metropolitan Processes, operating within the structures of the University of Silesia in Katowice, Poland tried to supplement the existing analysis with new problem areas, giving the opportunity to expand the applied optics of perceiving innovation in the context of metropolises. The researchers proposed the innovation place model, the starting point of which is an attempt to combine three problem areas: metropolitanisation, innovation and place. The innovation place model can be defined as an area in the local space which, although connected to the network of global flows and resources circulating in it, remains a local place, because it is loaded with meanings and values related to the past, but also with a vision of the future. In this way, a potential associated with a given place, which enables the creation of new relationships, but also resources on a local, metropolitan and sometimes global scale are created (Bierwaczzonek et al., 2020).

The sources of inspiration for new ways of thinking and the development of individual intellectual abilities are no less important. Nowadays, the creative environment is institutionally supported by providing the necessary help to creators and artists, promoting risk-taking and facing challenges. Interactivity is a property of a work of art that encourages the viewer to acting and can therefore influence the final shape of the work. It can not only radically change the recipient's situation, but also affects the way the work of art comes into existence. Artists using the potential of new media and their specific properties try to create new forms of relations between creators and recipients. The passive, contemplative way of perceiving

the work, characteristic of traditional art, is replaced by attempts to create partnerships in which the recipient is perceived as a co-creator. This is the case, for example, in interactive art, where the artist is only a specific designer of a specific situation, and the so far passive viewer becomes an interactor, an active participant in the process of creation of the work, co-responsible for the final formal shape of the work (*v*)user, *i.e.*, both the viewer and the user (Porczak, 2009). This type of participatory and collaborative culture can be a kind of indication for changing the model of audience participation in the formation of the creative environment.

This new type of relationship (creator – recipient) also affects a new type of recipient experience which can be described as multisensory strategies that appeal to multiple senses at the same time. Sight and hearing, as well as tactile stimuli, haptic, physical impact on the body treated as an interface – they all become the domain of practices changing traditional ways of experiencing works of art. A good example of this is the use of virtual reality, augmented reality and mixed reality technologies in order to create immersive environments (such as cave automatic virtual environment) where users are exposed to multiplied and intensified stimuli enhancing their perceptual capabilities. New media technologies generate new types of reception and co-creation of works, they activate the entire human sensorium. It is a radical *novum* in the process of reception of contemporary new media art.

3. The role and awareness of the regional creative environment using the potential of new media: case study. Organizational and methodological dimension

The contemporary demand for cultural services and entertainment, for knowledge and important urban events results from the very essence of creativity as a process related to the diversity that has always accompanied the city. The city was a source of emergence and a place for the exchange of new ideas, the seat of the university, and an inspiration for art and architecture. The research, a section of which is reported here, was the result of previous events that took place in Katowice, Poland in 2018. They were the United Nations Educational, Scientific and Cultural Organization (UNESCO) Annual Meeting in June, 2018 and the United Nations Climate Summit (Conference of the Parties 24) in December, 2018, co-organized with Kraków, Poland. These events were accompanied by the question of how culture and related activities can influence the achievement of the goals of the 2030 Agenda.

With these assumptions in mind, 14 discussion groups, 7 in Katowice and 7 in Kraków, were established in the research project. Their main goal was to reflect during special expert debates, on the possible impact of specific spheres of culture on the implementation of the goals of the 2030 Agenda. Thematic groups were organized both in Katowice and Kraków, similarly to the 7 areas distinguished by UNESCO, in which it is possible to apply for the status of a creative city. They include literature, music, film, design, new media, gastronomy and folk arts/crafts.

The research was conducted from February to December, 2018 in Katowice and Kraków. Each discussion group had its moderator who decided on the composition of the discussion groups, reaching for representatives of the city and regional creative circles. During the

meetings planned for each group, the participants discussed the goals of the 2030 Agenda or problems related to these goals. Importantly, each time references to cultural activity in the city were sought in distinguished areas. Participatory observation, which could turn into a kind of sociological intervention was the role of sociologists, *i.e.*, the researchers participating in the debates (Touraine, 1973; Wieviorka, 2008; Pyka, 2010; Pyka & Wódz, 2011). Each of the sociologists was assigned to one of the 7 cultural areas constituting the areas of UNESCO's creativity, simultaneously acting as a kind of link between participants in debates in both cities.

The analysis of the collected research material included the study of the content of spoken opinions with elements of discourse analysis – identification of the main thematic threads, theses and key words, the local/global nature of the discussed topics, the importance of the analysed issues in the area of culture for the development of the city and improvement of the quality of life in the city, and compliance/discrepancy of opinions. A comparative analysis of reports was also performed on the basis of “Kraków” and “Katowice” materials provided by moderators of individual thematic groups. The main research tool was the observation sheet including the most important analytical categories.

The project was experimental in nature, which resulted in an individualized approach of the moderators to organizing groups. The dynamic essence of the project – the variable or constant composition of groups, their openness or inaccessibility, accompanying other events – indicates the specificity of the implemented research task. The results of the research were prepared in the form of a report for Katowice – the City of Gardens.

For the purposes of this paper, it is worth taking a closer look at expert debates on new media, one of UNESCO's seven cultural domains. Each of the debates had its main topic. In Katowice, the discussions focused on the condition and presence of new media in public space, media education, the role of social media as tools for creating a local and global community, the relationship of new and old media, the use of new media by cultural institutions, as well as the art of new media from the perspective of artists. In Kraków, the cultural and technological convergence was analysed on the example of the project “Reclamation of Krzemionki”. Furthermore, the realities of the functioning of new media in the city in the context of 2030 Agenda, as well as the rules of the “Intermedia Work of Art” competition organized by the Intermedia Department of Jan Matejko Academy of Fine Arts (JMAFA), Poland were discussed.

The participants of the debates in Katowice represented various scientific and cultural institutions, and apart from the invited participants, no outsiders appeared at the meetings. There were 4 people, who were different every time. It has never happened that the same people participated in these meetings. The participants of the debates were dominated by men, people with social/humanistic education, *i.e.*, culture experts, journalists, artists, philologists, and philosophers. In Kraków, out of 6 planned debates, only 3 were held – including one “virtual”, consisting in asking key questions and sending them to potential interlocutors. The first spring debate was attended by a total of 10 people and a few students as observers and technical assistance. The meeting was very effective and additional short statements were filmed in the open air of the JMAFA Intermedia Department. The second meeting was virtual (e-mails were sent to over 40 people), and potential interlocutors also came from artistic or

journalistic environments, as well as – often and simultaneously – scientific. The third debate had a much more modest dimension – only one invited guest from the academic community participated in it. None of the planned debates took place in the autumn stage.

Research results, discussion and conclusions

Debate moderators presented a different view on the role of new media art and its importance for the city. In the case of Katowice – the debates were very well prepared in terms of the content, with a strong focus on the analysis of fundamental issues that are difficult to define. In the case of Kraków, some debates were not held, while those that took place were dominated by highly practical issues related to the down-to-earth side of creating the new seat of the Intermedia Department of the JMAFA in Kraków. The role of the sociologist in both cases was limited primarily to observing the entire discussion and incidental comments or reflections formulated during the debates.

The approach to the subject of the debates in Katowice was deeply analytical, reaching for reflection of a social or even philosophical nature. These interviews were very often of a high academic level due to the competences of most of the invited guests, *i.e.*, representatives of universities or very experienced media or cultural institution employees. Practical conclusions appeared relatively rarely in these debates, but they were indeed of a fundamental nature and possible to implement with the assumption of appropriate support.

In the case of Kraków, the most successful was the first debate, which gathered over a dozen interviewees (including 3 women). It was a very intense conversation, although it proceeded according to the order defined by the moderator. The three-minute recordings in front of the camera were its enrichment.

Both in Katowice and Kraków, certain similarities in the opinions of the respondents could be noticed, which mainly referred to the need to provide support – mostly financial, but also organizational, *i.e.*, to certain initiatives in the field of new media. This approach was most often the source of losing the main thread of the debate focusing on the idea of Krakowice (Kraków + Katowice) and the goals of the 2030 Agenda. A certain difference in the course of the meetings in Katowice and Kraków can be noticed. The meetings in Katowice were definitely more balanced, less emotional, more analytical, and focused on intellectual discussion. The Kraków meetings were more emotional, spontaneous in their course, but with a clear focus on the practical aspect, *i.e.*, creating a specific place for the exchange of thoughts around new media on the map of Kraków.

The involvement of the debate participants corresponded to the atmosphere created by the moderators. In the case of Kraków, it was rather a chaotic, dynamic presentation of plans that were constantly crystallizing in decision-making centres. The moderators who kept an eye on the time and subject of each meeting, were the dominant people in the debates.

Due to the different approach to debates, it is difficult to unambiguously identify common areas that could be implemented in urban activities by developing universal patterns of action. The only concordant conclusion is the issue of education in the field of new media and institutional support for specific cultural activities. This coincides with analyses previously conducted by another researcher who pointed out that contemporary Net Generation

“requires applying new paradigms for teaching and learning beyond the traditional classrooms” (Klibavičius, 2014). The process of educating children and teenagers in the scope of reception and understanding of new media art was one of the main topics which was common for the debates in Katowice and Kraków.

The main “implementation” conclusions that could be achieved at the municipal or regional level included taking specific actions, such as the reactivation of the *Art+Bits Festival* – which was once an excellent platform for the exchange of experiences and knowledge between various environments. At this type of artistic meetings, creative circles integrated, which was indicated as the necessity for the cultural development of the region. The cyclical nature of such events was emphasized. The Katowice interlocutors emphasized the role of local media in the constant search for leaders, and their consent in supporting global authorities.

The participants of the debates also gave a positive example of the *Silesian Science Festival* as an event focused on promoting science and strongly addressed at young people. Again the role of education with the use of new media as well as on new media was emphasized. Further ideas for actions such as the so-called *Usiobus*, which would travel around smaller towns in the region with the aim of promoting science were also provided. The use of specific places (e.g., the Silesian Museum, Katowice) as spaces for the organization of cultural events in the area of media art could also be an example of implementation activities that could be realised at the municipal or regional level. The education of specialists, i.e., the analysts of culture as a product is a separate problem noticed by the respondents. The necessity to change the way of educating artists was also emphasized, i.e., the shift from an artisanal approach to an interdisciplinary one combining the achievements of many sciences. It is also important to prepare future professional staff for the departments of analysts created at each major cultural institution. These would be specialists with both sociological and IT background, who would support marketing departments with a qualitative approach.

The conclusions of the debates were clearly related to regional issues – as in the case of the Kraków debates, where a significant part of the discussions was focused on the “Reclamation of Krzemionki” project – the creation of a forum for discussion and media art experiment around the new seat of the Intermedia Department, in relation to the TVP3 Kraków Centre, Park im. Wojciecha Bednarskiego w Krakowie and the cultural surroundings of the hill. “Reclamation of Krzemionki” is to be a positive example of creating a potential local communication node. You can see in this case how important a specific place for creative development can be. It was postulated to create a tool – a map of current spontaneous initiatives. Kraków has its undoubted centres of cultural innovation. The creation of an intermedia implant, which Krzemionki, Poland would be, is not only the reclamation of undeveloped and abandoned spaces, but also the possibility of coordinating initiatives by recultivating the place and creating a node for cultural innovation in it. Unfortunately, today these dilemmas are no longer relevant for a very prosaic and fundamental reason. The JMAFA’s Intermedia Department, which was to become a kind of driver and at the same time a centre integrating various environments (artistic, scientific and technological), was forced to move out of its seat in Krzemionki that it had been used for several years. In this way, the very interesting concept of creating a specific artistic and scientific centre, as well as an exhibition centre, within the city space of Kraków, broke apart.

The conclusions of the debates focus, among others, on the need to educate the young generation in the responsible use of social media. Promoting responsible attitudes and careful and conscious use of these tools should be a priority of the education system. This proposal is fully consistent with the fourth goal of the 2030 Agenda regarding lifelong education. The second main conclusion concerns the promotion of the principles of sustainable consumption and the models that should be shaped by them. The interlocutors saw the main role in this serious task for the authorities and for promoting local cultural events arising from the well-established system of values adopted during elementary education.

Summing up the conducted debates and the obtained results, it should be emphasized that although the starting point of the research project was the 2030 Agenda and related ideas concerning global challenges, the debates became a pretext to talk about problems identified locally at the municipal level. Ideas and reflections that emerged during the debates often concerned small social worlds – local spaces, housing estates and activities that can be conducted in such places as part of the implementation of global ideas. It happened that the urban or local perspective dominated and made the goals of the 2030 Agenda disappear from the discussion horizon. In terms of application, the research brought many ideas for specific activities and projects that can be implemented in Katowice and Kraków. They can inspire city authorities and institutions, especially when constructing city development strategies or sectoral strategies. Research in the network aspect has become a pretext for the integration of people associated with the area of new media, while opening the possibility of expanding the circles of cooperation and partnership, getting to know each other better and taking joint actions in this regard in the future.

Main assumptions

A multifaceted and systematized discussion on the issue of the impact of new media on the formation of regional creative environments is a broad task, and the previous research traditions and the multitude of interpretative approaches would require a separate detailed study. However, it is indisputable that some research on new media is clearly directed towards regional issues as the development potential of creative cities and regions, with the characteristic activity of the creative class. This is a new inspiration for not only strictly sociological, but also interdisciplinary and transdisciplinary research.

The use of new media and new technologies in urban space takes place on many levels: from the often controversial and disputable surveillance techniques, *i.e.*, systemic monitoring of citizens' behaviour, through communication and location facilities using various smartphone applications (mobile and locative media), to the use of new media in artistic, and more broadly, cultural practices. There is no doubt that all these aspects are important in shaping progressive thinking about media capital, which should be systematically considered when designing a vision for the functioning of the cities of the future and regions. It is not about focusing on the very (new) media, they are only operational tools, but rather a deeper look at the processes of "mediation" that take place in the "after new media" era (Kember & Zylinska, 2012), or even more broadly speaking, "after the media" (Zielinski, 2013; Zawojcki, 2016a). These mediations (and remediations) must consider the complex, network connections of

various entities involved in creating the postmodern structure of society not so much post-industrial now but creating the fourth industrial revolution (Fourth Industrial Revolution), the foundation of which is the integration of the physical and digital environment managed by omnipresent algorithms and artificial intelligence. Creative sectors can and should play in these processes a key role of global and local trendsetters, who set new paths of development, are precursors in the use of new tools and media and indicate the direction in which we should go.

The case studies discussed in the article – the research conducted among new media experts – confirm that the three planes listed in our diagram:

- the creative place itself – understood as an urban or regional environment, or a specific place such as a university;
- the category of creativity – understood as creation of new ideas, and innovation understood as implementation of a particular idea;
- and institutional support which is looked forward by the community of new media artists...

...are the foundation for building creative environments. New media themselves constitute a special kind of agent of change and formation for this environment. Their role stems from shifts in the way a new generation is being shaped. This, in turn, is the result of dynamic technological changes that further accelerated during the COVID-19 pandemic. The process of remote education has shown the extent of transformation the education on new media has undergone. At the same time, crowds of young people could have remained excluded from more sophisticated opportunities offered by new media art due to their contact with new technology being confined to necessary and basic forms of remote education. However, in the presented studies which, after all, took place before the COVID-19 pandemic, no one had even in the darkest visions predicted such a scenario and its effects.

On the other hand, it is worth emphasizing that the role of new media as an agent of change in regional development is limited by the opportunities resulting from support of relevant institutions. Favourable conditions of this type were located in the centre of the expert debates. Many respondents indicated important barriers to the development of not only new media, but – in this context – of the whole city or region.

The conclusion of the ongoing reflections is certainly the fact that there are clear multifaceted relationships between creators of new media and creative circles, which in turn promotes the development of the whole region. These planes may constitute separate topics of analysis, but an interdisciplinary approach, using experimental research methods, provides an opportunity to capture developmental trends and vital needs of specific creative environments.

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