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# NOTES ON MODELLING MEDIA SPACE
# (AN INTRODUCTORY INSIGHT INTO THE ISSUE)

Modelling media space involves specifying the being and factors as well as the manner of coming into being of media information or a media fact and mutual relations between sub-space thus expressed and its possible configurations, and also of their reciprocal permeation, adjacency and blending with other spaces.

The basic issue concerns a description of the appearance and being of the media information in social space, marginal conditions of the process, criteria and ways of interpreting what must come about in order for the process to reach the consciousness of the audiences. It is important to determine the role and functions of the media agents that intercept, extrapolate or mute media information, explain, offer comments – „arrange" it in the media space.

The media space is a space of open communication too that is enacted through networks of media linked with computers and bases of IT memory that have – as Pierre Levy has it (2004) – a modular character, plastic, fluid, „$n$-dimensional", recurrent in any real time, hipertextual and interactive, virtual, with creation of many other virtualities, with an interface of „entry" and „exit", associational[1].

In the vision of such a system of multi-dimensional space, media are a portal of accumulated information, knowledge, a new form of humanism or culture, and so they influence the depth and direction of civilisational transformations. This situation breeds many questions and critical reflections as for the vector and manner of the implemented changes. Ideology (or as some say – utopia) of communication is criti-

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[1] The majority of concepts that are today helpful in characterizing media space, virtual space or cyberspace has been first used in scientific fantasy novels, e.g. by S. Lem in his book titled *Summa technologia*, by William Gibson in his novel *Neuromancer* and in the movie trilogy *Matrix*.

cised, fears are voiced related to the dehumanizing impact of technology, lacking visions of alternative futures, yielding the arena to commercial marketing and not to intellectual challenges. The birth of so called new totalitarianism of the media that spells the loss of communication grounded in state, national and regional conditions is denounced.

The new situation of the media and of space created by the media makes one concerned with detotalization of information, prevention of demonization of the media contents, especially in the dimension of its virtual character and its operating in cyberspace, and taking into account all kinds of social-historical, political, technological and civilisational possibilities of involving a human being in this process.

To make the manner in which the media space is conceptualised more ordered, let us recall what various thinkers wrote about universal features of spatiality:

– „We imagine space as infinite vastness that we experience as a given" – wrote Immanuel Kant (2001: A20/B34, A22/B36)[2];

– „In a way, any object in space becomes one of two possible states of matter. I can think of space as of being empty but I cannot think of space without objects" – Ludwig Wittgenstein (line: 2012–20 131);

– „For a religious person space is not homogenous, there are fissures, fractures; there are pieces of space that are qualitatively different from others" – Mircea Eliade (1966: 5);

– „Time-space is not flat but curved or creased by energy and mass that are within it" – Stephen Hawking (2005: 82)

– „Cyberspace (in the media space) is a space of open communication by means of connected computers and IT memories that work all around the world" – Pierre Levy (2007).

Reflections related to the topic of media space should be an object of research in a variety of disciplines, such as mathematics, physics, geography, anthropology, sociology and psychology.

Interpretation of space has always been one of the most important aspects of avante-guarde thinking in culture and art. In XX century space started to be perceived as a neutral, infinite and limitless field. At

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[2] According to Kant, the sources of transcendental esthetics, time and space, are *a priori* forms inherent in our senses. They origin in the subject and are applied to all phenomena (that is senses provide impressions that have already been shaped in terms of time-and-space).We perceive time and space in our experience as real, however, during a transcendental analysis they turn out ideal – they become nothing when we want to consider them independent of experience (Tatarkiewicz 1988).

present, mainly owing to the inspiration provided by Einstein's general theory of relativity, the linkage between time and space is emphasized – the so called time-space[3].

In painting and sculpture (e.g. in cubism[4], unist conceptions) what was important was experience of so called multi-dimensional space that is an immanent component of any work of art[5]. In this sense photography, film, audio-video are used not only as instruments that document actions but as media that create a new environment that expands the sphere of artistic experiences. Thanks to new technologies, experiencing space gets extended by linking new areas of real space with media space[6]. The same is true about virtual reality and cyberspace that are tightly connected with media space. It is in here that the time of narration melts with the time of the story and the time of its reading – with watching and participating. They combine here and now. There – nothing gets narrated. The story narrates itself through the blending into one of the time of narration, story. In extreme cases this allows for psychotic „immersion – infatuation" with the contents – this is so called „Don Quijote's syndrome"[7]. Media space allows for new trans-media insights into contemporary human sciences, literature, art, film etc.

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[3] In Poland, Adam Wiśniewski-Snerg in his book *Jednolita teoria czasoprzestrzeni* (1990) attempted to look at space and time like this.

[4] In the theory of cubism, „space is continuous and this is why no part of it may be separated and contrasted with the remaining part of space. Dada artists and surrealists merged the experience of space with action; they performed first objects, environment, actions. In this way, they transcended the traditional esthetic space" (www.kubizm.119. pl/faza-prekubistyczna.html).

[5] In „unist" conceptions, „neo-avante-guarde challenged further areas. It continued the search for new media, new spaces of art. It developed avante-guarde experiences related to space: environment, happening. The body is introduced in art-space, performance appears, including also actions that probe the body's relation to the external" (Koncepcja unistyczna wobec przestrzeni, http://2010.inspiracje.art.pl/2009/artykuły/ o_ ofestiwalu/wobec_przestrzeni).

[6] During the INSPIRACJE 2009 festival some methodological criteria were accepted in this regard, allowing for a distinction between the group of projects concentrating on actions directed at space and the group of interdisciplinary installations, hybrid ones that belonged to visual culture. Those are intermedial actions and objects; space is an immanent component thereof – alongside the traditional media such as painting or photography or an advanced electronic technology. The specificity of such realisations transpires through adjacency of the two dimensions: media and time-space.

[7] „Don Quijote syndrome" is a complex of a man's behaviours vis-à-vis women that is characterised by predominance of dreams, high expectations, idealization and a search for a pure woman – a perfect one. The term is also used do describe attitudes

Its basic features include:

– digitality – resulting from the algorythmic nature of digital information (although examples of non-digital but interactive information are also known, as well as the other way round – of digital but not interactive);

– responsiveness – that is a consequence of digitality pointing out at reactive nature of the medium that is characterised by immersion; it is an ability to respond to changing conditions;

– multi-channel character – the work of art built by means of a digital technology may be created and received through many sensoric and semiotic channels;

– network character – digital media connect technology and people in space, situating them in new, often virtual environments;

– dynamism – resulting from changeability of signals;

– modularity – resulting from the usage of the computer, owing to which easy and quick reproduction of data is possible, their division into many autonomous objects.

Current activities aim at building a model of media space that will permeate and  penetrate variously configured and defined spaces in the aspect of the impact of globalization processes on the living space of the human being, their visuality connected with virtuality that are provided by the new media and the Internet, as well as changes in the mode of communication and new directions of research into cultural phenomena.

In the theory of social communication and the proposed models of media systems, media space, its structure, is determined by actors of the primary market engaged in mutual interactions (public character of mass media, market of actors commissioning commercials, promotion agencies) and of the secondary market – suppliers of software (media and audio-visual products and their distributors) and hardware (industry that provides new technologies, machines, software, equipment etc. for media production) and press-information agencies, institutions that

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that exhibit full immersion in an idealized virtual space, are detached from reality and transfer behaviours, values and models to the imagined world. A literary antecedent model for such attitudes is found in the hero of a novel by Cervantes about Don Quijote that was written in the XVII century; the universal literary myth of „donkiszoteria” derives from this. This complex is frequent in the Western culture being indirectly connected to the so called Madonna complex, that is the complex of virginity. It applies to shy, sensitive, noble men who cherish demanding ethical standards, perceiving women through the lenses of poetry, angelization, as embodiments of virtue etc.

reglament and control the media (Goban-Klas 1999; Dobek-Ostrowska 2007).

The idea of modern approach to media space is to treat it as a self-contained being, permeating and penetrating variously configured social, cultural spaces in search for information containing events that have emotional potential that allows for virtualising their form, getting to learn multiple dependencies and relations, causes of their coming into being, together with their pasts and forecasts.

The basic instrument to identify and penetrate the areas of media space and of other beings in variously configured spaces involves working out a penetrating algorythm that would allow for discovering a real dimension of processes of association taking place within them on the basis of its basic laws.

Each information in social space, no matter how configured, is a description of a fact, event and simultaneously a subjective imagining of those who receive them, their imagination and inspiration to new imaginings and further associations. By nature, it is information of so called semantic character (a set of news about facts, events, classes, features of objects etc.), embodied and offered in forms that enable their addresses to take a stance with regard to the existing situation and to undertake adequate actions.

Broadly understood, information is not only an item of news but also a decision, prohibition, suggestion or recommendation trammitted in the arrangement between „the producer" and the addressee". Narrowly understood, information means an item of news that a human being gleans through observation associated with knowledge and thoughts that sh/e has and that may be rendered in a form of a message.

Two basic kinds of information are distinguished: singular information that describes some single object, process, event, represented in the form of a set of information containing the name of the object, class, label of features, its value determined by empirical measurement (Stefanowicz 2000) and also its situational context, and aggregate information referring to sets of objects, sets of features etc. Agreggation may be effected in the space of objects themselves, in the space of features and their attributes, which allows for executing algebraic operations and algorythmic transformation. Agreggation allows for translation and association on the basis of likeness, contrast and adjacency, reciprocal permeation, imagination as well as inspiring to create new sets of information.

The semantic approach to information opens completely new areas of its functions and structures in the media space, too. This approach is characterised by its universal nature and simplicity that result from creation of elaborate networks of data, so called media semantic networks. What is needed then is a technology that enables access to new services and a new approach to semantics enabling digitalization on the basis of producing so called syntactic compliance, enforcing linguistic correctness of information and semantic compliance in „mapping" and analysing and verifying relations between elements.

Each item of information in the media space has its contents – multi-word series of the same answers to questions that are asked in the same order, and a weight – something that we provisionally call an emotional intensity (in the language of psychology – the strength of feeling emotions). In the process of modelling, we propose that a particular agreggate should be used – a graph of a special kind[8] (Gościński 1968: 62) allowing for a description of contents and weight of information, its location in the area of contact between social and media spaces that create a network of information. Such an aggregate will have an in-built system of address memory that has a specialised structure, an interface of entry and exit; it will be possible to describe its changeability in time. By means of empirically established parameters it will be possible to determine an emotional value of associations in the process of change over time.

To be used as the model of the media space, this agreggate as a graph of a special kind, must fulfill the following conditions:

– the extreme points of the graph are to be mutually connected with others and are to create so called incident peaks (*wierzchołki incydentne*);

– the number of edges and nods of the graph must be finite[9];

– each graph is to be treated as a relatively isolated system, that is, it is possible to describe it and its information circulations by means of a separate model;

– the model itself is in its essence a complex system, it creates a network for processing information and constitutes an element of a whole network of the medial space.

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[8] By graph we mean a drawing consisting of a set of nods (points, e.g. A, B, C) in which the particular pairs of nods (all or some) are linked by one or more lines.

[9] This is so called finished graph, and in the case when the number of edges is infinite, such a graph is called infinite.

Aggregates in the media space interact through permanent and diverse relations of spatial kind that could be understood and described by the proposed model to conceptualise the media space. In this sense, it is to be understood as a set of dependencies-associations that exist between certian magnitudes, reflecting relations that occur in reality, such as:

– the manner in which information is consolidated;

– the origins of perceptions, imaginings and their inspiration in an aspect of the exhibited emotional intensity;

– their association by means of likeness, contrast and adjacency.

Wishing to define within the model the movement and dynamics in space and its networks, we take advantage of possibilities offered by so called playing out algorythms (*algorytmy rozgrywające*)[10] (Kazimierczak 1973: 134–167) applied to managing, steering and penetrating of space by its objects. Building such algorythms allows for solving a majority of problems pertaining functional description of the media space and primarily for resolving the implementation problems and issues related to the networks' complexity. However, this will not be possible without applying of so called quantifying of space (*kwantowania przestrzeni*)[11] assuming that the very penetration of space takes place in a certain limted metric space, topological space (Jaworski, Ditław 1966: 845). The process of association in the media space, indispensable for its autonomous being and communication between its actors/subjects will occur similarly as in a cybernetic model of association-based memory (*pamięć skojarzeniowa*) (Kempisty 1968).

Social and political events that we see developing, indicate that it is worthwhile looking for current and historical relations between particular items of information in order to get to know others, which is often difficult to see in the media space. The conception of the media space in social and political dimension is to serve just this.

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[10] The playing out algorythms are used in technical cybernetics and game theory as *sui generis* steering arrangements that simulate the process in the condition of incomplete initial information and that nonetheless allow for imitating events – in our case searching for associations.

[11] The term „quantifying of space" (*kwantowanie przestrzeni*) (łac. *quantificare* – „to make big" and *quantitas* – „amount", formed following: Kopaliński 1980: 412) means the smallest portion by which the physical size of the given system can be changed. In cybernetics, by analogy, a concept of a „space quant" (*kwant przestrzeni*) could be introduced by means of convention.

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