STUDIA UNIVERSITATIS MOLDAVIAE, 2022, nr.11(01)
*Seria "Științe economice și ale comunicării" ISSN 2587-4446 E-ISSN 2587-4454 p.78-82*

**CZU: [659.3 + 070]:004** **DOI: https://doi.org/10.5281/zenodo.5816539**

# TECHNOLOGICAL PROGRESS: GENERATOR OF CHANGES IN THE MEDIA FIELD

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The digitalisation of the media implies a multi-aspectual approach, which, in a general framework, aims at the continuous and direct process of technologicalisation and in a particular one - the transfiguration of the traditional mass media and the emergence of new media, native digital. The basic features of the new media refer to: the fact that a single object responds to more and more functions, memory and storage space, sometimes even unlimited, speed and removal of communication barriers, the degree of user participation that can interact directly with other users and/or the author of a material.

New media, in a relationship of complicity with social media have become a fertile ground for experiencing direct communication, through a more colloquial language, which can cover different segments of the population and is represented by a new methodology, namely the "self-narrative".

***Keywords:*** *media, digitisation, users, virtual space, interactive, convergence, mediamorphosis, information society, multitasking.*

**PROGRESUL TEHNOLOGIC: GENERATOR AL SCHIMBĂRILOR ÎN DOMENIUL MEDIATIC**

Digitalizarea mass-mediei presupune o abordare multiaspectuală, care, într-un cadru general, vizează procesul continuu și direct de tehnologizare, iar într-unul particular – transfigurarea mijloacelor de informare în masă tradiționale și apariția de noi media, nativ digitale. Caracteristicile de bază ale noilor media se referă la: faptul că un singur obiect răspunde la tot mai multe funcții; memorie și spațiu de stocare, uneori chiar nelimitat; viteza și înlăturarea barierelor de comunicare; gradul de participativitate a utilizatorului care poate interacționa direct cu alți utilizatori și/sau autorul unui material.

Noile media, într-o relație de complicitate cu social media, au devenit un teren fertil pentru experimentarea unei comunicări directe, prin intermediul unui limbaj mai colocvial, care poate cuprinde diferite segmente ale populației și este reprezentat de o nouă metodologie, anume – cea „auto-narativă".

***Cuvinte-cheie:*** *media, digitalizare, utilizatori, spațiu virtual, interactiv, convergență, mediamorfoză, societate informațională, multifuncținal.*

The digitalisation of the media implies a multidimensional approach, which, in a broader framework, aims at the continuous and direct process of technologisation, and in a particular one - the transfiguration of the traditional mass media and the emergence of new native digital media. These perspectives highlight two priority forms of communication, information and information reception:

1) *the traditional form*, when the information is perceived separately, based on the type of production and distribution channels;
2) *the convergent form*, specific to digital media, when the information is perceived as a whole or as a constituent part of some integrated media products.

The latest form of media communication is developed primarily by new media, which, according to researcher Lev Manovich, are represented by modularity, variability, and automation. The hybridisation of new media requires a constant relationship, able to integrate distinct formats and domains. Digital content offers flexibility in structuring and ranking whenever needed [1].

The basic features of the new media refer to:

- a single object responding to more and more functions;
- memory and storage space, sometimes even unlimited;
- speed and removal of communication barriers;
- user participation that can interact directly with other users and/or the author.

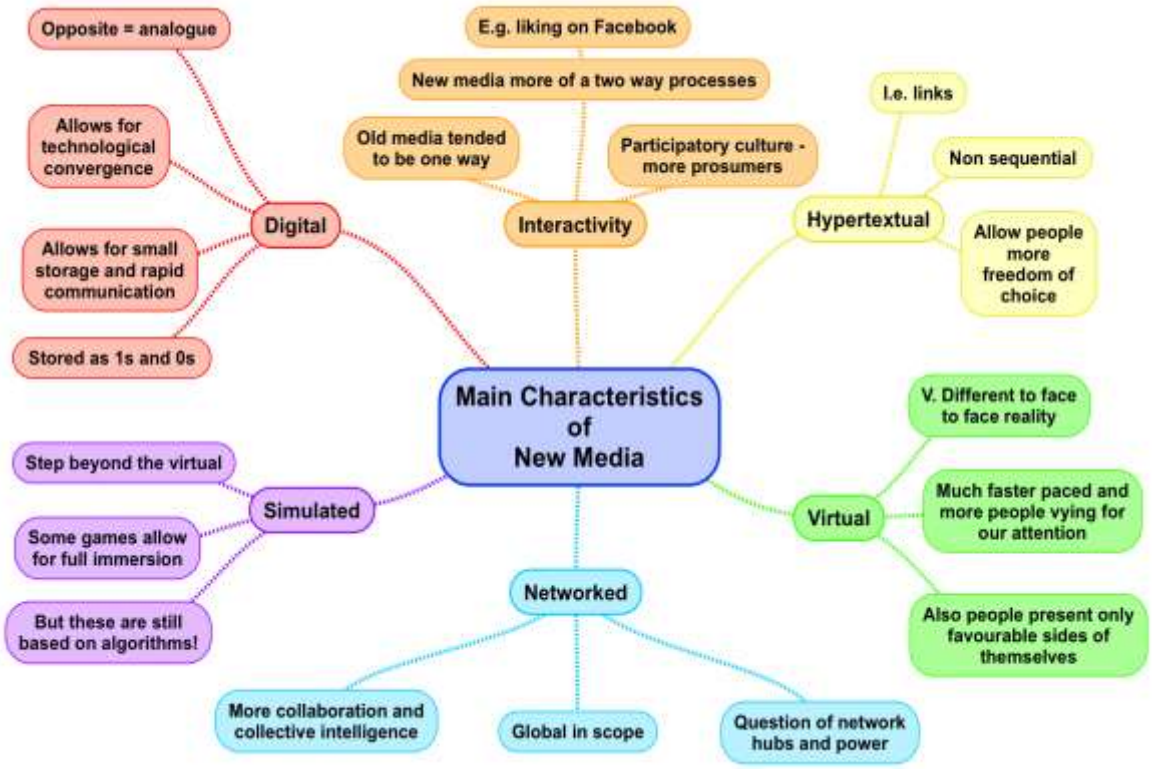


**Fig.1.** Main Characteristics of New Media.
***Source:*** https://revisesociology.com/2018/12/13/main-characteristics-new-media/

Digital communication conditions the simultaneous inter-cognitive perception of collective experiences and contributes to changing people's relationships with the world around them, by creating a virtual reality, considered the "*reality of modern people*" - a reality that replaces traditional forms of interrelationships and we operate with terms such as digital natives, web generation and second life within its parameters [2].

**Digital transformation of the media**

The unprecedented evolution of the *World Wide Web* has inevitably led to the digitisation of information, a continuous process, based on exact, interdimensional actions. Characterised by the unlimited exchange of information and data, it creates an infinite network of messages, codes, and linguistic acts. The interaction between them determines, to a certain extent, the character of virtual reality (VR), based on simulation, artificial intelligence, telepresence, and immersion.

The increase in the degree of mobility, as an effect of the ubiquity of information, has generated changes and transformations in society, including at the level of space and time barriers. The degree of personalisation and the ubiquity of technology and, implicitly, of information and interconnection capacity have allowed the creation of links between various other tools and technologies, through communication networks, reaching the fluidisation of the interaction between technology and society. So, digitalisation seems to have removed all barriers and crossed all boundaries of time and space [3].

Information technology has undergone a series of transformations, some of them of great magnitude, with a considerable impact on everyday life. The new forms of communication and transmission of information represent a response to the needs of the time, but also of the media institutions at the organizational level in terms of corporate communication and economic, social, and personnel policies.

The coordination and management mechanisms place a special emphasis on the use of the potential of human resources and the formation of multitasking skills.

Multitasking involves performing two or more actions at the same time, carrying out many activities in parallel, sometimes very different from each other. Emerging as a solution to the challenge of meeting

increasingly complex requirements, it has become a valued quality in assessing the effectiveness of people in the workplace, which could cover several roles at the same time.

In this way, the knowledge-based information society has led to the emergence of new functions in the media-communication field and the creation of new socio-professional statuses.

The most important specific stages of the information technology process, from the perspective of data centralisation and decentralisation, in terms of storage and processing, focus on

a) calculation period;
b) the period of personal computers;
c) the period of the ubiquity of information.

The latest stage is the World Wide Web 3.0 (Semantic Web) system – individual, personalised web, in which web platforms try to guess and satisfy our desires before we express them, based on a profile built by our actions in the virtual space, but also web 4.0 (Intelligent Web) characterised by its operating system called "Web OS", based on reading, writing, execution, competition in interaction with the intelligent system, and the symbiosis between the human mind and technology.

Information ubiquity is differentiated by the fact that several information systems simultaneously serve the needs of one or more users, at any time, from any corner of the world, in real-time.

**Digitisation, interactivity, and convergence**

***Digitisation*** in a general sense involves encoding the content or transforming any type of information into binary language. "A bit has no color, size, or weight, and it can travel at the speed of light. It is the smallest atomic element in the DNA of information" [4].

Digital coding of information makes it possible to compress it, following the principle of "reducing redundancy".

Therefore, the digital transfiguration of the media, represented as an active process, focuses on the forms of integration of texts, sounds, images of all types in a single environment - (integrated media product and/or multimedia).

The power of multimedia lies not only in the integration (direct, symbolic) and the coexistence of several elements but especially in the fact that it allows the manipulation of the user (interactive multimedia) and the associated organisation of information from different environments (hypermedia).

***Interactivity*** is specific to the virtual space and refers to the ability of an environment to allow users to exert an influence on the content and form of mediated communication. Different levels of interactivity can be recognized [5].

- "selective" interactivity;
- "broadcast" interactivity (based on unidirectional communication);
- "consultative" interactivity (based on bidirectional communication);
- "conversational" interactivity (production and insertion of information);
- "recording" interactivity - the system responds to this type of information in an "adaptive" way (based on artificial intelligence).

In the process of increasing the level of interactivity, an important role is played by *hypertextuality*, which involves connecting information in a non-linear way through logical references, so that they can be used through several reading paths customised by each user. According to the author of the concept of hypertext, Ted Nelson, its interpretation can be analysed from the perspective:

- a document in electronic form;
- a method of organizing information in which data is stored in a network of nodes and links, and can be accessed through interactive navigation programs;
- a technique for organising textual information through a complex nonlinear method, to facilitate the rapid exploration of a large amount of data and information;
- a way of building information management and representation system using links to create a network [6].

The characteristics of hypertext are nonlinearity; *non-sequentiality* (no chronology of reading is required); *open-access; the variable hierarchy of content* (the order of the contents, their hierarchy is decided by the reader, which can be defined as a single author).

The diversity of contents and the freedom of action offered by the virtual space contribute to the initiation of a process of transformation of people, who from simple users become communicators able to generate and distribute information flows, which aim to establish a higher level of interactivity.

Media ***convergence*** has established itself as a dominant current in journalism. It is defined by many researchers as an innovative process that involves a new approach to the selection, production, and dissemination of news, using all types of accessible media.

Researchers in the field, Anders Fagerjord, and Tania Storsul talk about six interpretations of this phenomenon:

1. *Network convergence* (network convergence - involves the transition from analog to digital signal);
2. *Terminal Convergence* (convergence of terminals - refers to the merging of different installations into a multifunctional one, provided for the reception and processing of information);
3. *Service convergence* (convergence of services - has emerged thanks to networks and digital terminals. On the one hand, it is related to the expansion of the offer by the service provider (television, online service, etc.). On the other hand, it is changing the communication model itself);
4. *Rhetorical convergence* (rhetorical convergence - is used to describe the process of creating new journalistic genres);
5. *Market convergence* (market convergence - telecommunications companies play an active role in the media market);
6. *Regulatory convergence* (convergence of regulatory regimes - results from market convergence, and the emergence of common markets also requires the establishment of appropriate regulatory procedures) [7].

Convergence in the field of media demonstrates that the role of journalists remains just as important in a world dominated by gadgets and social networks, in a virtual media space where anyone can convey messages and influence opinions.

Digitisation has turned journalism deadlines into a permanent state of breaking news. New technologies radically change the way we relate to the media, in particular, and the way we communicate, in general. Due to the accessibility of digital technology, we are ready to film at any time, to broadcast live on the spot, to post text and images on social networks, all with the help of a mobile phone [8].

Information digitisation also includes personalised content obtained by selecting information from pre-existing material. Customisation refers to the hierarchy of data through intelligent agents, Pull-Push logic as well. In this context, the media agenda is set according to previous and systematic visits to certain sites and/or searches guided by certain keywords.

Unlimited consumption in spatial and temporal parameters of personalised content, offers freedom to the user, but also flexibility in receiving and disseminating information, according to the *Pull* model, as a logic of transmitting and extracting information.

*Push* broadcast, specific to native digital media, is used to facilitate the automatic updating of user searches. It is the most direct way to increasingly personalised information (for example RSS Feed), a kind of *digital methamphetamine*.

Moreover, in the process of the digital transfiguration of the media, an important role is played by remediation, which assimilates techniques, forms, and social meanings of other environments and attempts to compete with them or to reshape them in different realities.

The double logic of remediation is based on two distinct cultural models:

- The illusion of the disappearance of the media in our relationship with the world - transparency (a level of simulation of reality, the logic of everything that means here and now, in which the language of the personal environment tends to accept the equivalence between reality and simulated experience - role plays);
- Radicalising the presence of the media in our relationship with the world - opacity (realistic simulation level, support, designed as a linguistic filter, is obvious to the user. It is the logic of hyper-mediation in which the structure of the "window" of the web is visible - pictograms).

The digitalisation of the media transposes us, either directly or indirectly, into virtual reality in which our activities, both online and offline, turn into experiences managed by electronic devices that establish clear trajectories in transmitting information and receiving, in producing content and process data.

Mediamorphosis, a term coined by Roger Fidler, aims at the digital transfiguration of the media, determined by the complex interaction between technological innovations and the needs felt at the socio-political and economic levels. Mediamorphosis is based on some fundamental principles, such as:

- *coevolution and coexistence* (traditional media evolve, adapt, and exist alongside new media);
- *metamorphosis* (transformation and assignment of new features that ensure their functionality regardless of circumstances);
- *propagation* (emerging forms of environments propagate the dominant features of previous forms);
- *survival* (traditional environments are forced to adapt and evolve alongside modern environments);
- *opportunities* offered to the public, users according to daily needs (everything happens here and now) [9].

The new media has become a fertile ground for experiencing direct communication, through a more colloquial language, which can cover different segments of the population and is represented by a new methodology, namely the "self-narrative". This is a methodology, which most often changes the trajectory of discussions in the communication process, regardless of its type, whether it is one to one, one to several or vice versa.

The constant and direct interrelation between the parties involved in the discussions brought in the public space through the products broadcast and disseminated in the virtual media space, transforms the logic of unidirectional communication into a multidirectional one, acquiring a diverse connotation, taking into account that these discussions often take place in real-time.

Kim Veltman argues that "the new media revolution, which the vast majority of people consider to refer only to electronic devices and the Internet, is far from just that, but rather can be considered a reorganization of all knowledge" [10].

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*Prezentat la 19.11.2021*