THE LANGUAGE OF MEDIA IN THE DIGITAL AGE¹

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Abstract

Contemporary journalism faces many challenges, one of them being adjustment to new trends caused by the advancement of new technology. In such circumstances traditional media need to find a way to reach new audiences that is present on online platforms. Those adjustments and changes, among other things, imply revisiting traditional concept of journalistic genres and new approach in shaping an information through the change of linguistic and stylistic characteristics resulting with the new media language. The aim of this paper is to offer an insight into the previous research of this topic in order to position the role of traditional media in the digital era. Although the process of media digitalization is not new, adjustment to new conditions is ongoing, recreating the term of new journalism over and over.

Keywords: new media, language, journalism, genres, digital age

Introduction

The end of the 20th century and the beginning of the 21st century reflect a complete transformation of forms of communication. This is due to technological innovations that have changed the way in which people receive information, as well as the manner in which this information is created and distributed. The Internet has paved the way to new platforms, forms of communication and expression, thus causing a transition to a different communication model. These changes occurred both in creators and distributors of content, as well as in its

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recipients. On one hand, the existing corpus of media is joined by new media and distributors of contents, whereas the audience is developing the initiative to be more active in a new media environment. Its engagement can be at the level of passive reception of media contents; however, members of the audience could also react to media contents and share their own opinion via new means of communication. The Internet itself has initiated revolutionary changes in the world of media, thus facing the traditional and conventional media with great challenges of adapting to new technological environment. In order to survive on the market and prevent potential distraction of public attention, these media had to find their place on the Internet. This communication revolution resulted in creation of websites and online editions, as well as those media which can be found only on the Internet. There is a change in the way of information creating and sharing and there are new types of contents in digital sphere, which were completely unknown in the modern age of print and electronic media. Moreover, citizens themselves become creators of contents and active participants in media debates. The characteristics of new media mentioned by the majority of theoreticians can be recognized by hypertextuality (a possibility for a reader to access another content by clicking on a specially marked word or group on words that appear on a computer screen, mobile phone, tablet etc.), interactivity and multimedia (Deuze, 2001; Pavlik, 2001; Miller, 2010). The Internet breakthrough brought numerous technological and communication advantages to traditional media. Analyzing online editions of print media, Pablo Boczkowski states that crucial advantages of Internet posting are the possibility of greater number of readers throughout the world, easiness of posting and improved graphic presentation (Boczkowski, 2002: p. 273). Traditional media audience, which could take over the role of a reader, listener and (or) viewer, becomes united on the world net, receiving quicker feedback thanks to comments, blogs, discussion forums and social networks (Bajić, 2017: p. 58). New digital media "speak" a different language whose forms, shapes and sorts vary from the well-known conventional media outside the net. In addition to that, the users of social networks contribute to the formation of a special kind of speech, which is interpreted as an expression of familiarity and belonging to a That is how the so called "net-speech" is created, and, taking its group. characteristics into account, it differs from the speech outside a particular social group (Crystal, 2006).

This paper deals with identifying and considering crucial forms of new media founded on the Internet. Furthermore, the authors study the changes of communication practice and particular features of media speech in digital universe.

Appearance of new media: context, definition and characteristics

During the 1980s, there were quick and radical changes in the field of communication and media. The world of media was transformed; nevertheless, these changes were not isolated, but they occurred in accordance with the general technological, institutional and cultural development. Karol Jakubowicz (Jakubowicz, 2009) quotes the definition of new media by Gustav Cardoso (Cardoso, 2006), according to which:

"all means of communication, representation and knowledge, i.e. media" where there is signal and content digitalization and which possess properties of interactivity and multimedia can be called new media. New media include numerous means, from mobile phones and consoles to digital television and the Internet. Those are media that adopted new technology, enabling the combination of interpersonal and mass communication on the same platform. They lead to organizational changes and new forms of time managing, while, at the same time, they present new audience and means of social reconstruction (Jakubowicz, 2009: p. 13).

The creation of new media marked the end of the 20th century and, especially, the beginning of the 21st century, reflecting global changes in all social sectors. Lister and his associates talk about the following basic changes that can be related to creation and development of new media: transition from modernism to postmodernism with structural changes within society, economy and culture; intensifying of globalization process which lead to devaluation of borders in the world of trade and creation of hybrid forms within culture; industrial era of production was replaced by postindustrial informatics era that emphasizes trading information and providing services in contrast to producing material goods; and finally, decentralization of established geopolitical orders where the leading role belonged to the entire generation of new media (Lister et al, 2008: p. 10-11). In his book, Here comes everybody: The power of organizing without organizations (Shirky, 2008), Clay Shirky claims that media revolution can be discussed only when the very appearance of media radically changes the way and models of communicating and functioning. According to him, there have been only a small number of such revolutions. The first revolution includes the period that begins with the printing press and printed media; the second revolutionary change coincided with the appearance of telegraphs and phones; the third one relates to media with the ability of reproduction (recorded media) such as film and music: the fourth revolution has to do with the era of advanced audio-visual media. The Internet brought about new media space as well as the creation of a differently organized networked society. The Internet possesses not only an instrumental function; it is not "a device which helps us exchange messages" (Milivojević, 2017: p. 161), but it implies radical changes in society whose consequences essentially transform the previous communication practice and habits. The greatest change happens when using new media becomes our routine, when we accept new media to the extent that we neither think about their functioning mechanisms, nor about their consequences on our behavior. Shirky has the following attitude to this: "Revolution does not happen when society adopts new technologies-it happens when society adopts new patterns of behavior." (Shirky, 2008).

Karol Jakubowicz, 2009 also wrote about the communication revolution, claiming that one should think about a new understanding or a new concept of media. He takes two crucial characteristics into consideration: the change of classical, conventional media and creation of new forms of media, as well as introducing new content creators and new forms, such as blogs, social networks, wiki pages, etc. New media shape the contents in the digital code, transferring it easily from one platform to another. The transition to the digital key helps traditional media keep their influence on the media market and symbolic universe of ideas. By adopting digital technology, old media can use the advantages provided by the Internet and enrich their content with multimedia forms. The key notion related to new media is convergence. Convergence can be regarded as a process which, according to Mark Deuze (Deuze, 2001), happens on many different levels, and, that is why, we can talk about not only technological convergence but also the one that happens between public and private sphere, "high" and "low" culture, culture and entertainment industry, modernistic and post modernistic views, etc. He defines convergence as unification of existing technological devices with computer networks, which is, in the first place, enabled by digitalization of all information formats. This facilitates open communication between all devices, which are, in one way or another, used in gathering, selection, publishing and distribution of information (Deuze, 2001: p. 11).

Vincent Miller analyzes forms of new media in relation to three major fields: technical processes, cultural forms and *immersive experience* into virtual world. Technological building elements of digital media are: digitality, networking, interactivity, hypertextuality/hypermedia, automation and existence of database (Miller, 2010: p. 14-21). In order to become a part of the digital world, the data should be presented in the digital code and they should be numerically represented. The process of conversion from analogue into digital form enables a large amount of information to be stored and distributed in a simple way. Digital, new media are different because they are closely connected so that there is the formation of network between the Internet, mobile phone and WIFI, which influences the number of creators and sources of information, as well as the choice that media users have. Interactivity is a key characteristic that is brought into relation with

new, digital media. In the simplest sense, interactivity means the ability of audience members and media users to respond to a certain media product or information in accordance with their needs and preferences (Miller, 2010: p. 15). Jens Jensen defines interactivity as "a measure of potential ability of media to enable the user to influence the contents and/or form of mediated communication." (Jensen, 1998: p. 201).

The concept of interactivity defined in this way is further divided into four subtypes or dimensions: transmission interactivity, consultative interactivity, conversational interactivity and registration interactivity (1998: p. 201). Transmission interactivity relates to possibilities and options given to the user by one-way media; they can be choosen from the continuous information flow, without the user's request (e.g. teletext, multichannel system, etc.). Consultative interactivity is carried out by media in a two-way communication flow where the user is faced with the possibility of selecting certain options (e.g. video on request, online information services, etc.). Conversational interactivity exists when the user has the possibility to produce and transmit his own information in a two-way media system, in real time, or the information groups, etc.). The last form of interactivity, registration interactivity, implies that media registers user information and responds to the user's needs or activities (e.g. control systems, intelligent agents and intelligent guides, intelligent interface, etc.).

Hypertextuality represents an important characteristic of new media which is related to the ability of movement from one text to another, thanks to the connection between them. The first usage of this term can be found in Ted Nelson who, during the 1960s, defined it as a system of connections and databases that enable moving from one content to another. It is also possible to move from one webpage to another on the World Wide Web. Hypertext is defined as a non-linear type of text because of the fact that the lines are created by the media user and as such, they can be unpredictable. According to Miller's definition, every hypertext consists of nodes and blocks of texts, i.e. contents, connections between those blocks of contents and indexes that move the link from one node to another (Miller, 2010: p. 17-18). Although the reader has the freedom to shift links according to his own interests, Lev Manovich expresses certain doubt that this freedom is complete. He points out that online media implicitly impose an interpretation to readers, leaving them an opportunity to choose one of the possible ways of moving through the hypertext (Manovich, 2001: p. 28). According to Vincent Miller, besides digitality, networking, interactivity, and hypertextuality/hypermedia, automation is the fifth important element of digital media. This key element of new, digital media is related to efficient modification or creation of digital products thanks to suitable programs. Users' activities on the net are carefully being followed and used for the creation of profiles of a certain company's marketing. Search engines automatically process databases and then deliver particular data according to specific criteria (Miller, 2010: p. 18). This can be brought into relation with the latest technological feature described by Miller, and that is the existence of digital databases which are very flexible, having unlimited possibilities of finding, filtering and organizing these data. Manovich claims that such databases mark digital culture where almost every action of citizens can be chosen from a certain catalogue, media or database (Manovich, 2001: p. 128).

Considering cultural forms typical for digital media, Miller compares modern and postmodern period. In modern age, narratives had a determined flow, beginning and end. The author had an undisputed part in guiding the reader through the text as well as describing and representing events. In postmodern period, culture experienced huge transformation, so the leading part belonged to databases, while the world was represented through lists and collections edited by the user. The importance of the author's part was diminished; his place was taken over by the user who took part in the presentation of the world according to certain parameters. In other words, the net introduces users into the world of databases out of which they can take and combine information, objects and texts (Miller, 2010: p. 20-22). Digital objects are in the process of continuous transformation and creation, not having a constant, definite and final form. It represents a result of conversations and relations through which it is being changed. Immersive experience into digital world represents the third significant topic in the discussion about digital media. Miller brings such experience into relation with the notions of tele-presence, virtuality and simulation (Miller, 2010: p. 30-40). Miller explains the phenomenon of tele-presence as an ability of man to be present at two places in the same time; one of them represents physical presence in a certain space, whereas the other is a space where we are taken by the media. For example, telephone conversations with a friend can take us into a different world thanks to the fact that we are thinking about what we are being told and we are also imagining the place where a friend could be at that moment. Virtual is often used as an opposite to real. However, according to Miller, virtual is a part of our real world because we feel its effects despite the fact that those are activities happening in the sphere of the Internet communications. Milivojević points out that actual and virtual reality represent two dimensions of our existence and, as such, they make our reality (Milivojević, 2017: p. 161).

Digital culture encourages the development of simulation, while users are invited to "visit" three-dimensional virtual worlds which are mostly pure simulacra, as referred to by Jean Bodriar in his work "Simulacra and simulation" from 1994. Simulation means entering an imaginary world where participants can assume different roles and experiment with their identities (Miller, 2010: p. 33-35). Media theoretician Snježana Milivojević talks about a different kind of mobility. She explains this feature of new media as the possibility of tracking information via mobile platforms and devices (the so-called smartphones). The one who possesses mobile media can reach media contents, information and entertainment anytime and anywhere. This author also mentions simultaneity as the key element of new media. This is related to time matching of a certain event happening and information being created about that event. Fast rhythm of life is associated with the need for getting information as quick as possible, and today, in the world of new media, users find different sources of new information on digital platforms of communication. What users get via traditional media is complemented with information they find thanks to hyperlinks and hypertexts on the Internet. In this way, citizens, eager to get new information and sensation, reach them quickly, which compensates for their inability to speed up the real world (Milivojević, 2017: p. 164-165).

The language of new media –online editions of traditional media and social networks

The development of new media has changed the way of placing and receiving information, and the way in which those messages are shaped has also changed, numerous factors having contributed to this. At the very beginning of popularity of online media, Richard Craig noticed certain characteristics and patterns which make online media texts significantly different from traditional ones. As he claims: "In traditional journalism, flat and uninteresting narrative is unacceptable, whereas in media, where you can switch to another content only by pressing the mouse, one cannot even think about such traditional approach." (Krejg, 2010: p. 125). So, it means that online journalism, most of all, erases sharp genre limits once established by traditional media through a range of properties and rules about shaping and placing certain information into public. Today, journalists are provided with a greater number of tools and options that enable them to have a more creative approach in creating and placing of contents in online eniviroment. This creativity is reflected in the very style of texts which gives modern journalists and editors a possibility to stand out from the competition, to be unique and thus attract the audience that has never had a bigger choice in a variety of media contents. Promptness, which has always been an important factor in journalism, here becomes crucial, because the need to publish specific information as soon as possible greatly affects the way in which this information will be shaped. This is mostly reflected in the size of texts; in the online sphere, there is a dominant tendency to inform as concisely as possible, using available multimedia contents. That is how, for example, websites of traditional media which publish the same texts both in newspapers and on the Internet, will hardly have any success with the audience.

Taking all this into consideration, it becomes clear why it is not desirable to copy traditional media in existing form and place it on the Internet; on the contrary, it is necessary to develop a new concept and new style that will take into account both technical possibilities provided by the Internet and the user's needs. Since an average press story is too large to be placed on the screen, in online press, texts are usually divided into several parts and enriched with links, audio and video materials so that they could be more attractive.

In order to demonstrate differences in style between traditional and online media, Craig cites the example of news from 1999 about the decision of an American court, according to which Microsoft Corporation was allowed to keep a monopoly over computer operating systems. Craig compared the writing of The New York Times and online editions of the magazine Fid. According to him, both publications share the same information but in different ways. The New York Times uses the form of a classical text typical for printed media, while the press release issued by Fid looks like a comment that is closer to a conversational style and addresses the reader more directly. ("Microsoft may not have lost at the court (as in appeals, if there are any in the future), but after the Friday evening's report, it lost its foretoken of inevitability") (Krejg, 2010: p. 128). Similar tendency, which Craig defined as "a style that is too free", was noticed in an online edition of Time magazine. Although the quoted texts were published two decades ago, they illustrate the priciple of genres that is present in online media today. However, online journalism did not only redefine the concept of genres, but it also redefined the journalist profession as well as the entire journalism. Thanks to development of the Internet, journalism today is available for a greater number of people - people who are not afraid to express their opinion about a particular topic.

The concept of mass media which sees communication process as one-way was rejected in theoretical circles a long time ago. In modern research, special attention is paid to interactivity, meaning that the audience is no longer only a recipient of content, but it also has the opportunity to become its creator. Establishing websites, blogs and other contents, the recent recipient takes over the traditional role of a journalist whose messages can influence public opinion and become a part of media discourse, which, at the same time, affects the very structure and shaping the message that reflects onto redefining of the concept of press genres. For example, blogs can have information function, but they do not have to follow the models of traditional journalism. In blogs, we can often notice a combination of literary and conversational style in the same text as well as a combination of standard language and slang, the choice of words inappropriate for official documents, narrative flow that is difficult to place into existing genres. Yet, such texts can have the same influence on the audience as those published in traditional media. Besides that, in this kind of texts, net neologisms, discussed by David Crystal and described as "words that directly derive as a result of Internet communication", can be created. (Crystal, 2011: p. 58). The main source of his inspiration was the research of blogs and accounts on Twitter where there is a great deal of net neologisms. That is why Diana M. Lewis may be right in asking whether online news should be regarded as a special genre. Important differences can be seen in the structure itself. For example, while newspapers present a certain event through a unique narrative review, in online media this review becomes significantly shorter, while narrative is divided into small units, the same or similar topics being gathered in hypertexts or multimedia contents (Lewis, 2003).

This trend is known as annotative journalism (Paul, 1995) or contextual journalism (Pavlik, 2001). If we look at information web portals, besides the text, their contents comprise statistics, charts, external links, audio and video clips, interactive contents, etc., which are also very important factors in shaping the modern content on the Internet and carry the traditional information function. Due to this, we can conclude that today, a piece of news is not only published in the form of text, but the accompanying contents can also contribute to conceptualization of the entire story, which changes both journalism itself and the way in which information is processed.

Apart from this, the audience gets information in a different way now. Not only by opening a certain information portal can the audience reach information. While surfing the Internet, they can come across blogs, subscribe to a particular content via newsletter service, and nowadays, they can also do that via text messages, mobile applications, etc. The latest news can wait for us in some of the bill boards during a walk or, more often, on a friend's profile while we check social networks from time to time. As we have already pointed out, due to the fact that information is available to us more than ever, it is very important to convey a message in the most concise and the most creative way in order to keep the recipient's attention. This characteristic especially becomes conspicuous in the age of social networks which carry certain linguistic and stylistic features.

As Serhat Kaymas states, popular social networks, such as Facebook and Twitter, not only enable interaction with readers, who take part in creation of contents themselves, but they also become platforms for sharing information. That is how, more and more journalists converge towards these networks and, without them, online journalism today becomes practically impossible (Kaymas, 2017). Popularity of social networks, as noticed by Yang Song and Angel Lin, caused the creation of new genres or modification of the existing ones that are based on specific characteristics of social networks themselves (like twitter news feed, audio slideshows...) (Song, Lin, 2012). These examples show that the very concept of news has also changed, so, today, news can be fit into 140 characters, as allowed by Twitter. Such news, that is often taken as a legitimate source of information,

does not have to follow the traditional structure of inverted pyramid, which means ordering facts according to importance with totally objective relation of the journalist to the event itself, but it can be the author's attitude shaped by its style. When talking about "the language of new media", we must not neglect globalization as the key factor. The English language has been dominant in online sphere from the very beginning.

According Deborah Cameron, talking about the global usage of English usually implies two things: learning of English as a second language and acquisition of that language system, including the emergence of English words into other linguistic systems which become integral to these languages. However, the third aspect is also important- accepting specific discourse norms from the Englishspeaking area which become a part of other language systems. As an example of this, Cameron gives the Hungarian language where there is a clear distinction between formal and informal speech, and this distinction fades away in modern age due to the influence of linguistic and cultural patterns of Anglo-American area, coming from the online world (Cameron, 2003).

This trend can be seen in modern media, and it is based on a more liberal style that can become even conversational in order to fit into modern media discourse. Yet, the relation between new media and language should not be regarded as a cause-and-effect relationship because of the fact that language itself eventually experiences transformations, in the same way as technology does. When talking about the innovations of digital language, researchers emphasize three dimensions- orality, compensation and economy (Androutsopoulos, 2007). Conceptual orality represents all aspects of conversational styles that are transferred to written language, thus erasing the boundary between the standard language and this style. Compensation implies demonstration of emotions when there is a lack of face to face communication. In the modern world, those would be emoticons² which have found their use in online media. Linguistic economy, which has been in the center of linguistic research for a long time, is related to strategies that contribute to message shortening and become used especially in online world.

Since interactivity is one of the main characteristics of online communication, one stylistic curiosity noticed by David Crystal is that particular content is edited by more than one authors, which results in a variety of personal styles within one text. On the other hand, information portals leave online users the possibility to comment on published texts. Information that can be found in those comments that often enables the reader to have a better idea about a specific event; therefore, we can say that the style of content recipients themselves influences stylistic variety of online texts (Crystal, 2006).

² Simple graphic solutions that represent the author's mood, and that are widespread in online communication. Thanks to emoticons, one can express sadness, happiness, anger, shock, etc.

Conclusion:

The phenomenon called "the Internet" has completely transformed communication models both in private and public sphere. The changes that occurred can be seen in the appearance of new media as well as in the challenge that the Internet put in front of traditional means of communication. Regardless of different definitions of the Internet as a new communication platform, media of all media or the only media, its effects have changed communication ways as well as creation and distribution of contents in a revolutionary sense. There are new participants, who, together with professional journalists, shape the media space. In addition to this, there are also new kinds of contents created by them, such as forums, blogs, and social networks which talk about the active audience whose potentials were not recognized by classical, one-way, traditional media. By adapting to digital technology, traditional media entered a different digital world distinguished by certain characteristics such as: networking, interactivity, hypertextuality, simultaneity, mobility, virtuality, database, etc. On the other hand, media users had to acquire the skills to use new media in order to move successfully through the digital universe. Although the radio did not "kill" the press, the TV did not "kill" the radio or the Internet did not "kill" the TV, it does not mean that the old media did not adapt to the new one in order to survive in the market and keep its audience. Adaptation of traditional media to options provided by the Internet is on going. An aggravating circumstance today may be the fact that editors and journalists of traditional media have to develop different approaches to online and offline contents, although they are essentially the same. Taking all the characteristics and factors previously mentioned into account, it becomes clear that, though under the same name, those are two separate media. Internet communication has developed its own rules, language, styles and patterns which are not going to adapt to characteristics and rules of traditional journalism. On the contrary. Having in mind that the media war in the market is more serious and competitive than ever, only the one, who understands new patterns and knows how to use them for their own benefit, can actually survive.

Literature:

- Androutsopoulos, J. (2007). Neue Medien neue Schriftlichkeit? Mitteilungen des Deutschen Germanistenverbandes 1/07: 72–97.
- Bajić, P. (2017). Onlajn štampa: odnosi između štampanih i onlajn izdanja dnevnih novina, CM : Communication and Media XII(39) 57–82.
- Boczkowski, P. (2002). The development and use of online newspapers: What research tells us and what we might want to know. In Lievrouw, L. &

Balkan Social Science Review, Vol. 12, December 2018, 101-113

Livingstone, S. (eds.), The Handbook of New Media (pp. 270–286), London: Sage.

- Cameron, D. (2004). Globalizing 'communication'. In Aitchison, J., & Lewis, D. M. (Eds.), New media language (pp. 41-49). London: Routledge.
- Crystal, D. (2011). Internet Linguistics. London: Routledge.
- Crystal, D. (2006). Language and the Internet. Cambridge, UK: Cambridge University Press.
- Deuze, M. (2001): Online Journalism: Modeling the first generation of news media on the World Wide Web, First Monday, 3.341, <u>http://www.firstmonday.org/issue6_10/deuze/index.html</u>, accessed 15. 07. 2018.
- Jakubowicz, K. (2009): A new notion of media? 1st Council of Europe Conference of Ministers responsible for Media and New Communication Services, 28-29 May, Reykjavik, Council of Europe.
- Jensen, Jens F. (1998): Interactivity: Tracking a New Concept in Media and Communication Studies. Nordicom Review, 1/1998, 185-204.
- Kaymas, S. (2017). When the Journalist Meets New Media: Some Reflections on the Interactions between Journalist and New Media Driven Journalism in Turkey. Journal of Media Research, 10(3), 26-47.
- Krejg, R. (2010). Online novinarstvo. Beograd: Clio.
- Lewis, D. M. (2003). Online news: a new genre. In Aitchison, J., & Lewis, D. M. (Eds.), New media language (pp. 95-104). London: Routledge.
- Lister, M., Dovey, J., Giddings, S., Grant, I., Kelly, K. (2008). New Media: a critical introduction (Second Edition). Taylor & Francis e-Library.
- Manovich, L. (2001). The Language of New Media. Massachusetts, London: The MIT Press Cambridge.
- Milivojević, S. (2017). Šta je novo u novim medijima? Časopis za književnost i kulturu, i društvena pitanja, Reč no. 87/33, 159–172.
- Miller, V. (2010). Understanding digital culture. London, Los Angeles (Calif.), Sage
- Paul, N. (1995). Content: A Re-visioning. Production in the Electronic Products Newsroom. St Petersburg, FL: The Poynter Institute.
- Pavlik, J. (2001). Journalism and New Media. New York: Columbia University Press.
- Shirky, C. (2008). Here comes everybody: The power of organizing without organizations. London: Penguin Group.
- Song, Y., & Lin, A. (2012). A Genre-aware Approach to Online Journalism Education. Procedia - Social And Behavioral Sciences, 51 (The World Conference on Design, Arts and Education (DAE-2012), May 1-3 2012, Antalya, Turkey), 400-404. doi:10.1016/j.sbspro.2012.08.179.