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From the mass media to social media: reflections on the new media ecology

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Abstract

The media ecosystem is a research methodology proposed by Neil Postman and Marshall McLuhan in 1971, with its consolidation based on solid concepts presented in 1979. However, it presents cross-cutting concepts to other media studies, many of them developed by theorists who will update, or built concepts that sustain a new media ecology. The article presents an update of these views from a research that has as a methodology the depth bibliographic method. We hope to offer, with the results presented here, the possibility of a conceptualization of a new media ecology. As results of the investigation, we present indicatives for the stock of new metaphors of the contemporary media ecology.

Keywords

Communication, media ecology, audience, social media.

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1. Introduction

The contemporary society has coexisted in the last years with transforming mediatic processes that not only involve technologies, but also processes and changes of status among social actors. Undoubtedly, this has been strengthened by technological changes, but the language of the society before technologies is what promotes transformations the most and, of course, innovation processes.

To understand communication, it must be preconceived as a set of successive stages of a phenomenon or a fact, that is, as a process: “Communication which is basically a process, walked by the hand of different platforms, of the mass media system... and complexity multiplied” (García & López, 2011, p. 13). Communication has been, is and will be the most important way to send and receive information, independently of the media used, especially in journalism. As presented by Renó & Renó (2017, digital page):

Among other changes, we can highlight the new production formats of journalistic reports with multi-language and a different way of considering distribution by users, baptized readers or recipients in the ecosystem of traditional media.

From the first men on earth up to our days to transfer information has always been necessary, either by a simple gesture or with a message through mobile phone. Media have been evolving and improving over time so that people get, in a simple and easy manner, information they require.

Among the elements that can be distinguished in the communicative process there are: the code (a system of signs and rules combined with the aim of conveying information), the channel (the physical media through which information is transferred), sender (who wants to send the message) and the recipient (whom the message is targeted to)

Communication can be affected by what is called noise, it must be understood as any interference or disturbance that makes difficult the normal development of the signal in the process, it mustn't always be related to an unpleasant and annoying sound.

In media –in the traditional communicative process– information of the environment is filtered through an organization of mass media where the message is decoded, interpreted and coded, to be transmitted

afterwards through an adequate channel to recipients, that is, it is a linear communicative process; but with Internet audiences are not only passive recipients of messages, but instead they take action in said process, in such a way that also individuals provide contents. Audiences also choose the moment and the way of acting. The new son Internet are instantaneous and don't reach every recipient in a homogenized manner, besides the recipient chooses news and the way to receive it thanks to the hypertext.

2. Method

The method used by the study is supported on bibliographic research, which is based on the search of previous publications about the issue for comprehension and a redesign of the state of the art of theoretical references. From the bibliographic research, concepts interpretation and analysis was developed, suggesting new interpretations about media ecology from results. Finally, we have designed a table with data that suggest an interpretation for the proposal presented in the paper, which is unprecedented, innovative and offers subsidies for new studies that look for a reorganization of the concept proposed by Neil Postman and Marshall McLuhan on 1971.

3. Understanding media ecology

The emergence of media ecology, specifically in that terminology, is folklorically commented as something accidental, resulting from an unexpected destiny. In 1967, without opportunities to work as a scholar in Canada, Marshall McLuhan is invited as visiting professor in Fordham University, in New York, accepting the invitation right away. During the period he worked in Fordham, McLuhan met Neil Postman, researcher of the University of New York, with whom he built a very close academic dialog.

McLuhan was a polemic researcher, which bothered his peers in the University of Toronto. Considered as scarcely academic in the occasion, McLuhan was known by his comments that escaped normality, and not due to ideas supported on solid concepts, something that science is grounded on. On the other hand, his statements transformed McLuhan into a popstar, which raised envy in his university workmates. Considering the internal pressure, the stay of McLuhan in New York was rather positive. Intensely researched and developed in the University of New York by proposal of Neil Postman, media ecology, besides being a theory, was the name of a doctoral program in said university. In 1971, Postman proposed the creation of a doctoral program in Ecology of Media with the aim of observing, researching, understanding and developing concepts that would be the sustenance of the theory, emerged from a postal exchange between Postman and McLuhan when he returned to Toronto.

But the birth of ecology of media was, effectively, unusual. In a letter, McLuhan wrote in the same paragraph the expressions Ecology and Media separately. Then Postman, when reading the letter, said: Ecology and Media? This can be a theory called media ecology. From this letter, there emerged a doctoral program, and in the program researchers such as Lance Strait, Thom Gencarelli, Paul Levinson, Robert Logan graduated, among others. During the discourse of the creation of the doctoral program in the University of New York, Neil Postman described the emergence of the term in the following way:

We put the word “media” by the side of the word “ecology” to comprehend there is not only interest on media, but also the ways of interaction between media and human beings that offer a culture or their character and that, we can say, help it to preserve a symbolic balance. (Postman, 2015, p. 98)

But some scholars consider McLuhan the creator of the term. Even in the Media Ecology Association, created by Postman, a group of researchers recognizes McLuhan as the responsible of the idea, although only the name came from him, without being consolidated and sustained by theoretical concepts. That is, the name is McLuhan’s, but the concept is Postman’s. Undoubtedly, it was born from a sequence of events and researches. Before McLuhan and Postman, there was the scholar Harold Innis, who was Pioneer in mixing history of the society with communication.

Likewise, Postman was the scholar insisting in comprehending what would media ecology be. In the first years of development of researches in the doctorate in Media Ecology, Neil Postman has constituted an ecological, critical and ethical vision of the USA mediatic system. According to Postman, the technological change is not additive, fundamental, but instead ecological, natural. Regarding the issue, he explained it using the example of a drop of red ink falling in a water recipient. There, the liquid mixes, coloring each water molecule. This was what Postman defined as ecological change, and applied the concept to the theories, mixing results with media and society. This has been named mediatized society.

After the first researchers, the ecological metaphor applied to media arise, bringing along two fundamental interpretations: media as environments and media as species. In this diversity of interpretations, Postman has positioned his researches in media as environments, while McLuhan positioned his ideas in media as species. The two ideas were the basis for the doctorate in Media Ecology, turning into the two research lines of the program.

According to Postman ideas, ecology of media as environment is synthesized in a basic idea: technologies – which entail communication technologies, from writing to digital media – they generate environments that affect the everyday life of actors using them. For Neil Postman, the word ecology meant the study of environments, that is, the observation about their structure, content and impact on people.

While Postman positioned his observations in the field of media as environments, McLuhan defended media as species. For the Canadian researcher, technology was the fundamental factor for the comprehension of media. Influenced by Innis, McLuhan and their followers, they would develop an holistic view that integrated the evolution of communication processes with socio-economic processes, observing the results that emerged from technology. As a justification of that idea, in *Understanding Media* the scholar stated that “media interact between them. Radio has changed the format of news in a similar manner the sound movies have transformed image. Television has caused changes in radio programming, etc.” (McLuhan, 1964, p. 78).

From the studies developed by the researchers of the doctorate in Media Ecology, after eight years, Neil Postman publishes, for the first time, a consolidated definition about the subject. According to Postman (1979, p. 186):

Media ecology is the study of human environments. They are concerned about understanding how communication technologies and techniques control the form, amount, speed, distribution and direction of information: and how, at the same time, these configurations or preferences of information impact people's perceptions, values and attitudes.

When interpreting that proposal, we can perceive that different contemporary researchers can be considered media ecologists, although practically all do not consider their studies as such. We include Dan Gillmor (2005) in the ecologists "bucket", who introduced the idea that we are "environment begins"; George Landow (2009), author of the idea of hypertext and hypermedia as narrative structures; George Siemens (2005), father of connectivism; Henry Jenkins (2009; 2001), with the evaluation of transmedia narrative, although its creation was made by Marsha Kinder in 1991; finally, Manuel Castells (2013), who suggested social networks as a tool for a better world.

4. Understanding Marshall McLuhan

We cannot skip this subject without analyzing Marshall McLuhan, who is defined as a visionary that understood the future of communication. As already mentioned in the history of Internet, McLuhan (1962) predicted that, due to the speed of communications evolution, the complete human society would start to transform, and also that all inhabitants of the planet would start to knowing among themselves and communicate in an instantaneous and direct manner favored by the technological progress. He called this phenomenon: the global village (McLuhan, 1996).

What was the main approach of McLuhan? "Media is the message" is the statement McLuhan used to summarize his theory. There, he explained that in the media there is influence about how the message is perceived. Media and message work as partners and media have the power to modify relationships and human activities.

But... what should we understand by "the media is the message"? For McLuhan the contents of the message was not as important as the impact of media in society, because all media have a different effect in recipients of information and this impact brings along with it cultural, political, economic and technological connotations. Media must be the center of study, not the contents within, because it impact the society it plays a role in, not only due to delivered content, but also due to the characteristics of media itself.

According to McLuhan, history of communication is experienced in four moments: agricultural, mechanical, electric-*mass media* and technological. The impact of the newspaper, a cold mechanic media is not the same -just as other of his theories would explain- compared to radio or TV, electronic hot media, or the Smartphone today, which is an electronic or technological media.

McLuhan (1964) differentiates between hot and cold media. The first ones reduce participation because they are full of information: radio and photography. On the other hand, cold media do not have much information and encourage participation, for instance, telephone and comic. He also established three eras of media: the first one is "Pre-literacy era or tribal", where the oral word and hearing was the only necessary tool; the second phase was "Gutenberg Era", where writing appeared. The invention of the Gutenberg's movable types of forced the human being to comprehension in a linear, even, concatenated and continuous manner. Written pages, their borders, margins, defined

characters line after line, brought a new form of thinking space, remains over time and can be acquired by other generations. The third one is the “Electronic Era”, where the current situation is comprised, interactivity through multimedia. Marshall McLuhan speculated about the potential of the electronic era; on one hand, he indicates that we need to survive media, avoid that they suffocate us and therefore, he mentions that the strategy to be followed, consists of observing first and then understand them. The number of users on Internet in the whole world doubled in the last five years and surpassed 2.000.000.000 in 2010 and the number of individuals with Internet access at home has also increased moving from 1400 million in 2009 to almost 1600 million in 2010. In 2015 there were 2800 million users in the world and, besides, continuing the line of the previous statistics, the International Telecommunication Union calculates that in the world there are 3.3 billion mobile lines and we should highlight that Latin America turned in the second largest market in the world in this aspect. Therefore, the million individuals using the technology worldwide grant reason to McLuhan.

We are entering the implosion era after 3000 years of explosion. The electric field of simultaneity makes everyone to be interconnected. All individual, desires and satisfactions are co-present in the era of communication. But computing banks dissolve human image. When all data banks are joined in an alternative whole, our complete western culture will collapse. Visualize an amphibian with the Shell inside and organs outside. The electronic man uses his brain out of the head and his nervous system above the skin. A creature such as this has a bad temper, avoiding open violence. It is like an exposed spider hidden in a cobweb, resounding with all the other spiders. But man is not flesh and blood; it is an item in a data bank, ephemeral, easily forgettable and embittered for this fact (McLuhan & Powers, 1995, p. 71)

Since the proclaiming of that famous thought of “global village”, fact happened as indicated and now we can see his theory reflected in the new technology, focusing on the cyber space and on social media such as *Facebook*, *Twitter* and *Instagram*; humanity is connected thanks to technology, today there aren't practically boundaries due to the expansion of information and communication technologies, also known as ICTs. Due to Internet, the whole world is interconnected and the globalization of knowledge was achieved; we became, as McLuhan said, a large village thanks to ICTs, that are not only used for and by large businesses, but also by small and medium size producers, indigenous communities, colonists, economic and farmers' organizations... in the end, each and every one of us communicate using ICTs.

Herbert Marshall McLuhan placed the pillars of studies about current mediatic communication and from there, subsequent studies of media ecology emerged. Through this theory it was clarified that media and content must be studied jointly to learn the discourse in-depth and not stay with the obvious. For McLuhan, technological media were extensions of human capacities or extension of the body, although in subsequent debates they are considered amputations instead, because technology works as a prosthesis in practice. McLuhan analyses the effects of technological media independently of what is said in contents and profiles a landscape of our relationship with the new technologies in emerging media.

5. The media transformation and the media ecology: new scenario.

When Silverstone formulated the question “Why study media?” in his book titled that way precisely, he doesn’t only explain that you cannot escape the presence of media, but in his proposal he also implies that processes and central elements of everyday life must be explained.

The answer to my question would entail tracking media through the way they participate in the social and cultural contemporary life. This would mean to examine media as a process, as something taking action and over what there is action on all levels there where human beings gather, both in the real and the virtual space [...] (Silverstone, 2004, p. 17)

Massive communication media are also known as mass media and refer to “those issued by a sender and that are received in an identical manner by several groups of recipients, therefore having a large audience” (Dominguez, 2012, p. 12) Is there truly a difference between mass media and digital media? What is understood by each one? In Jenkins’ book it is said that the old media never die, the previous one is forced to coexist with the new one, as Jenkins says:

[...] what die are simply the tools we use to have access to media contents (the 8 track or beta video tape). This is what specialists call distribution technologies ... The recorded sound is the media. CD, MP3 files and 8 track are distribution technologies” (Jenkins, 2008, p. 24).

Thus, the recorded tape is the media, the same as CDs, DVDs, Mp4, which are also distribution technologies, Jenkins argues it in his book in a chapter called “the black box fallacy”. According to this argument, the complete contents of media will flow sooner or later through a single black box to our living room.

About the matter, Scolari (2009) says: “Media seldom disappear: they tend to adapt to the new ecosystem to survive, for instance adopting or simulating features characteristics of the newcomers or integrating inside the new media” (p.44). Perhaps the term “new media” is more adequate to describe the net of networks that overwrite traditional relationships in exchange of new ones. In many ways, traditional media are based now in new communication routes of data and information. “Material platforms and discussions pass, while interfaces and semiotic processes of production of meaning and interpretation stay.” (Scolari, 2009, p. 44).

When we talk about mass media we refer to press, radio, television and, currently, to Internet; however, in this spectrum many and different forms can be incorporated, such as cinema, magazines, informative posts, traffic signs..., enough reason so that in 1972 and in 1997 Harry Pross & Manfred Fabler, respectively, (Domínguez, 2012), classified them as follows: Primary Media, related with the body and when the recipient is a group of more than 7 individuals (a professor teaching in class, 1 orator before an auditorium, a priest before his congregation); Secondary Media, where the sender uses technology to create the message, but the recipient does not need any to receive it (magazines, leaflets, newspapers, flyers... in general all communication written through technological means); Tertiary Media: sender and recipient need technology to send and receive the message (telegraph, telephone, music and television, among others); Quaternary Media, called new media and which allow the transference of information in several directions, either bilateral or multilateral and massive, in real

time, but in this sub-classification we use the more modern technology to make the most of message's reception and sending (smartphones, Internet, satellite television, etc.).

The exchange of ideas and images is of utmost relevance in the possibilities of new media. Not only the political horizons were widened, but also artistic, educational and social. Today, there is a great capacity among individual users not only to write, inform, educate..., but also to interact among them and establish connections in a way that could allow to eluding conventional ways of communication. "Latin-American communicology taught us that technology, culture and society are hand by hand. We cannot think about hypermedia as if they were only a technological gadget." (Scolari, 2008, p. 24).

Social distances are diluted with new media and with the current platforms: before the popularization of new technologies, to be able to communicate with the president of a nation, you needed to request an audience, today, and with the existing possibilities, you can send a tweet and expect to get an answer. Media always made us study the concepts of time and space, but in the current context, we must explain more thoroughly how these concepts are different for the new generations. "In the future we will receive "television" through multiple screens: small, large, mobile, hanging on the wall or carried in our pockets; and at the same time those screens will be useful for other non-television applications." (Majó, 2012, p. 78).

Screens turn into a protective shield in a society of young individuals, as observed in the use of emojis, which is an expression that must be managed and understood in the same social group; different manifestations through chats in mobile phones and personal computers, even situations that respond to a deep social relevance.

It is not easy to separate mass media from the one is not, we would need to analyze in a detailed manner, the contexts in which a communication process happens so that it can be called "massive", for instance: an email sent to a single person cannot be defined as mass communication, but if it is sent to a group it might surely be.

If we refer to the massive communication process as a complex organization, then we would need to analyze the difficulty of elaboration, coding, sending and reception of the message. "Until the arrival of Internet and the web, the traditional massive communication source was a group of individuals who performed a specific role in an organizational environment (...) it was the final product of the effort of more than one person." (Dominik, 2007, p. 12).

The presentation of a news in television, for instance, entails covering a specific fact by reporters accompanied by camerapersons and technicians; next, the writing of the note, review, editing is done and, finally, the presentation of the news on a specific section of the news program, all these under the rigor of the news director, editors, hosts and other professionals. The arrival of mass communication based on Internet changes this situation, thanks to the world web a person can become a massive communicator. This change means that the work of novice informers can be known.

Probably, the potential of new media lies in a fusion of its intermediate development and our social, political and economic transition inside and outside it; although we still need to demonstrate whether to define the digital frontier depends on us or not. In any case, the new media and communications are in continuous evolution and, as a result, their definitions also evolve.

6. A new media ecology?

In the last years, researchers participating on studies about media ecology have demonstrated interest particularly about new interactive multiplatforms of communication. In 1995, during a conference, Neil Postman questioned about infoxication suffered by the society in the first years of commercial Internet. For the author, people didn't know what to do with so much information. There wasn't a logical principle of organization and selection. In a way, this is experienced by the contemporary society up to the date, and with more intensity.

Based on Postman ideas, a third metaphor emerged, additional to the two metaphors of 1971: media after software. This concern, presented by Manovich (2005), originally published by the author in 2001, in English, grounded on the study of the software culture, a proposal justified by the emergence of new media. For Manovich (2005, p. 95), new media demanded a new stage in the study about the theory of media, which origins were supported on Innis, Postman and McLuhan researches, since 1960. In the same scenario, disciples of Postman and McLuhan dedicated his studies to comprehend society and media. Paul Levinson (2012) presented the proposal of, not an existence of new media, but instead "new new" media, with the justification that what we had was so new that only "new media" was not enough to translate the innovative. Simultaneously, Valerie Peterson (2012) observed society and media in a behavioral space. For the United States author, the world lives a new relationship between sex and communication, transforming the essential human intimate relationship into something completely different than what the history of humanity has experienced so far, within a mediatized period.

Also resulting from this new metaphor that involves "ecology" and "media", in 2013, Lev Manovich, which is mathematician and digital artist, published a new study, resulting of different works in the field of research applied in media ecology, *Software Takes Command*, a book that debates about the relevance of software in the new media ecology. No more automation softwares, but instead those targeted to the everyday aspect of the contemporary society, what account for our routine and that, in a way, cause a digital dependence.

In this new media ecology, different companies, like Google and Facebook, have transformed the relationship between society and media – media ecology -, offering apparently free applications and that have never been officially concluded. For Manovich (2013, p. 4) we are testers of software companies that create their products, offered in Beta versions.

The view of the author in this work leads us to observe a software dependency by the contemporary society, especially in situations of the mediatic ecosystem. With the Internet of things, this dependency will be even more expressive. However, engaged in studies about technology, such as Landow (2009) and Jenkins (2009), or concerned with the society, such as Manuel Castells (2013), bring us opinions contrary to Manovich, which might lead to the need to think about new metaphors. This is justified on the fact that the mediatic ecosystem is Dynamic, as well as its solutions and adaptations.

7. Facing consumers and audiences

How to achieve then that brands, both of media as well as organizations can survive in this new mediatic scenario? There are new ways to involve consumers in the multiscreen environments, there

are opportunities to create “liquid” contents simultaneously from the TV, to the Smartphone, Tablet, etc. Screens must be adapted, for instance, that the desktop version of an organizations’ website can be equally accessible from any other device. Contents must be developed through different points of contact, but connected, ensuring that the consumer understands “the complete story” of the brand generating an integrated experience. Specialized agencies provide the options described in the following table

<i>Paid Media</i>	Media paid through a third party. Paid media grant brands: control, reach, segmentation and share of voice; it is projectable, predictable and easily measurable. Paid media act as fast as the brand needs to convey a message to a specific consumer immediately, and it is by far, the fastest route because they may work as a connector between the brand and social media. Paid media accelerate interaction of consumers with earned media (Earned and Owned).
<i>Owned Media</i>	Owned media where brands develop their own media and contents. Owned media are an opportunity to offer a real value to the public and keep control of messages. With owned media the brand creates its own channels, with many opportunities to promote contents towards earned media and be used by paid media.
<i>Earned Media</i>	Earned media, where brands unfold their audience to generate and spread their message. Earned media leverage in a context of Independence of the consumer who speaks in the name of the brand and has more credibility than paid and owned media. Obviously the objective is to achieve those independent and influencing voices to champion the brand and not against it. Thus, the brand delegates the message control with the huge advantage of nurturing trusted voices that can polish and push a brand forwards.

Source: Communication and Advertisement agencies
Authors’ own creation

This “triangulation of media”, allows brands in the current context to achieve objectives, this is just a reference of why we need to perfectly know how consumers are currently, finally the goal of both media as well as information companies, as well as other products’ companies, is to get to interest groups to generate profitability.

8. Conclusions

We do not have a consolidated ecosystem, and never should. In reality, the mediatic ecosystem is Dynamic. It is an scenario of transformations related to cultural changes, and in this sense we can conclude that not only media ecology, but also digital culture, are themes under construction. However, concepts of media ecology, proposed by Postman and McLuhan in 1979, are still the observation line to understand the mediatic contemporary society.

The text we introduce in the paper comes from a still non conclusive study, but that points out to signals that there is the need for new metaphors for the contemporary mediatic ecosystem. With these

new concluded results, we can look for the understanding of future metaphors, connecting them with the society and its mediatizing needs/ expectations.

Surely, studies about media ecology are based on media observation and the crossing of existing concepts so that, given the case it is not associated to them, allows to create new concepts. However, we must comprehend what media ecology means. This is what we presented in the paper published herein.

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