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The contribution of Alvin Toffler to the theoretical and conceptual imaginary of communication

Meetings - also disagreements - of Toffler with the Media Ecology

Octavio Islas [CV] [[Universidad de Los Hemisferios, Quito (Ecuador)

Amaia Arribas [CV] [] [Universidad de Los Hemisferios, Quito (Ecuador)

Fernando Gutiérrez [CV] [0] [7] Universidad TEC de Monterrey, Estado de México (México)

Abstract

We start by affirming the complexity of communication and refer some of the main contributions to communication that have come from other fields of knowledge. We next point out that Alvin Toffler, a prominent American futurist who died on June 27, 2016, is one of the intellectuals who made valuable contributions to the communication sciences. At the end of the decade of 1970, for example, he anticipated the phenomenon of the prosumtion and gave name to the figure of the prosumers. Not a few academics and researchers in communication - and of the social sciences, in general - have recognized the effective relevance of the prosumers in the development of digital communications. In

the work and thinking of Alvin Toffler, we identified some concerns in common with Marshall McLuhan (1911-1980) and the Media Ecology developed by Neil Postman. In this text, we will focus our attention on three of Alvin Toffler's main books, in which he discusses topics related to the development of communication: The 'future shock' (1970), The Third Wave (1980), Revolutionary Wealth (2006), in which Heidi, his wife, participated as coauthor.

Keywords

Marshall McLuhan, Alvin Toffler, Media Ecology.

Contents

1. Starting point: the complexity of the communication sciences. 2. The 'shock of the future''. 3. The Third Wave. 4. The revolutionary wealth. 5. Conclusions. 6. Notes. 7. References.

1. Starting point: the complexity of the communication sciences

Communication is 'complex', and as Edgar Morin (2011) rightly points out, complexity is a problem word and not a solution word. Rafael Alberto Pérez (2012), "father of the new strategic theory", emphasizes that not a few of the main contributions to communication have proceeded - and we will continue to proceed, we affirm - from other fields of knowledge:

"the scientist who best explained the intimate connection between communication and human thought was a psychologist: Vygotsky. The one who finished locating it between the body and the mind was a neurophysiologist, the Portuguese Damasio, in his Error of Descartes. The one who gave us his first formulation/scientific definition, a mathematician: Shannon. The one who best connected communication and cultural heritage, an engineer: Shannon, who best connected communication and cultural heritage, an engineer: Korzybsky, the father of *general semantics*, with his germinal idea of "time-binded." One of the first to relate communication with rules and social acts, an anthropologist: Huzinga and his *homo ludens*; the second, an analytic philosopher: Wittgenstein, and his *language games*. The one who has best connected communication with symbolic capacity, culture and humanity, a philosopher and historian, Cassier, the father of *homo simbolicus*. The one who has best connected communication with evolution and knowledge, a neurobiologist, the Chilean Maturana, father of the *biology of knowledge* (Alberto, 2012, page 202).

In this relationship - in which it is possible to confirm the pronounced transdisciplinarity in the studies of the human communication - it is indispensable to incorporate the name of Alvin Toffler, outstanding American futurologist of Jewish origin, author of books that acceded to the condition of best sellers, like *Shock of the Future* (1970), *The Eco-Spam Report* (1975), *The Third Wave* (1980), and

Revolutionary Wealth (2006) - his last book - written with Heidi Toffler, his wife. Alvin Toffler passed away in June of 2016 in Los Angeles, California, at 78 years of age.

Alvin Toffler was born on October 3, 1928 in New York, and studied Letters - just like Marshall McLuhan. At the New York University (NYU) he got his doctorate in letters, law and science - some biographers claim that he obtained a doctorate in sociology. Precisely in the Culture and Communication Department of that university Neil Postman (1931-2003), a well-known American sociologist, developed one of the first programs of studies in communication focused on the Media Ecology. In the early 1970s, Neil Postman promoted the "Media Ecology" concept that he took from Marshall McLuhan to explain - through an analogy with this area of biology (ecology) - as in this case, that all media or communication technologies also affect the perception, understanding, feelings and values of people; and how this interaction with the technologies increase or reduce our chances of survival in a given space and time. (Postman, 1970). This metadiscipline, as one of his disciples Christine Nystrom (1973) called it, gave rise to a postgraduate course in the same University of New York that was part of the curricular offer of the institution for more than 30 years.

At NYU Alvin met Heidi, barely a year younger than him, with whom he married. She also became recognized as an important futurologist. While Alvin's formation was Marxist and Hegelian, as some of his biographers claim, Hegel finally prevailed over Marx. In the 1950s, Alvin Toffler labored as a worker at a cars' factory, and later at a steel mill. He then served as a correspondent in the Congress and in the White House for a Pennsylvania's newspaper. He later joined the editors of the Fortune magazine and became an associate editor. In addition, Alvin Toffler conducted some interviews for the Playboy magazine. [4]

In the work of the leading American futurist, it is possible to identify a broad repertoire of theoretical and conceptual concerns common with the Media Ecology and Marshall McLuhan. In 1964, Random House published the first edition of *The Culture Consumers*. A Controversial Study of Art and Affluence in America. A controversial study of art and wealth in the United States - Alvin Toffler's first book, a text that went almost unnoticed. That same year, it was published the fourth book of Marshall McLuhan, Understanding Media: The extension of man, which turned the Canadian professor into a celebrity. It also affirmed him as one of the emblematic icons of the twentieth century, as referred to by Tom Wolf, who is considered the "father of new journalism" in addition to being recognized as one of the main biographers of Marshall McLuhan. The central theme of Alvin Toffler's text was American culture. That theme was precisely the starting point of Herbert Marshall McLuhan in 1955, the year in which his first book, *The Mechanical Bride. Folklore of industrial man* was published. For both Toffler and McLuhan, the starting point was to study the underlying causes of the deep cultural upheaval that the United States resented.

Two years later, in 1966, Toffler began his teaching activities at the New School for Social Research in New York, as well as in other well-known educational and cultural institutions, highlighting the

Russell Sage Foundation in New York, dedicated to foster the research in the social sciences, as well as the Cornell University. Alvin Toffler and Marshall McLuhan were convinced educators. In 1967, the book *The Medium is the Massage An inventory of Effects* was published, Marshall McLuhan's greatest bestseller, which was illustrated by Quentin Fiore, a book that outperformed *Understanding Media: The Extension of Man.* According to Eric McLuhan (Islas, Strate, Gutiérrez, 2016), the book *The Medium is the massage* was conceived as the synthetic vision of *Understanding Media*, and was conceived as a text intended for a public alien to the study of the communication media. Precisely in the work, *the medium is the massage: an inventory of effects*, (McLuhan and Fiore, 1967) McLuhan with the help of Quentin Fiore gives an interesting explanation of the peculiar aphorism "the medium is the message" that contributed to identify his work and way of thinking.

"The medium, or process, of our time - electric technology - is reshaping and restructuring patterns of social interdependence and every aspect of our personal life. It is forcing us to reconsider and reevaluate practically every thought, every action, and every institution formerly taken for granted. Everything is changing - you, your family, your neighborhood, your education, your job, your government, your relation to "the others." And they're changing dramatically

(McLuhan and Fiore: 1967, p. 7)

Just as television and radio contributed to the modification of perceptions and habits of the people who came in contact with these media in the last century, now the new digital technologies are again reconfiguring the visions and social actions of this new era.

2. The 'shock of the future'

In 1970, Alvin Toffler's first bestseller, Future Shock, was published, which is considered the first book in a trilogy composed of the books The Third Wave (1980) and Powershift: knowledge, wealth and violence at the edge of the 21st Century (1990) The title of the book derived from an article that Toffler published in Horizon, in 1965. In such text, Toffler coined the term "shock of the future". In this book, Toffler warned about the fears inherent to change, which often paralyze individuals and societies, producing a state of "shock". The 'shock' of the future refers to the disorientation resulting from the anticipated arrival of a future, which surprises us unprepared to face it:

"I saw clearly that the «shock» of the future is no longer a possible remote danger, but a real disease affecting an increasing number of people. This psychobiological state can be described in medical and psychiatric terms. It is the disease of change "(Toffler, 1973, p.2).

Toffler's first thesis on the wealth that knowledge produces - which he would retrieve in his latest book *The Revolutionary Wealth* - were precisely embodied in this book, whose purpose, Toffler pointed out, is to facilitate our adaptation to the future. People - like any other species - should, in principle, seek

to develop characteristics (knowledge, skills, attitudes) that facilitate a better accommodation into the environment, and otherwise disconnect from the practices and habits that are part of their behavior, if these difficult or make impossible the adaptation process based on the new demands of the environment.

In the book, *The medium is the massage*. An inventory of effects, McLuhan (1967) said that we are accustomed to see the present from the comfort of a rear-view mirror. "we march backwards in the future," McLuhan stated. Although both authors agreed to identify the fear that the future and changes produce in people as well as in societies, Toffler questioned McLuhan (1973: p. 9): "McLuhan used the terms «global people» and «electricity era» with which he falls into the same error of describing the future on the basis of two rather small dimensions: communications and union". This questioning seems to us inaccurate. Toffler notices in McLuhan a media determinism that is not such, in fact it is a relative technological determinism.

In spite of this questioning, in the mentioned book it is possible to notice not few coincidences of Toffler with McLuhan and with the Ecology of the Means. For example, both noted the importance of the formidable historical acceleration that was recorded in those days, resulting from the development of new technologies:

"To survive, to avert what we have termed future «shock», the individual must become infinitely more adaptable and capable than ever before (...) before he can do so, however, he must understand in greater detail how the effects of acceleration penetrate his personal life, creep into his behavior and alter the quality of existence. He must, in other words, understand transience" (Toffler, 1973, p. 23).

Toffler also coincided with Media Ecology in recognizing the ecological effects of technologies:

"It is vital to understand, moreover, that technological innovation does not merely combine and recombine machines and techniques. Important new machines do more than suggest or compel changes in other machines - they suggest novel solutions to social, philosophical, even personal problems. They alter man's total intellectual environment –the way he thinks and looks at the world. (Toffler, 1973, pp. 18-19).

The concept of transience, Toffler pointed out, provides the missing link, for a long time, between the sociological theories of change and the psychology of the individual human beings. McLuhan not only handled the concept 'transitoriness', in addition, he complicated it. The Canadian argued that the process of invisibility-visibility of communicative environments is not automatic, and depending on its complexity, may even overflow expert observers. A new media environment created by a new technology, can only be perceived by most people at the time when another new technology arrives, proceeding to modify it. The previous environment will become visible while the new environment will become invisible to the users of the new technology. McLuhan argued that the vision of most

people is always a step back from technological change. Artists, however, often infer and anticipate the advent of new media environments. Toffler anticipated the creation of a new society (page 129). Marshall McLuhan named the emerging society; *Information Age*.

Bolter and Grusin (1999) suggest that communication technology functions as an interface between the environment and the user, but not in a transparent way, but in an opaque manner, through a more complex hypermediation process such as the one suggested.

Like other media since the Renaissance-in particular, perspective - painting, photography, film, and television - new digital media oscillate between immediacy and hypermediacy, between transparency and opacity. This oscillation is the key to understanding how a medium, fashions its predecessors and other contemporary media. Although each medium promises to reform its predecessors by offering a more immediate or authentic experience, the promise of reform inevitably leads us to become aware of the new medium as a medium. Thus, immediacy leads to hypermediacy. The process of remediation makes us aware that all media are at one level a "play of signs," which is a lesson that we take from poststructuralist literary theory. (Bolter and Grusin, 1999, p 19)

The immediacy spoken by Jay Bolter and Richard Grusin can be understood as an absence of mediation between the person and the environment. The installation of a level of transparency that makes imperceptible the technology, and exposes directly before the audience (reader, radio listener, viewer) the objects it represents, producing a sense of authentic experience. On the other hand, hypermediacy reveals an act of mediation. A transition from transparency to opacity. The idea that knowledge reaches the audience through a medium or instrument.

From Bolter's point of view, and based on McLuhan's thesis, it can be said that the new media are the result of an oscillation between "immediacy" and "hypermediation". When a new medium appears on the scene (in a given context), it is "remedied" in principle from the medium that precedes it and later of the means that follow it. This means that the new medium takes whatever is useful from the former medium (structure and language) and then which works from the means that follow it.

3. The Third Wave

In 1980, the book *The Third Wave* was published, second text of the mentioned trilogy. Toffler analyzed three central themes in communication sciences: the communication media, in chapter XIII "De-massifying the media"; the corporate identity crisis, in chapter XVIII; The phenomenon of prosumerism and prosumers in chapter XX, "The resurgence of the prosumer." On this occasion, for obvious space limitations we will focus our attention on Toffler's notes on the communication media and prosumers.

3.1. De-massifying Media

In the chapter "De-mystifying the media," Toffler began by affirming the importance of information: "the information has perhaps become the most important and fastest growing issue in the world" (1981, p. 162). The information is decisive in the transit of the infosphere of the second wave - the industrial society - to the infosphere of the third wave - the information society. Toffler's concept of 'infosphere' refers to the concept of 'cultural ecology' in McLuhan: 'the third wave is not only about speeding up our information flow: it transforms the deep structure of information on which our daily actions depend' (1981, p.164). In the second wave, the communication media made a decisive contribution up to the point to achieve the standardization of social behavior, as required by the industrial production system. However, in the third wave - perfect anticipation of the post medial society- individuals would emancipate themselves from the uniformity decreed by the mass communication media. With remarkable clarity and long before the Internet was possible, Toffler anticipated the media relay that would register in the third wave: [5]

Throughout the Second Wave era, the mass media grew more and more powerful. Today a startling change is taking place. As the Third Wave thunders in, the mass media, far from expanding their influence, are suddenly being forced to share it. They are being beaten back on many fronts at once, by what I call the "de-massified media." (1981, p. 164).

By 1980, Toffler had warned that newspapers and mass magazines would lose readers - as it has actually happened in recent years. In addition, he pointed out that the impact of the third wave on communications would in no way be limited to print media. For example, on the radio he anticipated: "new forms of auditory communication are constantly absorbing what remains of the general public" (1981, p.166). Toffler warned that the "shift to diversity" would also reach television "the most powerful communication media and massifier (...) The days of the omnipotent centralized network that controls the production of images are disappearing" (1981, p. 167). Toffler also anticipated the conflicts that mass communication media owners would face with the emerging communication media owners of third wave societies, as indeed has happened, from what happened with Napster to the laws that have tried to push some Hollywood media empires to try to contain the aggressive expansion of the Silicone Valley: "the third wave communication media are destroying in a broad front the dominion exercised by the communication media of the second wave" (1981, p. 167).

Neil Postman, who is considered one of the fundamental pillars in the Media Ecology, in an interesting dissertation on the effects of technology on society - Five things we must know about the technological change -, which he dictated at the congress "New Technologies and the Human Person: Communicating faith in the new Millennium", an event celebrated on March 27, 1998, organized by the Archdiocese of Denver, affirmed that there are always winners and losers with the technological changes. Nowadays the conventional mass media owners are the losers, while the owners of the new

media - Netflix, Google, Mark Zuckerberg, for example - would be some of the winners in the terms formulated by Postman.

For Postman (1970), the word ecology implies the study of the media or technological environments (books, photography, film, radio, television, computers ...), specifically their form, structure, content and social impact. In these environments, there is a dynamic and complex system of messages that conditions in people the way they think, feel, and act. On one hand, it structures what can be seen and said, it establishes roles, and specifies what is allowed and not allowed to be performed. In the case of technological environments, specifications are increasingly implicit and informal, and what this metadiscipline (Media Ecology) seeks is precisely to make explicit these conditions. Media Ecology promotes the study of media environments, and explores the cultural consequences of the technological transformation over time, that is how the media, tools, instruments, artefacts or technologies that are available to us continuously change and change us.

"We shape our tools and thereafter our tools shape us" (McLuhan, 1964)

Toffler, on the other hand, anticipated the segmentation of audiences, which, he warned, would significantly reduce the power of the mass media and affirmed that the demassification of the mass media would also overshadow our minds. In the resulting new culture - new cultural ecology, in McLuhan's words - the differences between the users of the second and third wave media are evident:

"Second Wave people, yearning for the ready-to-wear moral and ideological certainties of the past, are annoyed and disoriented by the information blitz ... Third Wave people, by contrast, are more at ease in the midst of this bombardment of blips ... Instead of merely receiving our mental model of reality, we are now compelled to invent it and continually reinvent it. (1981, p. 171)

The analysis of the impact of technologies - in general - as well as information and communication technologies (ICT) included the whole book. Toffler, for example, in the chapter "The Intelligent Environment" anticipated Big Data and Internet of Things (IOT): "We built a new infosphere for a civilization of the third wave, we are imparting not life, but intelligence, to the dead environment In which we are immersed "(1981, page 173). In that chapter, Toffler's coincidences with Media Ecology seem more evident:

"In altering the info-sphere so profoundly, we are destined to transform our own minds as well—the way we think about our problems, the way we synthesize information, the way we anticipate the consequences of our own actions. We are likely to change the role of literacy in our lives. We may even alter our own brain chemistry "(1981, p. 177).

3.2. Prosumers and prosumerism

In the first wave, prosumerism was a natural practice - Toffler says - most people consumed what they themselves produced: "They were neither producers nor consumers in the usual sense. They were, instead, what might be called prosumers "(1981, p.262). Toffler also outlines the foundations of a political economy not necessarily Marxist - Is the Marxist political economy the only one possible? - 'Self-help', 'do it yourself' and 'cold line' favored the expansion of prosumerism. In addition, on the development of the 'Knowledge Economy', he anticipated: "The more we move towards advanced manufacturing, and we de-massify and individualize the production, the greater the participation of the client in the production process must necessarily be" (1981, Page 269). Toffler also ventured to speculate on teleworking in 'electronic homes of tomorrow'. The greater involvement of the consumer in the production process, said Toffler, would lead to profound changes in the economy, also transforming the leisure of people, deriving new lifestyles. The rise of the prosumer: "will decisively alter all our economic thinking." The third wave, Toffler concluded, will produce the first "transmarket" civilization.

4. The revolutionary wealth

Alvin Toffler's latest book, published in 2006, comprised 50 chapters in five sections. In this text - in which his wife also participated -, the central theme of the book is the new form of wealth generated by knowledge. [6] Science, the Tofflers point out, is the key pillar of the Knowledge Economy. The Tofflers praised the wealth, emphasizing that this represents possibilities. Globalization - a process considered by them irreversible - is accompanied by problems and the world seemed not to be prepared to face them. The Sputnik launch into space on October 4, 1957 - marked the beginning of the Knowledge Economy. The space race favored the acceleration of scientific and technological development. The wealth supported in knowledge stimulates and allows the generation of new wealth systems; the development of K-tools designed to produce knowledge-place us before the threshold of a new industrial revolution. Most of the world's knowledge is stored outside the brains of the human being. The ages of knowledge identified by the Tofflers coincide with the statements about the early communicative eras, identified by McLuhan in the book *The Gutenberg Galaxy. The genésis of the Typographic Man* (1964). Both the Tofflers and McLuhan advised the importance of informational rhythms at each historical stage. However, it is worth noting that the Tofflers incorporated a fundamental element to the Media Ecology: the differential capacity to store knowledge:

"For millennia, human beings have had very limited means for the transmission of knowledge from one generation to another. Apart from the oral accounts (told and re-told with progressive imprecision), most of the knowledge disappeared with the death of each person and each generation. The pace of social and technological change in these early human societies was so slow... Thirty-five thousand years ago, a gigantic advance occurred when an anonymous genius

drew the first pictogram or ideogram on a stone or on the wall of a cave to remember an event, a person or a thing; In doing so, it began to store non-oral memories outside the human brain. Another breakthrough was the invention of different forms of writing. Millennia later came other formidable advances, with the successive invention of libraries, indexing, and printing, which increased the rate of knowledge growth from generation to generation "(Toffler & Toffler, 2006, pp. 163-164).

The Tofflers warned about the development of new emerging industries - the industry of synchronization, the industry of the solitude, for example -. They stressed that the media, in a much more globalized economy, influence the stock market and the development of the world economy. In the 'Ecology of Time' - an interesting term coined by the Tofflers, synchronization is decisive. The cost of desynchronization is high. Innovation is possible because synchronization is never perfect. The development of the new economy is accompanied by a resemantization of space, which dilutes not a few of the established borders. Not a few nations - Mexico, for example - see diminishing the advantages of their privileged geographical location. The center of gravity of the world economy moves to Asia. Space is one of the unexplored frontiers in wealth generation: "every dollar invested in NASA adds nine dollars to the gross domestic product of the United States" (Toffler & Toffler, 2006, p. 148).

The sixth chapter of the book is devoted to the subject of prosume. The Toffler offered an explanation of the word prosumer, a term which, as we noted earlier, was introduced in The Third Wave: "When as individuals or collectives, we PROduce and conSUME our own output, we are 'prosuming' (Toffler & Toffler, Page 221).

Prosumers want to do their own programming. The programming equals the assembly line of the second wave industrial societies. Prosumers develop their own content.

5. Conclusions

Toffler, McLuhan and Postman agree on the idea that the new information and communication technologies that constantly appear in the environment not only add something to the culture, but also change everything. When a new technology acquires importance in a given culture, certain elements that defined this culture are reconfigured. In this sense, the new culture that emerges is, to a large extent, a product of the technological change that has apparently unpredictable, rapid and irreversible consequences.

Each technology enhances an action and inherently has a new concept of the environment. In reality, there is no technological neutrality in the operation. Although the idea that technology cannot be good or bad in itself is deeply rooted in some critics of the technological determinism, there are some other theorists who point out that its use is impossible without considering some kind of influence, judgment

or bias. Precisely Jacques Ellul was one of these theorists who strongly rejected the idea of technological neutrality. Regardless of how technology is used, it will always have a certain number of positive or negative consequences, said Jaques Ellul (1990). Technological development cannot be described simply as positive, nor negative, nor neutral; but our own systems and technological environments will always condition us.

Jerry Mander pointed out in 1978 that humankind had not understood that in each technology, an ideology or philosophy adhered to its own form and structure. (Mander 1978: 350). In this sense, it can be said that technologies serve as a sort of viewfinder that determine our perspective of the world.

To a man with a hammer, everything looks like a nail; to a man with a pencil, everything looks like a list; to a man with a camera, everything looks like an image; to a man with a computer, everything looks like data (Postman, 2016).

In general, the uses that can be granted to a technology are always determined by its own structure. For Neil Postman (1979) the idea of technological neutrality vanishes by the following conditions:

- 1. Due to the symbolic forms in which information is encoded, different communication technologies always have different intellectual and emotional biases;
- 2. Due to the affordability and speed of information, different communication technologies always have different political biases;
- 3. Due to their physical form, the different communication technologies always have different sensorial biases;
- 4. Due to the diverse conditions in which they operate, communication technologies always have different social biases;
- 5. Due to its technical and economic structure, different communication technologies have different content biases.

Behind a clock is a new way of measuring time; behind a newspaper or magazine there is a new way of reporting; behind a computer there is a new way of working; each technology has inherent a new concept of the environment. From this point of view, it is interesting to note that the press, radio, television, computer and any other communication technology are not only information transmitters, but metaphors by which reality is conceptualized in one way or another (Postman, 1979, p. 39). In reality, the world is never perceived as it could be, but rather through the codification of the various technologies that mediate between people and their environment. Technology cannot be abstracted from its own context and for such reason it cannot be qualified as neutral.

In the third luster of this twenty first century it appears a new technological configuration dominated by new tools or instruments that drastically impact, in a very particular way, the habits and perceptions of the society. In this sense, it can be said that the new technologies undermine the equilibrium that

had been established within the social ecosystem. The dominance of a particular technology, in terms of attraction and market share, is limited by the release of a new offer that divides the attention of users of conventional instruments.

There is enough evidence to think that information and communication technologies will follow their development cycle, they will extend and amplify new functions and capabilities, and at a given moment, they will evolve into a more sophisticated way that will affect the reconfiguration of the human being as a species. However, this reconfiguration will always present serious risks for those who cannot adapt to the new conditions of the environment.

In order to understand the new environments in which communication takes place, it is essential to analyze the work of Toffler and of the parents of the Media Ecologies.

6. Notes

- [1] PhD in Social Sciences. Director of the Center for Higher Studies in Internet and Information Society, Universidad de Los Hemisferios, Quito, Ecuador. Director of the web magazine "Razón y Palabra", a pioneer among scientific publications dedicated to topics of communication in the Ibero-American cyberspace. Director of the Julian Assange Chair of the Tecnopolítica y Cultura, at the Centro Internacional de Estudios Superiores de Comunicación para América Latina (Ciespal). Author and coordinator of 16 books, more than 50 chapters in books. His email account is: octavio.islas@uhemisferios.edu.ec
- [2] PhD in Information Sciences. Research Professor at the Universidad de los Hemisferios, Quito, Ecuador. She has developed activities of consultancy and research in business communication and participated with papers in various communication forums. Her email account is: amayaa@uhemisferios.edu.ec
- [3] PhD in Design and Data Visualization. Director of the Social Sciences and Humanities Division of the Tecnologico de Monterrey, Campus Santa Fe. Executive Secretary of the Media Ecology Association. General Coordinator of the World Internet Project, Mexico. Author and coordinator of 7 books on communications media and new means of communication
- [4] In a very interesting book Playboy interviews Barry Golson (1982) compiled the interviews conducted by Alvin Toffler and Alex Haley to Miles Davis, Vladimir Nabokov, Cassius Clay-Muhammad Ali, Martin Luther King, Mel Brooks, Albert Speer, James Earl Ray, Marlon Brando, Edward Teller, John Lennon and Yoko Ono.

- [5] It is very nice to note that some researchers of communications in Mexico warn as a novel subject the gestation of the post medial society, when Toffler had anticipated it at least 36 years ago.
- [6] The Tofflers accurately reason, "the indeterminacy of the information goods requires a different political economy of information" (Toffler & Toffler, 2006, 158).

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