From the Alphabet to the Web:
How Time, Space, and Thought
Have Changed

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Introduction

In his *Philosophiae Naturales Principia Mathematica*, I. Newton (1965) explains how we should consider time, space, and place. He defines absolute time as a mathematical truth: It has no relationship with anything external, and it corresponds to length. Among its distinctive characteristics, there is the fact that it flows steadily and that it corresponds also to length. In this, we can distinguish it from relative time, defined as "apparent" and "vulgar" because it is only a measurement of absolute time. Space considered in an absolute sense, the physicist tells us, is by nature void of relations with external elements. For this reason, it is always the same and remains still. When, instead, we refer to relative space, it is necessary to consider it as a moving dimension or as a measurement of absolute space that our senses define according to its position with the surrounding bodies. A place is the part of space occupied by a body, and with reference to space, it can be absolute or relative (1965). It is a linear conception of time—the one proposed by Newton—that will later on be criticized by A. Einstein with his equation of relativity.

Yet the concepts of time and space described by Newton suit the cultural and experiential dimension outlined by M. McLuhan (1962) in his description of phonetic and visual culture—an analysis, which moving from the introduction of the alphabet, brings us to Gutenberg and to the electronic media. It is only at the end of the 19th century that the telephone became a habit for the inhabitants of the Western world. Before then, there had never been the need to assign the codification or the decodification of a message to any kind of media. The necessary competences to perform this function were, in fact, already innate in the sender and the receiver of the message: in man. Language, the mastery of the alphabet, and, of course, hearing and sight are things that man possesses. Man crystallizes as a medium of the things that are communicated through him. With the spreading of electrical media, among which McLuhan considers also automation, man can expand his senses, overcoming the barriers of faceto-face communication. The communication process expands over time and space: It goes beyond the physical place. There is the possibility to communicate at a distance with different times of emission and reception. Relying once again on the great scholars of the past, but without abusing their knowledge, we can establish a parallelism between the new perception of time and space offered to us by the Web and what Einstein says with his equation of relativity. Moving from the consideration that if the time of the perception of all objects was instantaneous, then the speed of light would be infinite, Einstein starts

confuting the idea of linear time. In fact, Einstein says that this is not true—the speed of light is not infinite—and in declaring this, he was able to count on the studies carried out in those years on this issue. The speed of light is high, but it is not infinite, and it corresponds to around 300,000 km per second. The consequence of this enunciation is that nothing can be measured as fast as light. Einstein imagined riding the light that carries the information about movement, and he therefore understood that it was necessary to change the dimensions of time and space when the events are being observed. In Einstein's opinion, space and time are not distinct absolute quantities as Newton had presupposed. They are instead intrinsically relative, so that space cannot absolutely be distinguished from time; it is the interaction between energy and matter that determines variable dimensions of time and space in the universe. These words recall those of J. Meyrowitz (1985), according to whom the influence of mass media is not so much in the vehiculated content but in their ability to create social situations where interactions can take place, transforming communicative models and favoring social change. The idea of time and space used by the Web picks up the one outlined by Einstein, and it could incur in the same paradoxes. For example, when we talk about communication via the Internet, we indicate it as simultaneous, but is it really so? How much time passes from the emission of the message and its reception? Can we "really" consider it simultaneous? Certainly not. What we can here point out is that we pass from the linear time typical of the alphabet to a dimension of time and space connected to each other and capable of drawing a net of relations and "places."

The systems of communication have changed, change, and will probably continue to change our perception of proximity. What was once perceived as distant is now part of our space of experience, that is, of that place where everything *appears* to be simultaneous. Information travels across the Web in simultaneous time. The Medium Theory (Meyrowitz, 1994) considers media as "environments" in which interactions between individuals occur, contributing to the creation of "technologically structured communities." This distances us from the idea that the means of communication are passive containers inside which information moves. The examples in favor of this statement are numerous and are connected to the very introduction of a "new technology" (Paccagnella, 2000). According to McLuhan (1962) and Eisenstein (1983), the invention of print had consequences on the general structure of society; satellites, radars, and, more in general, the new communication technologies have changed military strategies and tactics (De Landa, 1991). If we normally attribute to the invention of print and of movable type the passage from traditional to modern society, Marvin (1988) makes the attempt to position that moment toward the end of the 19th century, when the communicative potential of the telephone, the telegraph, and the light bulb was discovered. With the development of the Internet, and with the increasing pervasiveness of communication between networked computers, we are in the middle of the most transforming technological event since the capture of fire (Haythornthwaite & Wellman, 2002).

In recent years, the spreading of the Internet has changed and widened the modalities, the space, and the time of communication, work, and structure of thought. *Information and Communication Technologies* (ICT) have become so pervasive that the situational geography of social life has changed (Meyrowitz, 1985), projecting in the telematic sphere (Picci, 1999) new forms of interaction.

Time and space, considered as social constructs, undergo construction and deconstruction processes linked to the technologies and the "cultures" (phonetic, visual), which are introduced from time to time.

Time From the Alphabet to the Web

Time in Linear Communication

In *The Gutenberg Galaxy*, McLuhan (1962) affirms that the interiorization of the phonetic alphabet transports man from the magical world of hearing to the neutral world of sight. With the introduction of technological innovations, there is a substantial change in the vision of the world of a European or American boy in comparison with that proper of an African one. In an example offered by McLuhan, the technology surrounding boys coming from the Western world is essentially described as visual, abstract, and explicit, where things occur in times and spaces that are continuous, uniform, and in linear succession. On the contrary, African boys live in an implicit and magical world of resonant words (McLuhan, 1962). To strengthen this analysis, McLuhan quotes a research by J. C. Carothers, which appeared in the journal *Psychiatry* in November 1959. This author asks in what way teaching how to read and write can determine in society the passage from the idea of words as a living and resonant strength to that of a simple mental meaning. In his studies, Carothers compares illiterate and literate aboriginals and then, more generically, illiterates and Western world men. His observations push him to conclude that Western world men move from a reality where sounds are dynamic and external objects to another reality where, because of the existence of writing, they lose these characteristics and are subject to sight. The Western world man, affirms therefore Carothers, "mainly relies on the structuring of time-space relationships without which it is impossible to obtain the mechanical sense of casual relationships necessary to give an order to our experiences" (McLuhan, 1962, p. 44). This is the direct consequence of writing: In fact, as soon as words are colored with ink, they become part of the visual world, and they abandon the hearing one. This is also the opinion of W. J. Ong (1982), when he stresses the change in the relationship between space and discourse with reference to the press. The use of different media to communicate produces its consequences in the experiential world of man, who ends up therefore changing his way of perceiving time and space. The relationship between culture and technology is a theme that McLuhan and the School of Toronto are fond of. H. Innis (1952) in *The Bias of Communication* had indicated that writing systems develop as a means capable of coordinating and controlling human activities with reference to a greater extension of time and space. The same author in a previous book titled *Empire and Communication* (Innis, 1950) had already highlighted how a fundamental distinction to be made in terms of communication is the one that separates oral from written cultures, pointing out that whereas Greek civilization had been kept together by an oral culture, Roman civilization had been based on a written one. The consequences of the introduction of the alphabet were put forward again by McLuhan, who defined the literate as a "divided" and "schizophrenic" man. Such schizophrenia was attributed to the phonetic alphabet with its "abstraction of a meaning from sound and the translation of sound in a visual code." It forces, in fact, man to face an experience that transforms him (McLuhan, 1962, p. 47). According to McLuhan, the phonetic alphabet has the capability of liberating man from the tribe because he is taken away from the tight net of interactions of the hearing system. Man abandons or rather "comes out of" those simultaneous relationships typical of acoustic and oral spaces, and he finds himself in the world of the alphabet. Here, he lives a moment of *dualistic schizophrenia*, due to the dilatation or externalization of one sense or another. Yet, when technology extends one of our senses, a new cultural translation takes place at the same speed with which the new technology is internalized. The coming of the *Internet Galaxy* (Castells, 2001) produces a fusion between hearing and sight. If the introduction of a new technology determines a dilatation and an intertwining of our senses and if this has already been discovered by McLuhan in the passage from the magical world of sounds to the alphabet, in other words from a hearing system to a visual linear time one, how can we explain multisequentiality? How can we insert in an interpretative dimension the question put forward

by N. Carr (2010): "Does the Internet make us stupid? Or does it only make us once again schizophrenic?"

Timeless Time

It is in *The Rise of Network Society* that Castells (1996) identifies in simultaneity and timelessness the characteristics of time in our society. This is a consequence of computer-mediated communication that makes it possible to talk in real time with chat and interactive systems. The consequences of this system of communication can be traced in the predominant cultural system.

> The reorganization of media time within the same channel of communication and with the free choice of the spectator/actor, creates a temporal collage in which only genres are mixed together, while time becomes synchronic over a flat horizon, without a beginning, an end, a sequence. (Castells, 1996, p. 526; Italian translation, 2000)

Timelessness—Castells (1996) adds—is a trait of our culture deriving from the structure of the multimedia hypertext. Also for him, this way of finding and structuring information "shapes the minds and memories of the children educated in the new cultural context" (p. 526). Time events and, more in general, history are organized in sequences, in extractable freeze-frames so that a visual culture prevails. The author reminds us how encyclopedias organized knowledge in alphabetical order. At present, instead, the means of communication organize the access to information according to the needs of producers and consumers. Proceeding this way, the events lack chronological order and what we obtain is a culture of the eternal and of the ephemeral. The predominant culture is eternal because it is able to move forward and backward along the entire sequence of cultural expressions. It is ephemeral because it changes, bends, and takes the shape demanded by the context it finds itself in. In this case, the main change is the disappearance of linear sequentiality. It is in this sense that we have to interpret the passage from a linear alphabetic culture linked to the flow of letters that make words and to single events that make situations and history to a culture based on the multisequentiality of images, with a "timeless time," both eternal and discontinuous. The perspective in which Castells moves is called informationalism. It is the idea of the Web as a world capable of guaranteeing the connection and the communication between users geographically distant from one another and of becoming the most important resource from the economical and political point of view. Using the flows. The author can therefore affirm that timeless time belongs to the space of flows, because in the movement of the Web, the sequentiality of events is altered.

Spaces, Places, and Social Situations *Beyond the Sense of a Place*

The action is performed by an actor/element situated in a space that makes it come to being in a time that goes from $t0$ to $t1$. This is how we could make explicit the sense of what should be considered as an action and, consequently, as a "situation" in linear time. It matches what Newton (1965) enunciates in his *Philosophiae Naturales Principia Mathematica*. Yet, as we have here already affirmed, this conception falls to pieces as soon as we consider Einstein and his theory of relativity. It falls to pieces also when we consider the presence of the media. Milestone of this change is Meyrowitz's (1985) *No Sense of Place*. The author, studying in-depth the concepts of social interaction, of place, and of scene and back-scene presented by E. Goffman (1959), introduces us to the idea that "the nature of interaction is not determined by the physical environment as such, but by informative model flows" (Meyrowitz, 1985, p. 60; Italian translation, 1995). In fact, Meyrowitz argues that a place such as a room has a social

meaning because the walls and the doors bring to the inclusion and the exclusion of the participants, defining a space of action. Hence, it is the case to ask oneself if "behavioral environments have to be necessarily places. In other words, is the place really so important for the behavior or is there something else, traditionally associated to the place and for this reason confused with it?" (Meyrowitz, 1985, p. 59; Italian translation, 1995). The answer is the "informative flow," the knowledge, and the interpretation of the action and of the social situation that exists in a certain environment. The example proposed is that of some waiters who move between the lounge, where they serve the clients (the scene), and the kitchen (the backscene), where they get ready to serve the tables. But if the lounge is empty because the restaurant is still closed, the space of the "scene" can be used to perform "back-scene" activities. Likewise, if a regular client goes beyond the doors, which separate the lounge from the kitchen, also the kitchen can become part of the scene. It is clear that what changes when you are in a place is the different flow of information that you possess according to the situation you are in. The social situation is characterized by an "informative system," that is, by a certain model of access to information concerning the behavior of other people. Considering the situation as an informative system allows you to establish a *continuum* between a "face to face" situation and a situation mediated by communication systems. Media modify the border between the scene and the back-scene, no longer drawing it using a physical dimension, but with an informative one instead. Think about when you receive a call on your mobile and someone asks you, "Where are you? Am I disturbing? Can we talk? Are you alone?" All these questions are necessary to define the social situation. This way you can sense if it is possible to ask certain kinds of questions, how the interlocutor will filter his or her answers, how much time he or she will be able to dedicate to the call and the topics of discussions, and what else could attract his or her attention. The introduction and the diffusion on a large scale of new means of communication restructure many social situations and require new social behaviors. But there is a "dark side" to this declination in a large scale of situations and also to the creation of landscapes in which you are inserted. They are tackled by A. Appadurai (1996) in *Modernity at Large*, where he defines *ethnoscapes* as "scapes of group identities." He explains that this neologism contains a wanted ambiguity. It refers first of all to the dilemmas of perspective and representation all ethnographers have to face, and he admits that (as for the landscapes of the visual arts) the traditional perceptions and perspectives, together with the variations in the situations of the observer, can influence the process and the result of the representation (Appadurai, 1996, p. 71; Italian translation, 2001). These *ethnoscapes* have a fluid and irregular shape for they are the consequence of global interactions, stretched between cultural homogenization and heterogenization. What Appadurai (1996) suggests should be read as an acceptance of the consequences of the exchange of information via the new technologies—in other words, the acceptance that the exchanged flows of information produce new scapes, such as the ethnoscapes, the mediascapes, the technoscapes, the finanscapes, and the ideoscapes. The mediascapes refer

> both to the distribution of the electronic ability to produce and spread information (newspapers, magazines, T.V. stations and motion picture production studios) which are available to an increasing number of centers of private and public interest all over the world, and to the images of the world provided by these media. (Appadurai, 1996, p. 55; Italian translation, 2001)

The main function of *mediascapes* is to offer stories and images in which are mixed the worlds of goods, politics, and news. The effect on the public or, better, on the users is to reduce the distance between fictional and realistic worlds. The negative consequence underlined by Appadurai (1996) in this excess of symbolic media production is that the more the public is distant from experiencing directly what is

narrated, the more it will build imaginary and chimeric worlds, basing itself on what is produced by the media. And this will be its reality.

The Space of Flows

In recent years, the diffusion of the Internet modified and widened the way, the space, and the time of communication. The *space of flows* (Castells, 1996) is known to be "a time out of time and a space out of space," a web with more inclusion and exclusion than in McLuhan's (1962) "global village." The concept of an active space in the geographical structure of the Web is not defined by the physical distance between two points of the Web itself, but it must be connected to the notion of "place" specifically of the Web. Castells (1996) suggests that it is space to organize time and not vice versa. He stresses the strength of the space of flows toward the space of places, going beyond what is expressed by Newton: A place is the part of space occupied by a body. Here, the place can be an environment of communicative vicinity and exchange. According to Castells, there are flows of capital, information, technology, organizational interactions, images, sounds, or symbols—everything that can "move" from one node to another using the technological support. Information being the predominant resource also from the economic point of view, the flows become an expression of the processes that control the economic, political, and symbolic life. If in social theory, *space is the material support of the social practices of time sharing* (Castells, 1996, p. 472; Italian translation, 2000), in information society, the material support of the main processes will be the elements that support the flows.

> The space of flows is the material organization of the social practices of time sharing which operate through flows. By flows I intend sequences of exchange and of targeted, repetitive and programmed interactions between physically separated positions occupied by social actors in the economical, political and symbolical structures of society. (p. 473)

The places that make up the territories of the Web are electronic mail, mailing lists, newsgroups, forums, Internet real chats (IRC), Multi-User Dungeons (MUD) or Muds Object Oriented (MOO), but also massively multiplayer online role-playing games (MMORPG) and social network sites. The connection of users thanks to these instruments of communication creates forms of community relationships that are different from the relational networks with weak and hidden borders (Dell'Aquila, 1999) and in which prevails a "hybrid" kind of language. Dell'Aquila emphasizes how the birth of virtual communities takes place in the presence of a common *Lebenswelt* (world of life) that pushes who is alone to enter a community. This is little to do with Tönnies's *Gemeinschaft* because it has the characteristics of a social unity—more or less locally extended—where shared themes are discussed (Giuliano, 1999). Mailing lists, newsgroups, social networks, and chats become privileged places where it is possible to monitor the development of the themes, of the adopted modalities of communication, and of the tools themselves, considered as *agorà* and *milieu innovative*.

Principles and Consequences of the Digital

The Digital Paradigm

The phonetic alphabet favors the linearity of language and thought projecting us toward a linear time and space. The digital paradigm characterized by the principles of nonsequentiality, of probability, and of variability (Manovich, 2001) brings us to the perception and the structuring of a multidimensional space and thought. The three main principles of the digital paradigm provide us with a reading/ writing space that is different from that of the alphabet and of visual culture. There is a step from a "mythical thought"

in which things have sense because they are brought back to one and only one context to an "alphabetical thought" and at last to "digital thought," which introduces us into an intersubjective context deriving from a new auditive and visual culture to be found in a nonsequential textual dimension (de Kerckhove, 2001). The nonsequentiality exists both in the writing phase and in the text fruition phase on the Web. In addition, the possibility to choose one connection instead of another favors the indeterminacy of the structure of a "story." All this pushes us to summarize the variability of the narration typical of the new media as the sum of the relationships that can be created between the objects (Guidolin, 2005; Manovich, 2001). Digital technology produces an acceleration in the relationship between culture and communication, offering new perspectives to the art of writing, the structure of texts, and the perception of events. The new communicative modalities have a lot in common with oral communication. Although this belongs to the past, we can now paradoxically find some of its modalities in technological settings: the immersion of the reader/user in the context, his or her ability to be "trained" by it and to interact with the text by changing it, and his or her willingness to accept new experiences.

Hypertexts as articulations. Hypertexts derive from numerous literary, philosophical, and technological influences, which may seem unconnected, but which have in reality collaborated to the realization of a new software system linked to a conceptual and psychological environment: virtuality (La Rocca, 2006). The oxymorons—Derrida, the hypertextual, and Nelson, the poststructuralist—were coined by Landow (1994) to indicate how two disciplines, philosophy and computer science, apparently so distant from one another, can have in some way worked together to create a digital-conceptual structure capable of originating a nonsequential way of writing and an active way of reading. Two cultures face the future of writing, two approaches give hypertexts a structure: The labyrinth is not only a net of links but also a mythological image. T. Nelson (1990) notes how technological culture and humanistic culture have not established any form of dialogue on common themes. Technologists are interested in the rational logic of their proceedings, and they condemn the humanists who usually discuss the problems and themes considered idealistically.

> For the Humanists the World is history, art, literature and the little corner is occupied by "technical things". For the technologists the World are the great ideas and the Technical Issues, while the little corner is occupied by old-fashioned things of a pre-technological past. (Nelson, 1990, 1/13; Italian translation, 1992)

Obviously, Nelson has a different opinion. He believes that both parties live in a "little corner" and because of their closed mentalities, they both do not understand that the objectives of the editorial systems of the future are those of civilization itself and that technological tools are necessary for these objectives to be reached. "System Humanists" are in Nelson's opinion those who believe in this possible union. The conceptual link, identified later by Nelson and Derrida, is the *Eldorado* of the System Humanists. Derrida is a poststructuralist philosopher born in 1930; The affinity with the systems of hypertext writing can be found in some works of the French philosopher, such as *Of Grammatology* (Derrida, 1967) and *Dissemination* (Derrida, 1972). Crucial in his work is the language experience, which can be such only if expressed in writing. The written text becomes a *brand*, an epiphany, a tangible sign of a word. In *Dissemination*, in the part dedicated to *Plato's Pharmacy*, he writes, as follows:

> But what does absent or present mean here? As every text, Plato's could but be connected in a virtual, lateral dynamic way to all the words which make up the Greek language system. Associations unite at a distance and in different ways, the words "effectively present" in a speech

to other words effectively present in a lexical system. (Derrida, 1972, p. 159; Italian translation, 1989)

This passage taken from Landow (1994) underlines how the hypertext writing system is present, even if not in a blatant way, in Derrida's analysis. Recalling our attention to some of the words present in the aforementioned text, such as *virtual, dynamic, lateral, associations*, and *different ways*, we can identify the elements of hypertextual surfing and the creation of an active way of reading. The textual implications of the development of a semantic space seem to be clear also to Nelson and to T. Berners-Lee (1999), although the latter is more interested in the technological aspects than in the literary ones connected to the development of a virtual environment. Nelson affirms that there are some difficulties in the sequential writing of a text. These lie in the necessity for the author to make a choice among the arguments to present, which at the same time implies a process of inclusion and exclusion of both words and concepts. Using a hypertext, these difficulties are eliminated because the choice moves from the sequences to present to the connective structure of the elements to articulate. It is no longer necessary to decide what to insert and what to exclude; what is needed is to identify "where one can fix things in an explorable labyrinth" (Nelson, 1990, p. 1/17; Italian translation, 1992). The limits of traditional writing were also noticed by Calvino (1973), who broke it up in *Il castello dei destini incrociati*. The work consists of some short stories, narrated using a pack of tarot cards. The position of the cards of the first player is the link to jump spontaneously to the story of the following character. It is not necessary to mix the cards again or to choose new ones: It is their position to suggest the new story to tell. The combination of the different cards resembles the structure of the hypertext with its links: Hypertexts allow us to zig zag between words and concepts. Using links, it is possible to go from one page or paragraph to another. The indication of the presence of a connection is given by an *active word*. The reader can therefore jump from one page to another activating various links, and this process is called hypertext surfing. The technological stimulus to create a hypertext as we know it today came from Berners-Lee
(1999). It is important to consider that the structure of a text written with multimedia support has a sequentiality and an impact that have to be distinguished from the linearity of a traditional printed text. A written text has a spatial structure, which implies also a temporal structure: According to Bolter (2001), a written text can, in fact, be compared with an orchestral score with its visual representation of the notes on the staff and its verticality, in the same way of the musician who is able to read the notes in the spaces without the need to play them. The complete reading of a text, therefore, involves both a spatial and a temporal dimension (Bolter, 2001, p. 135; Italian translation, 2002). "Reading is to follow a path among those suggested by the distribution of the text" (p. 135).

Two cultures tackle the future of writing; two approaches give a structure to the hypertext net. The labyrinth is not only a reticulate of links, but also a mythological image. According to some theoretics, ours is the "civilization of image"; according to others, it is the "civilization of writing"; according to others again, our world is a "global village" or the return to a second level oral civilization made possible by the electronic technologies. Indeed, in the experience of gaining access to the Web or in the knowledge favored by the new electronic publishing systems, as well as in that which comes from the globalization of information, we can find the same elements of simultaneity of oral communication, although they all make use of hypertextuality. There seems to be the possibility to talk with somebody about a certain topic and to inform him or her also about the connections that come before the narration or the going into the matters more thoroughly.

The Consequences on Experience

A first reorganization of the forms of experience is due to the development of modern society: The increase of knowledge and the possibility to communicate events "distant" from our daily lives have determined what J. B. Thompson (1995) calls a release from sequestration of experience. Such release from sequestration is carried out by the press, but also by the radio and the television, which have the capability of clearly transmitting news geographically distant from those who receive them. Thompson calls this kind of experience "mediated experience" to distinguish it from the lived experience of W. Dilthey's (1924) *Erlebnis*. The characteristics attributed to the latter are immediacy, the being continuous and, to a certain extent, instinctive, but it is also the "experience we have in the practical contexts of daily life" (Thompson, 1995, p. 315; Italian translation, 1998). This experience is the result of the activities and the encounters we have everyday, and in this sense, it is different from the one determined by media interactions, which expanding in space and time allow an intimacy with other people who do not share the same spatial–temporal environment and are therefore "distant" (p. 305). Thompson indicates four substantial differences between mediated and lived experience. First of all, mediated experiences are those that take place in situations distant from daily life. Then they are contextualized differently, in the sense that people gain access to them in places that are different from those where they are happening. A third element that distinguishes a mediated experience from a lived one comprises the priorities it is characterized by. With this, the author means to say that if

> the self is like a symbolic project that the individual models and re-models during his/her life, we must then admit that such project presupposes a scale of the most important things, which can also be continuously modified: This scale decides the relevance or irrelevance of the real and potential experiences. This structure of priorities is an integral part of our project of life. (pp. 317-318)

The structure of the priorities attributed to mediated experiences is different and from certain points of view inferior to the one attributed to lived experiences because, in the first case, also when certain appointments become a routine, the relationship that the self establishes with them remains weak. The fourth element considered is called "de-spatialized commonality." This is necessary to stress the difference in the proximity of the sharing of the experience. In fact, in the case of a lived experience, the place in which this takes place is the same for all the actors who are experiencing it; this does not happen in the case of mediated experiences because these permit the actors to live the same experiences even though they are not sharing a similar life environment. At the end of this analysis, Thompson then asks himself what happens to the self in a world in which mediated experience plays such a deep role in the life of people and in which the self is liberated from its ties with the practical contexts of daily life. Here, we affirm instead that the need to make mediated experience daily and therefore close to us in its context, time, and place has as a consequence that people—or some people—look for it as a media-lived experience. The new means of communication allow us to have what we describe here as "media lived experiences." They can be connected to Dilthey's experience because they are inserted in the temporal flow of daily life, but also to the media. The media allow that experience can be, one, "mediated" because it is known through the media and, other, "mediatic" because the individual has the opportunity to live the experience entering the medium.

The Consequences on Thought

Let us start from the end, reading what Carr (2010) writes at the end of his book: "*An intellectual technology exercises its influence changing the focus of our thought*." We are nearly at the end of a book

when the author himself admits that he had to disconnect from the Web to see light and this because the Internet changes our capability of "working on a piece" for a long time.

The consequences of the Internet on our cognitive modalities can be enclosed in that short statement: The Internet is an intellectual technology, and like all intellectual technologies, it widens and strengthens our mental capabilities and it requires an exploration modality that is different from that of other technologies; with time and in time the way in which information is structured inside itself changes (as a consequence) our "way" of organizing and storing information. We cannot look to the Internet as a lived experience distinct from the rest of life; Haythornthwaite and Wellman (2002) suggest that we think of the Internet as "embedded in everyday life."

In time, there have been various intellectual technologies. Carr mentions the map and the mechanical clock—the map as an example of the change in the representation of space and the mechanical clock, instead, as the emblem of how time and natural and social organisms have been represented. When the map and the clock became of common use, they changed our language, sense of abstraction, and thought.

> God became this way the Great Clockmaker. His creation was no longer a mystery to accept. It had become a problem to resolve. Descartes wrote in 1646: "Without doubt, when the swallows arrive in Spring, they behave like clocks." (Carr, 2010; Italian translation, 2011, p. 71)

The Internet and its surfing require forms of extremely intense mental *multitasking*. This is because the multisequentiality and the surfing routes allow us to jump from one page to another, from one information to another very quickly, generating the anxiety to obtain "new" information. We are pushed to search and search, reflecting little on what we have just found. It is a sort of "liquid" information, following which we move from one page to another. This exercise has its cost of commutation, which Carr explains presenting the different studies carried out by psychologists, eye specialists, and neuropsychiatrists. Recalling what M. Jackson (2008) writes in *Distracted: The Erosion of Attention and the Coming Dark Age*, we can say that in Internet *multitasking*, surfing the brain takes time to pass from one page to another, having to reset its objectives very quickly and to remember the rules required to perform one task and then another. This multitasking activity allows us to acquire a capability of reorganizing our research activities very quickly, but we lose the depth of thought. We are often interrupted while we are performing an activity on the Web, but we often want to be interrupted because we know that every interruption carries with itself some precious information, because the Web is able to monitor events, to update, and, therefore, to tell us everything that we need to know. The consequence is that the Web encourages us to face a wide range of topics, but at a "superficial" level.

The episode of Vittorio Alfieri's life, in which wishing to learn Latin, he ties himself to a chair until he learns it, is well known. From this experience derives the famous sentence: *Volli, sempre volli, fortissimamente volli esser poeta e lo fui* (I wanted, I always wanted, I very strongly wanted to be a poet and I was one). This is an approach to knowledge that excludes any form of distraction to be able to learn in-depth. Today, Alfieri would have probably simply looked for a good search engine for translation and linguistic adaptation to translate in Latin his works written in *volgare*—and this, while he kept simultaneously open his Facebook pages, his electronic mail, and a few online newspapers. He probably would have never felt the need to learn Latin. But we should also ask ourselves, "Would he today have written anything without his computer and without an Internet connection?"

Declaration of Conflicting Interests

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