

# The languages as antidotes to the mediacentrism

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## ABSTRACT

The profusion of media is so intense, its participation in social and individual life is so omnipresent that the media come to produce the effect of a fetish. The presence of the media is so prominent that everything else seems to fade away. When attention is fixed exclusively on media, the first thing to be missed, as a sort of blind spot of the retina, are the sign processes which, by the way, are produced and transmitted by the media. Without underestimating the media saturation and its multiple consequences in contemporary societies, the aim of this paper is to bring sign processes to the front of the scene, take them from the back stage, from negligence and almost forgetfulness to which they have been relegated.

**Keywords:** languages, media convergence, hypermedia, remix culture, matrices of language.

## RESUMO

A profusão de mídias é hoje de uma tal dimensão, sua participação na vida social e individual tão onipresente que as mídias acabam produzindo o efeito de fetiche. É tão proeminente a presença das mídias que, frente a elas, tudo o mais parece se apagar. A primeira coisa que se deixa de perceber, como uma espécie de ponto cego da retina, quando o olhar se fixa apenas nas mídias, são as linguagens, os processos sógnicos que muito justamente são produzidos e transitam pelas mídias. Sem minimizar a saturação midiática e suas múltiplas conseqüências nas sociedades contemporâneas, o objetivo deste trabalho é trazer as linguagens para o primeiro plano da cena, resgatá-las do pano de fundo da negligência e quase olvido a que têm sido relegadas.

**Palavras-chave:** linguagens, convergência das mídias, hipermídia, cultura *remix*, matrizes da linguagem.

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**D** **T**HE NAME CHOSEN, **MATRIZES**, for the magazine of the post-graduation program in Communication from ECA/USP, takes me inevitably to the title of a book of my authorship that shows the same word “Matrizes”, more specifically, *Matrizes da linguagem e pensamento. Sonora, visual, verbal (Matrixes of language and thought. Sonorous, visual, verbal)* (Santaella 2001). From Latin, *matrice*, the word “matrix” carries originally the meaning of place where something is generated or created, something which is the source or origin. In modern sciences, its main employment occurred in the field of algebra, and in the field of practice, the word is extensively used in typography. It was precisely the original meaning of place of generation that inspired the choice for the title of my book. Before the multiplication of medias of language production, which had started in the 19<sup>th</sup> century, been accelerated from the middle of 20<sup>th</sup> century on, and before the consequent exacerbated proliferation of signic processes and mixtures, in this book, I tried to develop the hypothesis that subjacent to the multiplicity expressed by signic systems – writing, oral language, theater, painting, photography, music, dance, cinema, newspaper, video, television, hypermedia, etc – there are only three logical matrixes, from which, through processes of combinations and mixtures, all the possible forms of language and communication processes originate. These matrixes are: sound, visual and verbal.

In order to comprehend the combinations and mixtures, which are certainly quite intricate, I decided to classify with detailed acuity the modalities and sub-modalities of language in which the matrixes appear more purely: (1) the sonority, (2) the fixed images and (3) the written verbal text. Based on this classification, to develop the postulation that all the languages are hybrid, I pointed the logical-semiotic bases that, from the three matrixes and their modalities, govern the hybrid language formation.

Many are the reasons that lead us to produce a work and great part of these reasons is beyond our conscious intentions. That is why I usually say we are chosen, much more than we ourselves choose our predilections. Nevertheless, when I researched and wrote this work, it was clear for me that, among other reasons, on the one hand I was trying to swim against the tide of a certain tendency, in the studies of communication, at least in our sphere, to the growing concern with the medias to the detriment of the language processes that run through their veins. On the other hand, on alert for the hybridization of languages that had already been suggested intensively in hypermedia, I also intended to go against the tendency to an atomized view of the medias themselves: photo, cinema, TV, video, etc.

Nowadays, I return to this book, not only for the coincidence between the titles, *Matrizes*, in this magazine and the book, but also because the tendencies, which I tried to face, have been accentuated excessively ever since. Despite the so-called “convergence of medias” propitiated by digitalization, in school and university curricula, languages are still studied in impervious fields, rigidly separated: literature and the narrative forms in one sector, art in another;

cinema on one side, photography on another; television and video in one area music in another and games still searching for a place of their own. Besides that, now more than ever, the concern with medias, with their social impacts, with their injunctions to politics and their cultural unfolding has led to forgetting the role that the signic processes perform in the constitution of medias itself.

It is evident that the means of communication in which languages are encoded and transmitted are fundamental to comprehend the way which messages are produced, transmitted and received. However, this does not justify the backdrop to which languages have been relegated. Not even McLuhan, with its famous provocation “The medium is the message” (1964), so criticized a few decades ago and so assiduously remembered today, has come to the level of obliteration of language that the fetishes of medias have reached. On the contrary, with his statement, McLuhan was just deviating from the common tendency in the theories of communication of the time that separated, on one side, the way the message is transmitted, on another, the content of the message. By placing emphasis in the medium, McLuhan insisted in the impossibility of separating message from medium, for the message is determined much more by the medium that transmit it than the intentions of its author. Therefore, instead of being two separate functions, the medium *is* the message (Lunenfeld 1999: 130).

As well as this sentence from McLuhan was denigrated especially by those who separate content from form, without these critics having even made an effort to comprehend it, nowadays everybody talks about media indiscriminately, without any concern and commitment to the scrutiny of the semiotic complexities that constitute them.

### **REMEDIATION OR INTERSEMIOTIC TRANSLATION?**

Although I have emphasized somewhere else (Santaella, 2003: 25), it is worth recapping that medias are simply medium, i.e. material support, physical channels, in which languages embody themselves and through which they travel. For this reason, the vehicle, medium or communication media is the most evident component, i.e. the one that first emerges in the communicative process. Despite its relevance for the study of this process, vehicles are mere channels, technologies that would be devoid of meaning if it were not for the messages they convey. Consequently, communicative processes and forms of culture that occur in them must assume the different languages and signic systems that are conveyed in media according to the potential and limits of each media, as well as the mixture of languages that occur in hybrid medias which cinema, television, and even more, hypermedia are good examples.

Although they are responsible for the growth and multiplication of codes and languages, media continue being *media*. Turning your back on this and, besides that, considering that social mediations come from medias

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themselves, as it has been frequently considered, is to incur an epistemological simplification, for the mediation first does not come from medias, but signs, language and thought, which medias transmit (Santaella 1996: 222-230). Eloquent example of such a mistake and of the hyperexposition of medias to the detriment of the signic processes that constitute them is found in the work repeatedly cited *Remediation*, by Bolter and Grusin (2000). To start with the word itself “remediation” is ambiguous, for you cannot decide if it refers to “remediation” as in medicine or media or both. Reading the book, however, implicitly elucidates the ambiguity because everything suggests that the authors want to refer only to media, i.e. the “particular ways the new medias reconfigure the traditional ones and the ways into which traditional medias reconfigure themselves to face the challenges of new medias” (ibid.: 19).

Objectives similar to Bolter and Grusin, focusing the analysis not on medias themselves, but on the signic processes which are constitutive to them, are found in the pioneer work on this issue, *Tradução intersemiótica*, by Julio Plaza (1987). For the author, intersemiotic translation means transcreation of language forms, which implies on knowing how to penetrate the viscera of the different types of signs, scrupulously trying to elucidate the procedures that rule the translation of a system of signs to another. The epigraph of Octávio Paz, which opens one of the chapters of the work of Plaza (p. 98), expresses clearly this idea. “The starting point of the translator is not the language in motion, raw material of the poet, but the fixed language of the poem. (...) Its operation is opposite to the poet’s: it is not about constructing with mobile signs an immobile text, but to dismantle the elements of this text, put the signs again in circulation and bring them back to language”.

Although it refers to poetic translation, this mode of operation, described by Paz, can be transferred to any type of non-verbal translation, from literature to film, from painting to video, from poetry to music, from this to computational graphics, etc. According to these principles, Plaza (ibid:72) determined three modes of approaching signic forms vital to the translating operation: the capture of the norm in the form, as rule or structuring law; the capture of the interaction of senses to the level of the intracode; and the capture of the form as it is presented to perception, as qualitative simultaneity. This has taken him to a typology of intersemiotic translations in three great classes: the iconic translation, and its subclasses, the indicial translation, with its corresponding subclasses, and the symbolic translation. Therefore, naming these processes “remediation”, as Bolter and Grusin do, is to reduce all the subtlety implied in the translational competence to a simple transposition of media.

### THE MEDIATIC EXACERBATION

The claim I make here of the primacy of the signic processes does not imply, anyhow, minimizing the mediatic saturation and its multiple consequences in the contemporaneous societies, i.e. what Sodré (2002; 2006) has been calling “mediati-

zation”, thought up as a new bios, which adds to the three forms of human existence (bios) in Pólis, formulated by Aristotle in its *Nicomachean Ethics*: contemplative life, political life and pleasant life. The fourth existential sphere would now be mediatization. Sodr  (2006:20-23) carefully distinguishes among “mediatization”, “mediation” and “interaction”. Symbolic mediations, present in every culture, are languages, laws, arts, etc., while interaction is the operating mode of the mediating process. Mediatization, on the other hand,

(...) is an order of socially realized mediations – a particular type of interaction, therefore, which we could call tecnomediation – characterized by a sort of technologic, al and mercadological prosthesis of the sensitive reality, denominated *medium*. It is a cultural apparatus historically emergent in the moment when the communication process is technically and mercadologically redefined by information, i.e. by a product serving the structural law of value, also known as capital. (ibid.:20).

When compared with interactive forms, present in traditional mediations, the mediatization changes into an exacerbated social mediation, with its own and relatively autonomous space. Different from the concept of mediation, mediatization does not cover the totality of the social field, limiting itself to the field of “hybridizing articulation of the multiple institutions (relatively stable forms of social relations committed to global human finalities), with their various organizations of media, (...) besides being culturally aligned with a specific form or semiotic code” (ibid.:22). For Sodr , the initial issue is to know what influence or power this articulation exerts over the construction of social reality, molding perceptions, affections, meanings, customs and the production of political effects. The argumentation that he develops make him state that the mediatic bios implies “a new mental and perceptive technology, a new kind of relationship of the individual with concrete references and with the truth, i.e. a new anthropologic condition” (ibid.:23).

Although he does not define the condition of mediation so clearly as Sodr , Mart n-Barbero (2006) also goes beyond a merely instrumental consideration of medias. For him, the technological revolution must not be comprehended only as an introduction of an unusual quantity of new machines, but as new relations between the constitution of cultural by symbolic processes and forms of production and distribution of goods and services: “a new mode of producing, confusedly associated with a new mode of communicating” that transforms knowledge in a direct productive force. Thus, by epistemologically and politically maintaining the strategic tension among the historical mediations that bring meaning and social range to medias and to the role of mediators that they are playing today, Barbero discards the trends of technological fatalism. For him, technology is not reduced to some apparatus, but, however, to modes of perception of language, to new sensibilities and writings that modify the both cognitive and institutional

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statute of the conditions of knowledge and the figures of reason, which conducts “to a strong erasure of boundaries between reason and imagination, knowledge and information, nature and artifice, art and science, experienced knowledge and profane experience” (ibid.:54-55).

With a similar proposal, Orozco Gomes (2006) clarifies that understanding the current game of mediation implies abandoning the idea that mediations come solely from media and are, somehow, their extension. Against this reductionism, he conceives mediations as structuring processes that come from different sources and occur in the communication processes, forming the communicative interactions of social actors. By substituting the relevance that institutional mediations, typical of modernism, such as school and the State, performed for the production of meaning together with the audiences, technological mediation attains today an immense importance, influencing cognitive mediations as far as the technological possibilities of transmission and consumption of information and mainly images alter the perception, which places perception in the center of present and future transformations, in the sphere of communication, more and more stimulated by technological mediation.

### LANGUAGE AS A UNIVERSAL MEDIATOR

Without rejecting the mediating character of technologies, in other words, technomediations, we must emphasize that technologies can only play the role of mediators because they are language technologies. The same postulation is very strong in the thought of Kerckhove (2003: 7), when he states that technologies affect the mind because they hold or manage the language, since “language is a system for the articulation of mind, so it has a close and intimate relation with our most internal sensibility and also with the structure of our minds”.

Since the invention of photography, all the machines or subsequent “devices”, as Flusser (1985) prefers to call them, from cinema to computer, are extensors of the human capacity to produce language and, as such, play the role of cultural and historical mediators. From photographic camera on, technologies of language production multiplied themselves and the circuit of signs that transit through them were progressively and extraordinarily growing. What Orozco (ibid.: 84, 88) calls “emergence of a complex communicative ecosystem” and “explosion of mediations” must certainly correspond to the multiplication of languages provided by semiotic machines (Nöth 2001) that, since the industrial revolution, have increased in quantity and complexity.

The era of images of physical register of fragments of the world, initiated with photography and followed by cinema, TV, video and holography, has lasted for just a century and a half and we are already settled in the post-photographic era, of synthetic generation of images, and now deep into the effervescence of virtual

reality, augmented, mixed, of ubiquitous, pervasive computing and of locative medias (see Lemos in press). Besides growing as fast as each new vehicle or medium is invented, languages also grow through merging media. Newspaper, for example, is, among other things, a union that worked among telegraph, photo and the qualitative modification of written language in the graphic space (layout, use of types, etc.). The video-text – a rudimental version of current telematic networks connected to personal computer whose model is the internet – was born from the combination of a database with a telephone and a video terminal. After all, the mediatic universe offers us an abundance of examples of hybridization of media, codes and signic systems. These are the processes of hybridization that act as propellers to the growth of languages. It is not by chance that mediatic ecologies, populated with languages of all kinds, have literally ruled the world.

Being or not attentive to it, we are night and day, anywhere in the planet, with higher or lower intensity, immerse in signs and languages, surrounded by books, newspapers, magazines, sounds coming from the radio, CDs, DVDs, iPods; we are bombarded by images, words, sounds and noise coming from television; we have cinema inside home through VCR and with Internet, the network of networks, today expanded in the connections propitiated by mobile disposals, we can surf through information and connect to any part of the world in fractions of seconds. After all, as I have repeated several times, there is no indicator that languages should stop growing.

Recapping the historic sequence of medias, therefore, what, in the handmade world, was called support, with the advent of electro-mechanic machines of language production (photo, press, cinema), started to be called mean of communication, for the most fundamental characteristic of technological means of first industrial generation, of mechanic nature, is in its power of reproduction, as it has been well demonstrated by Benjamin (1975), in his anthological essay about the technical reproducibility. The reproducibility of signs enlarges its receiving public and, consequently its communicative power. Hence, these terms are called means of mass communication. They introduced substantial socio-cultural, economical and political changes which have become noticeable, when mechanic media started to live with the second generation media, electronic media – radio and television. This way, the reproduction of mechanic media was supplanted by the power of diffusion of electronic media.

The social impacts caused by the means of mass communication were so varied that it is not surprising the fact that, in first instance, the focus of the attentions of the communicational studies and researches has turned, in priority, to these impacts. Nevertheless, it cannot be forgotten that, under any circumstances, what communicational technologies move are languages from the most diverse types, depending on the medium in which they materialize. The language of newspaper is distinct from the language of cinema, which is distinct from the language of television, and so forth. Although this is not exactly the meaning that McLuhan wanted to give to his chapter about “The

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medium is the message” (1964: 23-35), this sentence can be re-interpreted as an indicator of the inseparability of the sign processes regarding the media they embody, as mentioned above.

Due to this, it must not be ignored the fact that the impacts of means of mass communication and the socio-cultural environments that they create are supported by changes in language’s own nature. Before the emergence of the means of mass communication, signs, word, image, were static and only mixed with certain difficulty. With newspaper, word, photo, layout started to live together in hybrid syntaxes, resulting from the ability to manipulate language visually and spatially.

Very rapidly, cinema set in motion the fixed image of photography, provided sound, incorporated the spoken dialog, all of them together cooperating in the composition of a magic and unbeatable formula for art to build stories. An art that made unforeseen narrative temporalities arise, configured by scenery and that, in the beginning of 20<sup>th</sup> century, conformed and served the new fragmented sensibility, detached of the human being inhabiting the big urban centers. In Benjamin’s view, I have discussed in another work (Santaella, 2004: 30) that there is an isomorphism between the way the human being moves in the big city, the way he experiments with the movement of the train, the streetcar, the bus and the car and the movement of the cameras from the cinema. In fact, the human sensibility adapted to the fugitive intensities of the incessant circulation of ephemeral stimuli is inherently a cinematographic sensibility.

“It is not surprising that the modernist vanguard, attracted by the intensity of emotions from modernity, [...] by recognizing the power of cinema to transmit speed, simultaneity, visual superabundance and visceral shock, has taken possession of [...] cinema as an emblem of discontinuity and modern speed” (Singer, 2001: 137).

For Benjamin, “cinema corresponds to profound changes in perceptive apparatus – changes which are experimental, in an individual scale, by the man on the street, in traffic of the big city, and, in historic scale, by any citizen nowadays”. The rapidity of the cinematographic rhythm and its high-impact audiovisual fragmentation have constituted a parallel to the shocks and intensities of modern life. “In a movie”, Benjamin proceeds, “the perception in the form of shocks has been established as a formal principle. What determines the rhythm of production in a conveyor belt is the base of the rhythm of reception in cinema” (apud Singer *ibid.*: 137-138).

The lucid reflections of Benjamin lead us to comprehend that the transformations of mediations related to cognition that Orozco talks about (*ibid.*: 98), in which perception plays a preponderant role, can only result in transformations in the sphere of languages. As the emergence of new technical



apparatus enables the appearance of new ways to produce language, the human cognitive apparatus become *pari passu*. Ferraz (2005, 2006) has emphasized, in his studies about the works of historian of art Jonathan Crary, that there is no way to separate the process of modernization of perception from the extreme alteration in the statute of image in the turn of the 19<sup>th</sup> to the 20<sup>th</sup> century . Thus, the modernization of perception is inseparable from the invention of new technologies of production and reproduction of images (photography, stereoscopy, cinema) which have radically reconfigured the actual optical system and epistemological model so far.

After cinema, television has realized, then, the prowess of taking, with the characteristics which are their own, the alchemy of a fairy-like mixture of languages and genres into our homes. But the televised hybridization is only preliminary when confronted with the hypermedia that constitutes today the new mixed language of networks. All this seems to prove that the peculiarity of the human cognitive development is in its conduction to the blooming of hybrid minds, consubstantiated in knowledge networks, feelings networks and memories networks. In fact, the hybridization of human cognitive processes can be observed in the more and more accentuated hybridization of the means of communication and the languages which are of their own.

### LANGUAGES IN LIQUID ARCHITECTURES

The computer does not put us only in front of a new kind of technicality, but brings along a cybrid language, i.e. the signic and mediatic hybridism which belongs to cyberspace. It is notorious that the concepts of writing and text have been going through deep transformations since digital technologies have emerged. The integration of text, of images from the most diverse types, fixed and in motion, and of sound, music and noise, into a new hybrid, crossbred, complex language, which is called hypermedia, has brought changes to the way not only text, but also image and sound used to be understood.

All the language hybridizations or intersemioses, already present in the newspaper, magazines, in the cinema, especially in television, given its highly hybrid nature, capable of swallowing cannibalistically the other means, are only epiphenomena when compared with the great hybridization allowed by digitalization and by hypermediatic language introduced by it with its wholly new, interactive and dialogic communication processes. To start, the computer, means of production, storage, distribution and reception of hypermedias, as Scolari states (2004: 66), is a metamedia, not only because it has a high capacity to absorb and translate precedent medias, but also because it goes beyond these ones, as it occupies a privileged place from

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which it can describe other medias. By transforming into metamedia, Scolari completes, digital machines lose all the connotation of autonomy to convert into some kind of “Esperanto or universal technological language”.

Indeed, digital language performs the feat of transcoding any codes, languages and signals – these being texts, images of all kinds, graphs, sounds and noise – processing them computationally and returning them to our senses in their original form, sound as sound, writing as writing, image as image. Nonetheless, for being capable of putting all languages inside a common root, digital language allows – this one being its greatest feat – these languages to mix in the act of their formation.

Hybrid, mixtured languages are, therefore, created. Sounds, words and images that, before, could only coexist, start to coengender themselves into fluid structures, liquid cartographies for the navigation with which users learn to interact, through participative actions as in a game. This is the principle of hypermedia, a principle that is installed in the core of language. Although hypermedia can configure itself in supports like CD-Rom and DVD, it constitutes today, undoubtedly, the rizomatic and infinite language of networks.

I have called the attention (Santaella in the press) to the fact that, differently from the gutenbergan revolution, hypermedia does not occur only in the way writing is produced and reproduced. Although it also involves this aspect, hypermedia goes much farther. It is a new way to produce the written text in its fusion with other languages, something that transforms writing in its core, highlighting writing’s own nature and its potentials’. Though, the hybridization of languages, codes and medias is only one of the characteristics that defines hypermedia. In more than one occasion (Santaella, 2001:pp. 406-411;2004: 47-53), I have tried to sketch these characteristics to which I return soon. They are: (a) the hybridization of languages, already mentioned above, (b) the non-linear, reticular organization of informational flows in hyper-architectures, (c) the cartography of navigation and (d) the interactive negotiation of the user, for this reason denominated “interactor”. Let us observe, in a few lines, the description of the last three characteristics.

Textual linearity, which belongs to the book, in hypermedia, is broken into units or modules of information that consist of parts or fragments of texts, graphs, drawings, photos, videos, followed by sounds, songs, noise. These fragments or basic units of information constitute the knots that, metaphorically, can be called the basic bricks of hypermediatic construction. They usually fit in a screen, but the knots are not confused with media units, for they are much more modules whose functionality depend on the role they perform in the larger context than parts. The cement that alinearly connects these bricks are the links, i.e. the system of connections which belongs to hypermedia. There is an infinite variety of possible connections. Among them,

the most important are the ones that link one knot to another in the interior of a document. There are also connections that link a text to knots, or even lexical connections which link regions of texts to us, among others. Transiting among modularized information, reticulated, the options of paths to be followed are the reader's responsibility from navigational maps that constitute the third characteristic of hypermedia, as follows.

Hypermedia has the potential to concentrate an enormous amount of information in hundreds or thousands of knots with a dense network of connections. This flexibility can turn into disorientation if the internaut is not able to form a cognitive map of the structural design of the document. For the formation of this map, it is necessary to find and follow footprints that work as signalizations of this design. From there comes the necessity to create routes that are capable of guiding the interactor in his/her process of navigation. These routes are functional in hypermedias or games in fixed supports. In networks, however, the associations among documents are unpredictable. Bearing in mind that transiting through infopaths may puzzle or frustrate the itinerant, when he/she cannot adjust the connections to the targets he/she looks for, networks are making the cybernaut's life easier and easier through systems of search that make the procedures less subject to errancy. There are, at least, five strategies of search: (a) scanning (covering a vast area without depth), (b) browsing (following a path until the target is found), (c) search (insisting on the search of an explicit target), (d) exploring (finding out the extension of certain information), and (e) strolling (navigating in an unstructured way and without a defined purpose).

Leão (2004b: 296-98) presents an itinerary quite updated for navigation, a systematization that goes from the simplest to the most complex: from directory systems, such as *Yahoo*, to tracing systems of search, such as *Google*, and from these to the metasearchers, which research the systems of search themselves, even virtual libraries. Besides offering this systematic route, Leão presents, in sequence, suggestions regarding processes of digital organization of all the information the internaut can collect. The author ends up discoursing about the importance of maps and territories when one deals with the liquid architectures, without a beginning or an end, that compose the cyberspace.

Searches and cartography, however, do not depend on an agent that activates them. Indeed, nothing happens in cyberspace if the itinerant does not take the initiative, for hypermedia is, by its own nature, interactive, and here we find the fourth characteristic defining hypermedia. There is no interactivity without interfaces, which are designed to make reading and comprehension easier and to stimulate the interactor's determination and decision-making process toward this hyper-language that they themselves helped to build. It is not by chance, but much more as a product of the

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continuous and accelerated evolution of the networks and its precipuous language, hypermedia, that “interactivity” (see Primo 2007) and “interface” have increasingly become the two major topics of production and discussion in the digital world.

In its more generic definition, interface refers to the human connection with the machines and even to the human entrance in a cyberspace that self-contains. Domingues (in the press) defines interfaces as hardware devices and parts of a program or software which cause the communication of man with technologies. Hardware are peripherals, cameras, joysticks, sensors, gloves, keyboards or other input devices that send information to the program. The author points out that there are more natural or biofeedbacking interfaces, such as eye trackers or brain waves scanners, which promote a flow of natural signals highly sophisticated with the computational code. Interfaces are also parts of the code, written in programs or software. There are direct and indirect interfaces. The former activate icons in a software menu, as bucket, brush, arrows, scissors. Also an example of manipulable interfaces are avatars that we incorporate or wear to act in a digital graphic world, as it happens in *Second Life*.

The latter are the ones written in a program and that do not have visibility, but perform algorithm functions. These interfaces are made in programming language, using numeric symbols or letters that constitute the computational language, among them the languages C, C++, Java. In communication, the written parts in the code do not follow the visual metaphor shown by the icon, as a bucket to paint, scissors to cut, however, the same functions are written through words: twist, texture, explode, which are registered in the program and which act by adjacent happenings.

In his both creative and reflexive works, from the definition that interface is what makes the translation between heterogeneous media, and supported by several pioneers of the digital revolution, Garcia (2007a) has shown and argued that we are walking fast towards a new interface that approaches us more and more to the way we think. According to Garcia (ibid),

In our mind we do not dream, or think, or feel in only text, sound or visual or olfactory image, what goes through our conscience or subconscious are diverse combinations of mixing and sequencing, narratives and fragmentations, speeches and silences, built with all the images that come from the senses and memory, that flow in diverse levels of predominance and interaction. The priority is defined by content, by syntax and infinite talents of the mind, and not by a hierarchy among languages.

Thus also, in the digital medium, for the author, the most powerful medium of convergence and intertranslation ever created and whose course of rapid evolution goes toward us, there are tools today for the creation of languages which represent mental models. In this densely hybrid languages, images – conceived as patterns similar to those in the mind – are multi-sensorial clusters that reduplicate verbal, spoken or written language, kinetic or not, and the visual and auditory language in an imaged plan and not only visual (ibid., 2007b). Yet according to the author, the interface of the future is proclaimed will be immersive, enabling the user to interact with the information in a multidimensional environment. When the first purely textual interfaces are compared with the interfaces that are present today, for example, in *Second Life* and in games, the prognosis announced by Garcia is absolutely convincing.

Bearing in mind that hypermedia is a language in permanent state of metabolism and complexity growth, merging the four characteristics that currently constitute it, hypermedia can be synthetically defined as a nonlinear system, reticular of connections (links) between units of information (us). The connections are not fixed, but open to the personal marks of the style of interaction that the navigator impose to them. The units of information may appear under the form of texts, images of any species, photos, drawings, graphs, videos and sounds, also of various species, from music to noise. Although every hypermedia performs a true orchestration of codes, languages and routes of navigation, it is substantial the role played by the text in any hypermedias, both in CD-Rom support and in networks. By the way, besides the advances of WWW, the gross information transmitted by the net is presented through text, a prominence that, nowadays, has been facing the competition of the visual prominence in *You Tube* and *Second Life*.

In summary, “we are inhabiting a new house, for the language is the being’s home. The digital structures of hybrid creation of texts, images, audios, videos and programming have enabled the creation of a logic never explored before”, states Sérgio Bairon (in the press). The cultural, cognitive and communicational consequences that it brings for the ways of producing knowledge, art and information in general are not few. For Sodré (2006: 30), facing the non-sequential, “chaotic” logic of the cybernetic hypertext, “the most adequate cognitive posture of the user is the interpretative exploration, instead of the deduction of truths. No discursive hierarchy organizes the heterogeneous regimes of media expressions, as well as there is no homogeneous scheduling of their contents”. It is, as the author wants, a type of “logic more hermeneutic than precisely epistemological in the traditional and kuhnian sense of the term”.

In a similar line of thought, Martin-Barbero (2006: 74) points out one of the clearest signs of mutations that we go through: “the cultural reintegration of the dimension separated and undervalued by the dominant rationality of the

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West, since the invention of writing and logical discourse, i.e. the world of sounds and images relegated to the sphere of emotions and expressions". By integrating interactively sounds, images, and written texts, hypermedia "hybridize the symbolic density with the numeric abstraction, making the two parts of the brain, opposite so far, meet again".

As a complement to both authors, it is worth recapping what I have stated somewhere else (Santaella in the press), namely, that, in digital design and hypermedia, there are heterogeneous ways of thought germinating, but, on the other hand, these ways are semiotically convergent and non-linear, whose mental and existential implications, for the individual as well as for the society, we have just started to touch. Digital design and hypermedia constitute today universal languages, a true Esperanto of machines, a new area of knowledge. As time goes by, they will become a kind of second mother tongue and there will probably be a huge number of professionals who will need to show skills and competence developed in this language. Just as today subjects like philosophy, psychology, anthropology, sociology are basic in many different courses in humanities, sooner or later, hypermedia may also enter as a basic subject in a wide variety of courses, from engineering to medicine, literature and communication to history, biology to informatics.

### CULTURE OF REMIXING

As hypermedia is defined as the language emergent from networks, it is necessary to consider that no media with its corresponding language can pass safe and sound across the mutations established by the computer. The great majority of photos that dominate in the contemporaneous visual scenery, for example, are not pure photographs, but, as Manovich (2006a) says, are various hybrids and mutations that passed by many filters and manual adjustments until they acquired a stylish look, a plainer graphic appearance, a more saturated color, etc. "photographs mixed with graphic types and design; photographs that do not limit themselves to the part of the spectrum visible to the human eye (...); simulated photographs, produced by 3D graphic computation, etc". Thus, photography has become, indeed, "photo-GRAPHICS", in which the photo only appears in the initial layer of a graphic mix. Likewise, in the field of image in motion, "the term motion-GRAPHICS (animated graph) expresses the same development: subordination to the graphic code of live cinematographic action".

Also likewise, the traditional defining categories of cinema are being disputed. "The idea of the screen, as the cinematographic infinite or the field as the limit of the filmic plan, is being redefined by the emergence of new technological layers" (Maciel 2004: 61). In the sphere of experimental cinema, it has become difficult to define the precise boundaries between what is or not cinema. In summary: what can be the film in the vortex of transmutations which the image in motion has been going through?

Besides that, digital photo, images captured by webcams, videos populate cybrid space, hybrid spaces from cyberspace that coincide with what Manovich (2006b) has been calling “visual hybridization” of the language of images in motion. Until 1990, computational images were treated in isolated way. From the end of this decade on, computational animation has definitely become just one of the elements integrated in a mediatic mix which also includes live action, typography and design and in which the passage of a language to another is so instantaneous that it becomes imperceptible. “Joined inside a common software environment, cinematography, computational animation, special effects, graphic design and typography form a new metamedia”, a fundamentally new stage in the history of medias (ibid.).

With good reason, Manovich also criticizes the use of the term “remediation”, from Bolter and Grusin, to characterize the logic of metamedia, for the computer does not “remediate” a particular media. It, in fact, simulates all medias. And what it simulates are not superficial appearances of different medias, but the techniques used for their productions and all of their methods of visualization and interaction.

The ability to compose many layers of image with distinct transparencies, to put mobile and fixed elements in a shared 3D virtual space, and then move a virtual camera through space, to apply simulated movement effects of erasure and depth, to change in time any visual parameter of a frame – all this can now be applied to any image regardless of being captured via lenses-based register, drawn by hand, created with 3D software, etc (Manovich 2006b).

With that, computer has turned into an experimental lab in which different medias can meet and their techniques can be combined to generate new signic species. When a media is simulated in the computer, proprieties and methods of work are added until the point of transforming the identity of this media. This happens because software, as the species in common ecology – in this case, the computational shared environment – once released, start to interact, mutate and generate hybrids.

From there a new field of mediatic production is originated – the animated graphics, which combine languages of design, typography, 3D animation or not, painting and cinematography. The condition of possibility “of this new logic of design is found in the compatibility among different documents generated by different programs. That is, the commands of ‘importing’ and ‘exporting’ graphs, animations, video editions, composition and modeling programs are historically more important than the individual operations that these programs offer” (Manovich 2006c). From the various languages that share the same basic logic of remixability and liquidness results a remix culture that has been in the agenda of discussions carried out by the theorists and critics of new medias and cyberculture.

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To this logic, composed by videos, layers of bi-dimensional images, animation, abstract images generated in real time, Manovich (2006b) gave the name of “remixability logic”. It comprises not only the content of different medias or simply its esthetics, but its techniques, methods of work and fundamental presuppositions. For the author (2005), the real precedents of remixability are found in electronic music for which, since 1980s, remix has become the key-method. The central factor of this method was in the sampler, equipment that stores sounds, similar to a synthesizer, enabling the reproduction of different effects, according to the configurations set by the DJ. By this time, musicians started to sample songs already existent, as well as fans of television sampled their favorite series, assembling films by pieces.

Nevertheless, it was the software of sound and visual design that made the operations of remixability much easier, a facility that was largely enhanced by internet in the possibilities that it opens for each one to publish the documentation of their work in their private site or blog, so that everyone could know what everybody is doing. With that, locating and reusing contemporaneous material, design and works or from different periods became a rule.

For Manovich, in remixability, it is the software, the users interfaces, the flow of design that allow to combine multiple levels of images with various degrees of transparence. Nowadays, computational programs allow for a imagetic composition to have hundreds and even thousands of layers, each one of them with its own level of transparence. Besides that, each visual element can be independently modulated: resized, recolored, animated, etc. It is a “deep remixability” that dislocates the concept of image in motion to the one of “modular mediatic composition”.

In his book *The language of new media* (2001), Manovich had already erected the modularity as one of the principles of computational media. If before that, this principle was applied to packages of cultural goods and raw medias (stocks of photos, virgin videos, etc.), after the computer, cultural modularization operates in a structural level. “The images break into pixels, the graphic drawing, films and videos break into layers. Hypertext modularizes the text. HTML and media formats like *Quick Time* modularize the multimedia documents in general”. In summary, all the contents now want to be granular. The interface of DVDs break the film into chapters, iPod and the on line media stores, like *iTunes*, break music into distinct tracks, turning the track in a new basic unit of music; what in the past was a single and coherent cultural object can now be divided in separate blocks to be accessed individually (Manovich 2005).

Although it does not necessarily require modularity, remixability benefits greatly from it. This can be verified in the multichannel mixers in music. When



each element of music became available for separate manipulation, remixing intensified. Besides that, Manovich (*ibid.*) stresses that, while pre-computational modularity led to repetition and reduction, post-computational modularity produces unlimited diversity.

All the remix practices have their bases on the cultural hybridization which is the great fundamental of the present. According to Lemos (2006: 52), cyberculture is governed by “re-mixing”, which he defines as the “set of social and communicational practices of combinations, collages, information cut up from digital technologies”. This process started with post-modernism, grew worldwide with globalization and peaked with new medias. In this sequence are included “the possibilities of appropriation, deviations and free creation (which start with music, with DJ’s in hip hop and Sound Systems) from other formats, modalities or technologies, potentialized by the characteristics of the digital tools and by the dynamics of the contemporaneous society” (*ibid.*: 54). Still according to Lemos, three are the laws that are on the basis of “remix-cyber-culture”:

- a) The liberation of the pole of emission. The excess and the viral circulation of information represents the emergence of voices and discourses previously repressed by editing of information by mass medias.
- b) The net is everywhere. It is the principle of generalized connectivity that began with the transformation of personal computer in collective computer, since the emergence of internet, and the present collective mobile computer in this era of ubiquity and pervasive computation allowed by cell phones and Wi-Fi networks.
- c) The law of reconfiguration. Not only one media reconfigures the other, but also modifies the social structures, the institutions and communicational practices.
- d)

Continuing with his text, Lemos (*ibid.*: 56-65) establishes the correlation among the three laws above and the logic of remixing, analyzing their main offspring: electronic art, blogs, podcast, P2P systems and free software.

Electronic art, new way of the artistic making, expresses a recombinant logic that sets interactive, open, collective and planetary processes in synergy. The sound emissions known as podcast refer to the system of production and diffusion of sound contents arising in 2004. The name derives from the junction of I-Pod (MP3 player from Apple) and broadcasting (system of dissemination of information in large scale). Blogs (audioblogs, fotologs, vlogs) are forms of publication which any person can have available and emit, as a personal diary, journalistic information, audio emissions, video, photo. They can gather in communities, in which users can comment and add information. P2P networks are a system of sharing that enables the exchange of files from several formats throughout the

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world. Open-coded software recombine software and code lines in an open, free and creative way, allowing the planetary sharing of intelligence in the development of solutions to computer programs. With that, as it was announced by *BBC News* website (apud Lemes *ibid.*, p. 63), “from blog to podcasting, millions of common people are becoming writers, journalists, broadcasters and filmmakers thanks to increasingly available and accessible tools”.

### **MATRIXES OF LANGUAGE IN THE ROOT OF HYBRIDISM**

As it can be observed, innovations and changes in the digital universe are exponential. We are in the eye of the hurricane and the technological convergences are just beginning. Having started with photography – followed by cinema, radio, TV, audio, video, and now the internet, hypermedia, virtual reality, enhanced, mixed, locative medias and the pervasive computation – technological languages go through massive transformation, generating more and more intense associations, interactions, convergences, intertranslations and hybridisms of language, techniques, forms, patterns, in which the printed text, the spoken discourse, voice, music, surrounding sound, gestures, mathematical language, software programming languages, photography, cinema, video, bi and tri-dimensional animation, theater, plastic arts, dance, etc. become, now, thanks to computer, elements decategorized from their original sense as medium or language (Garcia 2007a).

Therefore, on the one hand, it becomes urgent to advance beyond atomized views of languages, codes and medias, searching for a more economic and integrating treatment that enables to understand how signs form and how languages and medias combine and mix. On the other hand, in an extreme opposite, it is also necessary to go beyond the mere evidence of signic and mediatic hybridism which expands with increasing intensity.

In the beginning of 2000s, even before such convergences and hybridizations were so evident, with the theory of matrixes of language and thought, I intended to achieve the targets mentioned above by assuming that the multiplication of languages has its bases in three and no more than three matrixes of thought and language: verbal matrix, visual matrix, and sound matrix. All the languages, despite the variety of supports, channels and means, despite the specific differences that determine the constitution of the verbal, the visual, the sound and all the variety of signic processes that they generate. These roots are much deeper and latent than the surface of messages and medias can make us realize. How is, however, the passage from the latent logical and cognitive level to the level of manifestation of messages?

The theory of matrixes of language and thought and the classification coming from it has tried to make clear that such passage occurs through the combinations and mixtures that are processed among several modalities in which each matrix subdivides itself, namely, nine modalities from verbal, nine from visual and nine from sound, in a total of 27 modalities (besides other additional submodalities). The combinations and mixtures do not occur only among the modalities in the interior of the same matrix, but also can occur among the modalities of the three matrixes among themselves. It may seem obvious when we take the example of cinema or television, eminently hybrid languages, which process the mixture of written verbal (the script), with the oral verbal (the live speech of the characters), the image, which allows even the take of image inside image, and all kinds of sound, in music and noises.

Through the nine modalities of each matrix and the mixtures inside them, in the book about matrixes of language and thought, I have tried to demonstrate which logical bases and which laws govern these mixtures. By exploring the signic roots which are subjacent to the languages of particular medias, the conceptual and classificatory exercise that was put into practice here allows us to escape from a fetishist view, merely atomized and seen as an addition of medias, a view that often affords opportunities for technicism and the segmented and disintegrated conception of phenomenons of communication.

Strictly, postulating the three matrixes of language does not mean postulating that these matrixes are pure. There are no pure languages. Only the sonority would reach a certain degree of purity if the ear were not tactile and if we did not hear with all our body. Visuality, even in fixed images, is also tactile, besides absorbing the logic of syntaxes, which come from the domain of sound. The verbal one is the most mixed of all languages, for it absorbs the syntax of the sound domain and the form of the visual domain. That means all the manifest languages, embodied, are hybrid. The logic of the three matrixes and their 27 modalities allows us to understand the processes of hybridization which languages are constituted by. As a matter of fact, each existing language is born from the crossing of some submodalities of the same matrix or the crossing among submodalities of two or three matrixes. The more crossings processed inside the same language, the more hybrid it will be.

In this way, for example, oral verbal language, the speech, presents strong marks of hybridization with sound language as well as with visual language in the gestuality that follows. Architecture, in its harmonic and rhythmic aspects, also intertwines with sonority, besides being visual and tactile, among all the languages the most visually tactile. All the forms of visual language in motion (cinema, TV, video, computational animation)

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also intertwine with sonority, due to temporal syntax that characterizes them, as well as they intertwine with several submodalities of verbal discourse, mainly narrative, due to the diegetic content with which narrative fills the temporal vector that is characteristic of sonority. Therefore, under the point of view of matrixes of language and thought, concretized languages are, in reality, embodiments of an abstract semiotic logic which is subjacent to them and which is sustained by the axis of syntax in sonority, of form in visuality and by discursivity in written verbal.

Ultimately, modalities and submodalities of matrixes of language and thought provide conditions for the reading and analysis of logic-semiotic processes that are on the basis of all and any form of language, enabling the analyst to devise similarities and differences among concrete manifestations of language. The ultimate objective of classifications is to function as an apparatus that allows to perceive the semiotic forms from where the several signic processes or languages come and the relations that are possible among them, what, in an extremity, leads us to overcoming impervious divisions among languages as new bases are provided for a relational view founded in logical matrixes. In the other extremity, it also allows the overcoming of a merely evidential view that languages and medias are converting, by enabling the accurate exam of processes through which languages mix, slide from one to another, overlay, complement, fraternize with, join and separate, and intertwine.

### REFERENCES

- BAIRON, Sergio (no prelo). *Conhecimento e hipermídia*.
- MARTÍN-BARBERO, Jesús (2006). Tecnicidades, identidades, alteridades: mudanças e opacidades da comunicação no novo século. In *Sociedade Midiatizada*, Denis de Moraes (org.). Rio de Janeiro: Mauad, 51-80.
- BENJAMIN, Walter (1975). *A obra de arte na era da reproduzibilidade técnica*. In *Os pensadores* XLVIII. São Paulo: Abril Cultural.
- BOLTER, Jay David & GRUSIN, Richard (2000). *Remediation. Understanding new media*. Cambridge, Mass.: Mit Press.
- DOMINGUES, Diana (no prelo). Ciberestética e a engenharia dos sentidos na Software Art. In *Estéticas tecnológicas*, Lucia Santaella & Priscila Arantes (orgs.). São Paulo: Educ.
- FERRAZ, Maria Cristina Franco (2005). Tecnologias, memória e esquecimento: da modernidade à contemporaneidade. *Revista Famecos* 27, agosto 2005, 49-56.
- \_\_\_\_\_ (2006). Percepção e imagem na virada do século XIX ao XX. In *Imagem (I) realidade. Comunicação e cibermídia*, Denize Correa Araujo (org.). Porto Alegre: Sulina, 233-249.
- FLUSSER, Vilém (1985). *Filosofia da caixa preta: ensaios para uma futura filosofia da fotografia*. São Paulo: Hucitec.

- GARCIA, Alvaro Andrade (2007a). *Arte digital*. *Revista Idiosincrasia*.  
<http://portalliteral.terra.com.br/Literal/calandra.nsf/0/4E49550428E77ED60325723D0068CA47?OpenDocument&pub=T&proj=Literal&sec=Entrevista>. Acesso em 20/07/2007.
- \_\_\_\_\_ (2007b). *A oitava arte: a arte da imaginação*.  
<http://www.ciclope.art.br/pt/text/aarte.php>. Acesso em 20/07/2007.
- KERCKHOVE, Derrick de (2003). Texto, contexto, hipertexto: três condições da linguagem, três condições da mente. *Revista Famecos* 22, dezembro de 2003, 7-12.
- LEÃO, Lucia (2004). Mapas e territórios: Explorando os labirintos da informação no ciberespaço. In *Cultura em fluxo. Novas mediações em rede*, André Brasil et al (orgs.). Belo Horizonte: Pucminas, 294-305.
- LEMOES, André (2006). Ciber-cultura-remix. In *Imagem (Ir) realidade. Comunicação e cibernética*, Denize Correa Araújo (org.). Porto Alegre: Sulinas, 53-65.
- \_\_\_\_\_ (no prelo). Mídias locativas e territórios informacionais. In *Estéticas tecnológicas*, Lucia Santaella & Priscila Arantes (orgs.). São Paulo: Educ.
- LUNENFELD, Peter. The medium and the message. In *The digital dialectic. New essays on new media*. Peter Lunenfeld (ed.). Cambridge, MA: Mit Press, 130-132.
- MACIEL, Katia (2004). Por um cinema sensorial: O cinema e o fim da “moldura”. *Conexão. Comunicação e Cultura* v. 3, n. 6, 61-72.
- MANOVICH, Lev (2001). *The language of new media*. Cambridge, Mass.: Mit Press.
- \_\_\_\_\_ (2005). Remixability. <http://www.manovich.net>. Acesso em 25 de janeiro de 2007.
- \_\_\_\_\_ (2006d)a. Image future. January 2006 version. <http://www.manovich.net>. Acesso em 25 de janeiro de 2007.
- \_\_\_\_\_ (2006e)b. After effects, or velvet revolution in modern culture. Part I. <http://www.manovich.net>. Acesso em 25 de janeiro de 2007.
- \_\_\_\_\_ (2006g)c. Import/export: Design workflow and contemporary aesthetics. <http://www.manovich.net>. Acesso em 25 de janeiro de 2007.
- MCLUHAN, Marshall (1964). *Understanding media: The extensions of man*. New York: McGraw Hill.
- NÖTH, Winfried (2001). Máquinas semióticas. *Revista Galáxia*, no. 1, 51-74.
- OROZCO GÓMES, Guillermo (2006). Comunicação social e mudança tecnológica: um cenário de múltiplos desordenamentos. In *Sociedade Midiatizada*, Denis de Moraes (org.). Rio de Janeiro: Mauad, 81-98.
- PLAZA, Julio (1987). *Tradução intersemiótica*. São Paulo: Perspectiva.
- PRIMO, Alex (2007). *Interação mediada por computador. Comunicação, cibercultura, cognição*. Porto Alegre: Sulina.

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- SANTAELLA, Lucia (1996). *Cultura das mídias*. São Paulo: Experimento.
- \_\_\_\_\_ (2001). *Matrizes da linguagem e pensamento: sonora, visual, verbal*. São Paulo: Iluminuras/Fapesp.
- \_\_\_\_\_ (2003). Da cultura das mídias à cibercultura: o advento do pós-humano. Revista *Famecos* 22, dezembro de 2003, 23-32.
- \_\_\_\_\_ (2004). *Navegar no ciberespaço. O perfil cognitivo do leitor imersivo*. São Paulo: Paulus.
- \_\_\_\_\_ (no prelo). *Linguagens líquidas na era da mobilidade*. São Paulo: Paulus.
- SCOLARI, Carlos (2004). *Hacer clic. Hacia una sociosemiótica de las interacciones digitales*. Barcelona: Editorial Gedisa, S. A.
- SINGER, Ben (2001). Modernidade, hiperestímulo e o início do sensacionalismo popular. Em *O cinema e a invenção da vida moderna*, Leo Charney e Vanessa R. Schwartz (orgs.). São Paulo: Cosac & Naify, 115-150.
- SODRÉ, Muniz (2002). (2002). *Antropológica do espelho. Uma teoria da comunicação linear e em rede*. Petrópolis: Vozes.
- \_\_\_\_\_ (2006). Eticidade, campo comunicacional e midiatização. In *Sociedade Midiatizada*, Denis de Moraes (org.). Rio de Janeiro: Mauad, 19-32.