MONDO
Literature and Democracy: the metamorphosis of the future
cognitive mutations and human values
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to René Berger

The end of the law is, not to abolih or restrain, but to preserve and enlarge freedom.
John Locke

Great men, great nations, have not been boasters and buffoons, but perceivers of the terror of life, and have manned themselves to face it.
Ralph Waldo Emerson

One of the most curious human traces is his formidable capacity to make generalizations.

We generalize automatically. This is a generalization.

To deal with architecture, music or literature as a question of taste, as a subjective impression, for example, is a popular generalization.

Many only are aware about the nonsense of such affirmation when its object passes to be medicine, whose results imply a direct responsibility on life; or mathematics, whose universe many times is full of inaccessible signs.

In those cases, it is clear not be a question of taste, but of knowledge, of references inside a system of order. Everything we make is not a purely subjective question, absolutely free from the environment that forms us.

Subjectivity in itself – what *I am* – also is what *we are*, because what we call *intelligence* is between us.

Thus, the word *human* appears from the ancient expression *humus* that means *earth*, also generating the terms *humility* and *humble*; all indicating our common existential links.

However, such a sense of unity has changed through thousands of years of continuous metamorphosis.

In oral societies, the informational environment and the nature of short and long-term memories project small social linked groups, in a certain sense like the form of an onion – with overlaid structures, always depending on the position one is.

Because of this it is common to find in typically acoustical and oral societies groups that tend to close themselves inside smaller and smaller circles.

I and my children against my brothers; I, my children and my brothers against my neighbors; I, my children, my brothers and my neighbors against the others... From there, the old Arab proverb – «to our friends everything, to the others the law».

Much before Machiavel, even Petrarca advised the ideal prince: «You must be the father of your subjects; you must love them as if they were your own children, love them as if they were members of your body. Against the enemies, you will use weapons, guards and soldiers...».

Petrarca, who lived between 1304 and 1374 – despite he was a wonderful writer and poet, and precursor of many of what it would become the Modern world – still had in his veins the acoustic scale of the medieval universe.

The principle of *isonomy* is an idea of standardization.

In the beginning of the 21st century, a little everywhere, people started to question the validity of democracy. Who would be equal to whom? A miserable addicted would have the same value for the society like a scientist? A terrorist would have the same rights like a diligent citizen?

The principle of isonomy ends with this question – there is no longer place for judgments of value. All are equal face to Law.

It is about an ideal principle, of course. There is no absolute equality; as well as no absolute difference.

They are poles of attraction, like *strange mathematical attractors*.

The principle of isonomy appears in the Ancient Greece, more precisely at Athens.

On isonomy, Cicero said that «what follows from this principle is that if there is a specific quantity of mortal creatures, the tally of immortal is no fewer; and again, if the destructive elements in the world are countless, the forces of conservation must likewise be infinite»; thus, all are equal face to a superior principle. Everything took as a question of scale.

The idea of *isonomy* seems to have started as conventional concept only after the 5th century BC, with Alcmaeon of Croton, who lived between 540 and 500 BC where presently is the region of Calabria, in Italy.

Alcmaeon was a physician and he defended that equality – or isonomy – of powers – like wet, dry, cold, hot, bitter, sweet and so on – maintains health, while monarchy among them produces disease.

He was the first one, in Greece, who defended the brain as the place where thought is processed and, curiously, several authors have suggested that such idea only would have appeared to him after had observed the optic nerve binding the eyes to the brain – the curious fact here is the close relation between the idea of *isonomy* and the faculty of vision.

Born about twenty years after Alcmaeon's death, Herodotus defended that «the government made by the people brings with it the most beautiful of all ideas: *isonomy* – equality of all face to law».

Contemporary of Herodotus, Pericles, mentioned by Tucydides, said that «our constitution is called democracy because the power is on the hands not of a minority but of the whole people. When it is to determine private disputes, every-

one is equal face to law...».

About one hundred years before, the social reforms projected after the legendary Laws of the Twelve Tables elaborated by Solon – who lived between 638 and 558 BC – are considered by many as the first concrete expression of the principle of *isonomy*: all uniformly submitted to a single and stable set of laws – more than one hundred years before Alcmeon.

Thus, what we vulgarly call the *Rule of Law* was born.

Why such an idea of equality of all face to Law appeared at that time?

Isonomy is one of the fundamental elements to understand democracy. Other ones are the departmentalization and atomization of its constituent parts.

Atoms, departments and a universe of equality face to Law.

Independent discrete unities and a principle of equality face to Law determine the ideal order of democracy.

Another important element is the Law, or *legal corpus*, as a stable system elaborated by the people, in a representative or direct way.

Isonomy and democracy were even considered as almost opposed each other by Plato. Aristotle defended in his *Politics* that «it is more proper that the law should govern than any of the citizens», and condemns the government where «the people govern and not the law», when «everything is determined by majority vote and not law».

That is, isonomy can exist without democracy, but the former is fundamental for the existence of later, at least in modern terms.

In isonomy there is no personal questions.

The first article of the Ninetieth Solon's Table, on public law, says that «no privileges, or statutes, shall be enacted in favor of private persons, to the injury of others contrary to the law common to all citizens, and which individuals, no matter of what rank, have a right to make use of».

After the 2nd century in the Common Era, the equality of all face to Law gradually loses importance, with governments increasing their interferences on citizens' lives, mainly having as justification the improvement of security and economic performance.

Already in the 6th century AD, the Emperor Justinian would definitively ends with the idea that all should be equal face to Law and that Law should serve to the defense of individuals' freedom – launching a first model for the figure of the prince, which would be consolidate much later.

The ancient Greek principle of isonomy would only be effectively recalled already in the 17th century, through the waves of transformation produced by the Italian Renaissance.

Why only then it is that isonomy was again considered to be an important element in the discussions about structures of political order?

The answers to these questions imply to know *how* our senses modify and *format* our patterns of thought, to know *how* that thing we call *logic* is *designed.*

Logic not as a specific type of reasoning, like the one supported by Aristotle, but a principle of order of thought, such as George Boole's ideas.

Order is differentiation; disorder, dedifferentiation – basically the two fundamental principles of thermodynamics – desegregation and aggregation.

All logic is just the design of desegregation and aggregation forces.

The emergence of the idea of isonomy and, immediately later, of democracy, coincides with the invention of the *Greek miracle* – through the importation of the phonetic alphabet from the Levant, in the Middle East, its synthesis and "heating" with the addition of the vowels.

Associated to the papyrus, the scale of use of such cognitive artifact generated a mutation in the standards of thought, in the structures of order, in the principles of differentiation.

All generalization is inevitably related to principles of order – to differentiation – but always aspiring to entropy.

The question isn't if we generalize or not, but *how* we do it – which are the principles orienting our thought organization.

Intensified exercise of phonetic alphabet associated to a fast medium like papyrus, or even faster like paper, articulates two types of vision – peripheral and central.

Central vision is sensitive to color and texture; peripheral vision to movement and light.

Everything happens with the scale of writing – the size of letters on papyrus or paper. If the letters are too big, for example, legibility is reduced – because, depending on their size, they start to implicate a more active involvement of the peripheral vision. The form perception of letters is especially oriented by the central vision.

We read letter by letter and also by blocks, words and phrases – in a dynamic process of tracking involving different parts of the brain and both the basic types of vision: central and peripheral.

When we read a text, central vision identifies letters and peripheral vision gives us a perception of the whole, of the sense of the text. All very dynamically, in continuous jumps from one to the other side, up and down.

People just alphabetized have difficulties to understand a text, because they still don't articulate, in a fast and dynamic way, that *ocular jumps* process in the writing context. We learn to search, and when we do it well, we read in silence – and we become free from the voice and ear.

This doesn't mean that ancient Athenians normally read in silence. The first reference to silently reading – which definitively dissociates ear and speak – only happens more than one hundred years after Solon. Even during the Roman Empire, the existence of *celas* – small special rooms – in buildings and houses of richer social classes indicates that, very probably, great part of the people at that time still had the habit to read not in silence. The presence of papyrus was not enough intense to allow a generalized habit of silently reading.

Reading in silence gradually grows with the popularization of papyrus, and

disappears, in a relatively fast way, with its partial substitution by parchment in the end of the Roman Empire.

Parchment is slower and more rare than papyrus.

The fusion of phonetic alphabet and papyrus, as well as the reading in silence, makes to emerge what we assign as *literature*.

The form of literature is its medium. Intercalated discrete units in a strongly predicative and teleological structure.

Following the classical triadic division of the Indo European world, we generally think about hierarchic systems as typical of armies, agrarian world and religious structures, that is: typical in pre-literary societies. In fact, it happens like that, because it is about a new medium taking as its content the previous one. Strong hierarchical principles characterize any existent isonomic democratic system.

Everything ruled by the Law.

There are two types of hierarchic nature – *teleology* and *teleonomy*. The first one indicates the orientation of the system to an attractor point, a kind of singularity, which belongs to the system itself. Predication is an example of how that happens.

It was a German philosopher, Christian Wolff, who lived between 1679 and 1754, who created the term *teleology*.

The literary world is strongly teleological.

Teleonomy, on the other hand, indicates a hierarchic structure generated without intention – typical phenomenon in biology. *Teleonomy* means the emergency of a hierarchic structure of order generated by *function*, that is: it is a process in coordination designed by *function* through a dissipative process.

While *teleology* establishes principles of order *a posteriori*, *teleonomy* has them *a priori*, as its very first nature.

In a republican isonomic democracy – of presidential or parliamentary type

– everything is oriented to a focus of power, with a structure ordered by the Law, always uniformly *above* all – and everything is established in *teleological* terms.

In every isonomic democracy there always is what we commonly call *authority* – in its more diverse instances. The word *authority* was born from *author*, which is closely related to writing. And authority, here, is always a *symbol*. This also happens with literary texts.

It is the predication and the illusion of contiguity.

The form of a society organized accordingly to the principles of isonomy and democracy is similar to a literary text, where history and symbol have a preponderant rule.

More refined the literary text, bigger the internal *teleological* references, and more *attraction points* we find – but all them established in function of a strongly hierarchical structure of action. Or either, everything organized accordingly to a main *vanishing point*.

Another typical aspect of literature is departmentalization. Everything in the text is departmentalized.

Not only, in phonetic writing, sound is departmentalized into discrete unities. This phenomenon unchains a process of departmentalization in different levels, like an auto-similarity process.

Everything in sensorial perception is based on repetition, and a *copy* is the sublimation par excellence of such phenomenon.

It is the same with modern democracy. Each social value has its place, following to a very first referential – the power – before formalized by ownership, by money, and later by consumption.

In literature, voice is disembodied – separated from body, from its original organs. Voice free from mouth and ear. In the literary universe, not only voice but also image is disincarnated, transformed into *imagination* – without body.

When we read in silence, the disembodiment of voice and of the world image, associated with ocular movements, generates a special logic, a new type

of memory.

While spoken voice demands great redundancy in way to sediment long-term memory, written works as prosthetic extension of that type of memory, free mind to all kinds of speculation.

Because of this, our word *speculation* comes from Latin *speculum*, directly related to *mirror*.

Beyond the repetition of phrases, other two especially important forms of redundancy in the oral universe are rhymes and rhythm – producing an element of repetition enough intense to support the sedimentation of short-term into long-term memory.

Thus, literary text frees poetry from the song: paper assuming that function of repetition.

For this reason, oral systems are much more traditionalistic than those coined by writing.

Redundancy demanded by the acoustic system as condition for the sedimentation of short into long-term memory implies a high degree of repetition.

The ideas of *history*, *science* and *philosophy*, bring with them the principle of discovery, of what *is different* – because the text on papyrus or paper is in itself a system of informational storage sufficiently stable to allow a "reflection on". Phenomenon directly associated to *Enlightenment* by medieval Gnostic groups.

In this way, it is with literature that *history*, *philosophy* and *science* emerge – impossible ideas in a framework of great systemic redundancy.

Thus, we call the *Modern History* as that one started with Italian Renaissance – after Gutenberg. And also because of that, what we vulgarly call *classical history* starts, in fact, with Ancient Greece.

History while technique: soon transformed, in metalinguistic terms, into *technology*: the critical approach on itself – *redesigning* itself.

It was necessary the appearance of a stable long-term memory storage

medium so that the notion of history, as we know it, could appear; an artificial intelligence system to give our short-term memory a coefficient of redundancy sufficiently intense to turn us able to establish with velocity and flexibility a continuous informational loop exercise on a large contingent of data.

It is clear that all this complex system of artificial intelligence established by phonetic writing in fusion with media like papyrus or paper is not "out" the human beings, neither exclusively inside them.

Phenomenon that enlightens the idea accordingly to which what we call *intelligence* is between us, and that what we know is not *ours*.

The word *modern* launches its roots on the Indo European *med* that indicated the reflection on questions of order, generating not only the word *meditation* but, also, *medicine* – because, in the past, *medicine* was the reflection, the meditation on how our bodies work.

In the 14th century the word *modern* was rescued from the low Latin *modernus,* which had, in the 6th century, the indication of *mode*. In the 16th century, after the popularization of the mobile types press, the word started to have a pejorative sense of what is made *here and now*, with invention, but free from the heavy chains of the past, free from the rigid canons of tradition and, therefore, without great value.

The spirit of invention, in the modern sense of the term, is born with literature, with prose.

The spirit of invention implies a relative independence of our long-term memory, that is, the freedom to "take in" and "think over" – as Eric Havelock alerted.

That is, there is a third term that – associated to the principles of isonomy and democracy – projects what we made conventional to call modernity: the principle of revolution.

Revolution is the paradigmatic transformation of a society – the whole transformed. This is the logic of literature – each book is a universe in itself.

The paradigmatic transformation was, along centuries, the principle par

excellence of scientific revolutions, as showed by Thomas Kuhn.

Written text, turned literature, is unique and paradigmatic. Each text of literature is a precise and complete universe. Each author aims to be owner of a clear and unequivocal style.

The phonetic writing system, formalized by the intensive use through those stable, fast and flexible informational storage media, is paradigmatic in its essence.

The same happens with pictorial representation or tonal strategies in music.

In oral societies, plastic representation is generally structured after a geometric base, many times established by reticule made with orthogonal lines, like what happened in the Ancient Egypt; or like the so typical geometric diagrams of the medieval world.

But, when phonetic writing emerges, associated to a dynamic medium like papyrus or paper, that pictorial strategy is quickly changed, assuming an anthropomorphous strategy – that is, making to emerge, while logical principle, what we assign as illusion of contiguity.

In visual world, instead the rigid frames of lines that design the object, human body becomes the basic reference for all measures.

But, the body is not there. It is about a second and degenerated reference, like what happens with metaphor.

Here, it is curious to question the close relation between this phenomenon and the emergency of the idea of *isonomy* – each one equal facing to Law, no longer a Law established by a religious entity, but having the human being as *measure of all things* – as Protagoras defended, exactly at the same time when the idea of isonomy took its definitive form.

At the end of Roman Empire, when importation of papyrus, mainly from Alexandria, was gradually depleted, the ideas of isonomy and democracy gradually disappeared, and pictorial representation was again supported on strong geometrical graphics. Visual identification of individual disappeared giving place to a

universe much richer in terms of repetition of visual events.

The reappearance of those ancient Greco-Roman ideas would happen only about a thousand years later, in a gradual way, melting elements from the previous universe – like what happened before with the Homeric universe and the reality of Pericles.

Thus, when *plain perspective* technology appeared, the figure of prince brought as its content the ideas established by Justinian, and not the strategy traced by the perspective with a single vanishing point.

That is, however the prince is a single vanishing point, he still doesn't satisfy the concepts of democracy and isonomy. It is the symbol for a new medium. Content of a new medium.

The term *literature* appears from the word *letter* – *litteris*, in Latin.

In its turn, the word *letter* launches itself to the Indo European particle *l, that is supposed to have appeared from *r – which indicated the idea of "to move itself on something", indicating the act of "to detain himself on something" and also of "to release", "to freed".

The Indo European term *lag appears from that old root, meaning "to link", and also *$likh$ that, as phonetic variant of *$rikh$, indicated the action of to mark, to scratch something with an instrument.

One of the oldest words in Sanskrit, present in the Rig-Veda, is *laksa*, which indicates the idea of "sign", with which an owner marked his cattle: a concept of property that indicates the ideas of freedom and of independence.

Later, from the Sanskrit *laksa* it would appear *laksmi*, which was the notion of pure beauty, *Visnu*'s wife, representing wealth and prosperity.

The origins of the word *literature* associated to the ideas of "link" and "sign".

Phonetic writing was the first system of intelligence that inaugurated in a radical way the process of disembodiment – separating sound and voice. Papyrus – and, later, paper – accelerated, amplified and changed this phenomenon.

Briefly, in the same way we deal with different types of memory, we take here different faces of knowledge – basically, *cognition* and *perception*: two strong self-referential systems, without clear mutual distinction. True paradox, the division only happens with the objective to understand the phenomenon – because only difference produces consciousness.

We take cognition while formation of knowledge, in the structuring of a complex network of sign relations of the most diverse natures; and perception as the structuring principles of the environment while *quality* – considering the environment as everything what constitutes the existential relations.

One of the most brilliant minds ever, the American philosopher Charles Sanders Peirce – who lived between 1839 and 1914 – elaborated a strategy for the study of language – verbal or non-verbal. He called it the *General Theory of Signs*.

Peirce was a mathematician and, thus, he didn't elaborate a strategy radically or exclusively related to verbal language. Therefore, his method is open to all kinds of language.

Synthetically, Peirce started from a triadic structure, formed by relational poles he called, simply, *one*, *two* and *three*.

When I say the word *airplane*, for example, all we know is what it is, and we have, immediately, a kind of *image* – but we cannot say what type of airplane it is. It is not exactly about an *image*. What model, what size, what color? Everything is unknown, but we know, even so, that it is an airplane. This kind of *image*, unexplainable knowledge, relation of quality with its object, is what Peirce called *one*, *icon*, or also *firstness*. The word that unchained the process is the relation of existence, an *index*, its second relational category, or *secondness*. Finally, when we understand what we are dealing with, bringing to the domain of reason, we have a relation of *law*, *symbol*, or *thirdness*.

Now, let us imagine how many degrees of *firsts*, *seconds* and *thirds* are generated from a single sign – because the isolated existence of a sign is its impossible aspiration. Peirce established a great structure of dynamic associations, born from that synthetic principle. The fusion of all those elements is the sign.

In reality, it is not possible to explode the sign in departments, and Peirce left this fact very clear. It is about a fragmentation that is *and* is not, simultaneously.

Thus, what we call cognition is related to Peirce's *thirdness*, as perception is his *firstness*, having the environment – everything what *is* any kind of language – *secondness*, what unchains the whole process.

So, the medium is the message, as defended by McLuhan.

Both Charles Sanders Peirce's ideas and the shining Schopenhauer's intuition in relation to a *telecausality*, were very advanced to their time.

And all this happens because human metamorphosis doesn't happen linear and diachronically, with principle, middle and end – like what literature teaches us – but expands itself as true pulsars in space-time.

By this way, taking cognition as more associated to the symbol category, and perception to the relations of quality with the object – even if bundled in a same complex of action – allows us to establish some interesting principles to understand the mutation of the order of thought.

From there we have the notion of *resolution* as perception data, and *definition* as cognitive element.

When reading a text we generate a *high definition* universe in *low resolution*. We read a literary text and it suddenly becomes – like a hallucinogen effect – a true scene of action in *high definition*. We dive inside story, as if we were there. But, it is about a *low-resolution* system: letters simulating sounds and sounds simulating action. Two plans of degeneration projecting a simulacrum.

In the acoustic universe, everything happens in *high resolution* and *low definition* – exactly the opposite of literature. The spoken voice belongs to the body, it happens *actually*, with *total definition* – but, our system of sedimentation of short into long-term memory, working in constant deletions, in self-referential loops, demands a high degree of repetition, of redundancy, projecting a *low definition* reality. With short capacity of memory storage, repetition implies less diversity. This is the nature of imprecision in myths. For this reason, oral world is frankly two-dimensional, while the literary one, operating in depth and organized

in a predicative way, is characterized by the third dimension.

So, everything in literature happens in depth – like to dive inside a parallel universe: interactive layers of signs in an ample pattern of simultaneity.

A universe of fields and attractors operating in the sense of a *singularity*: the reader.

In this way, music followed literature with the appearance of symphonies, the most elaborated works for quartets and chamber ensembles, fugues and complex pieces for piano – from the 15th century up to the 20th century: layers of events in simultaneity, with the *tonality* while system that organizes sounds in function of a main note, *vanishing point* in a strongly *teleological* system.

Near the 20th century, gradually, that process of organization is disintegrated, with Lizst's *Bagatelle without Tonality*, the second movement of Gustav Mahler's *Fourth Symphony*, with *Jeux* by Claude Debussy and, finally, with Arnold Schoemberg, Alban Berg and Anton Webern.

Like great part of the music created after the 13th up to the 20th century, the book characteristically is a way of a single direction. This trace, together with its design of great stability, to the almost immutability of the letters and their relations, projects an aspiration to homogeneity – thus, aspirations to constitute stable regimes in standard societies start to be reality.

As a medium of long-term memory expansion and articulation, papyrus projected the space-time amplification of the Roman Empire – when the principle of identity became abstract: the Roman citizenship.

Even before the fusion between phonetic alphabet and papyrus have reached enough intensity to generate the Roman phenomenon, already in the Ancient Greece the idea of opposition between court and province, city and countryside, started, having as key element the spoken word. It is when the idea of *barbarian* is born, of whom is out of a context for speaking differently. Voice took as content, as *explanation*, of a new phenomenon.

The relation between city and countryside, court and province only can exist if those places are linked in some way. And papyrus provided that linking.

Phonetic alphabet and papyrus structured a world of figure and ground. This allowed Aristotle – pertaining to a universe already reasonably literary – to establish the logical principles of the *third excluded*, also known as *middle excluded*, accordingly to which things simply exist *or* not; as well as his *local causality* principles: all event has a local and previous cause.

Only the stable scenario of a detached universe separated from all existence, a reality on which one can think as a uniform whole, allows the emergency of those ideas.

The word *reality* would appear practically at the same time with Gutenberg's invention, and its use would know a strong expansion after the mobile types press has amplified that parallel universe phenomenon.

Even before Gutenberg, with the expansion of urban world after the 11th century – when paper started to be manufactured in the European continent, first at the Iberian Peninsula and later also in the Italic Peninsula – the process of standardization generated by literature made that, gradually, social behaviors at table and human relations in general were also standardized – producing what we called *good manners*. Roads were paved, physical mutilation gave place to methods of vision suppression in prisons, and time definitively passed to be departmentalized into discrete units. All happening in a process that later would be strongly amplified by Gutenberg's metallic mobile types press.

Erasmus of Rotterdam, already in the 16th century, wrote behavior manuals for children. It is when books are released from the illuminators' hands and the principle of personal calligraphy appears – with *schools* that would remain active until the 20th century. People started to be recognized not only by the way they spoke – more or less obediently to the written text, denouncing his literacy degree – but also by their written letter.

It is with the fusion of phonetic alphabet and papyrus – later the paper – a world structured by *stereotypes* emerges – typical phenomenon of literary societies. Stereotype is opposed to sacred. Thus, the Greco-Roman world was strongly pagan, and religion – even very present – was placed in second plain.

Like a kind of contradiction, Gutenberg's invention appeared as a defense of the Catholic Church's ideals of evangelization – and, even having generated a formidable positive wave for the Church, it would soon produce Martin Luther

and, in parallel to its own expansion, Catholic Church was gradually desecrated along the centuries.

Stereotype is the base of *format* – and, from the human behavior to artifacts, everything can be subject to a *format* in the universe of literature.

Literary world also starts the refusal of the obsolete.

Obsolete is not what became without use, but yes what, remaining functional, is no longer perceived. Obsolete is what enters inside the flux of routine and becomes redundant. Thus, the idea of obsolete practically doesn't exist in the tribal world.

The obsolete belongs to the past, to what it is already integrated. Paper belongs to the future, to the permanent exercise of elaboration on the past, transforming it.

It is here, again, that the notion of *tradition* emerges as product of rupture.

It is also when the idea of *trust*, as a long-term commitment, is established – because only a dynamic, flexible and stable medium like papyrus and, later, paper, creates the projection of the future.

The creation of telephone in the 19th century appears as a radical transformation of *definition* and *resolution* conditions, established by literature.

While literature operates in *low resolution* and *high definition*, telephone is designed by *low resolution* in *low definition*.

Our spectrum of auditory frequency goes from sixteen to twenty thousand cycles per second – in the most refined ears. But the spectrum of frequency used in telephones turns around only about three thousand cycles per second, that it is the frequency of heavier impact in the average of the ears. The entire remaining portion is practically lost. Even so, we are able to recognize voices and even to identify different musical instruments through telephone, because we have a neuronal system that *completes* the lost information.

Therefore, it is more difficult to speak foreign languages at a telephone conversation.

We repeat, involuntarily, more phonemes when speaking at the telephone. To use telephone, to be understood and to understand what the other says, implies a learning process. People who had never spoken at telephone have great difficulty to communicate as well as to understand, in their first experiences.

The *low resolution* and *low definition* design was a barrier for the expansion of telephone beyond individual communication. And the *individual* becomes content of this new medium, recalled from the silently reading promoted by papyrus and paper.

Telephone – in contrast to what happens with literature – inaugurates two fundamental phenomena to understand what it would appear, about a hundred years later, as the *virtual universe*: *real time* and *two hands* communication.

The strong interaction and the *real time* that *design* telephone, don't allow it to have a *format* – once connection is made, all rest is improvisation: dynamic articulation between short and long-term memories.

By this reason, even having artworks of video, installations, cinema or books, it never happened a work of art of telephone – even if experiences with its use have been made.

The disembodiment phenomenon in telephone is different from that which characterizes literature – there is no longer body, but an effective link between people. It is not about a medium that articulates degenerated layers, but yes a direct connection.

In telephone everything is surprise and nothing is invention – because in the oral world everything is diachronic: one thing after the other. Thus, for the acoustic universe, what it is now known will only have meaning with what will come next, which will always be a surprise.

The world of literature assures a stability of the future and projects the continuous aspiration to invention. In the oral world, everything is more redundant and traditional but – given the nature of the relation between short and long-term memories – the next moment will always be essential.

Telephone amplifies the oral phenomenon: the intimacy of acoustic uni-

verse, full of unexpected elements but without invention, without discovery. Everything is ephemeral in telephone.

As a kind of ultra acoustic universe, with a reduced frequency spectrum, telephone demands a great redundancy of information, implying a deep involvement of people.

With telephone, the *design* of the individual knows a mutation – he becomes conscious of himself through the intimae link with the *Other*. Deep participation of people at the telephone unveils the sensorial experience of the *Other* in each one of us.

This intimae link is generated by *real time* – continuous improvisation. A link that allowed – together with the car – a faster spatial expansion of family and cities.

With the appearance of radio, the isolated and amplified voice goes in a *single direction* – also disincarnated but with a larger spectrum of frequency and with a basic trace: the explosive spatial expansion.

Radio is always the orator's voice – communication from one to many. But, it is about an orator without frontiers – this is the reason why radio emissions had always been considered, since their beginning, a matter of State security.

Radio is a sensorial reversion, in an oxymoric process, of the phenomenon created by literature – no longer the most different personages happening in our body, but personages made by disincarnated voices – a kind of disembodiment of theater.

Such disembodiment generated the emergence of an ideal of the pure voice.

Voice always was the element of social integration par excellence – the first thing we make when we born is to learn to speak.

The word *voice* appears from the Indo European **wek*, that meant "to speak" and passed to the Sanskrit as *vac* – indicating not only the *voice* but also the idea of deity.

That mysterious ideal of the pure voice practically exterminated with *bel*

canto, and projected with all powers the figure of the public orator – no more a person speaking to tens or hundreds, but to millions.

Being an element of social link par excellence, disincarnated voice brought the impulses of super nationalism – generating, among other disasters, the figure of Hitler.

All nationalism is essentially tribal.

Like what happens with oral communication, radio doesn't have a *vanishing point* – great part of the advertising works appeared after the radio and the telephone had been invented has a strong two-dimensional character.

Cinema also happens as a single direction path – like radio or book – but it launches a new sensorial revolution. A new language of light: *projected light*. Until then, practically everything was homogeneous light projected on a surface of irregular reflection – like what happens with books or paintings. With movies, this phenomenon is inverted: irregular light projected on a homogeneous reflexive surface.

Not only, in a kind of artificial *obscure chamber* enlarged to all, movement and light, which are typically worked by peripheral vision, are suddenly concentrated in central vision – sensitive to texture and color: here is the magical sense of black & white photos and movies: inverted senses.

This sensorial reversion makes movies be designed by a formidable concentration in central vision, with *high resolution* and *high definition* – decreasing the use of peripheral vision – sensitive to light and movement.

Literature dynamically activates both types of vision.

With central vision we have the typical phenomenon of *systasis* – everything took in a single shot. When we admire a visual artwork, we don't look separately at its parts.

In this way, when the manufacture of paper begun in the European continent, Romanesque architecture appears – characterized by design in compartments, by colors and textures, because then we exercised more intensely the central vision, yet without the large-scale practical use of the silently reading. Only

later, with the increase of use of paper, phonetic alphabet and the appearance of silently reading, it is that peripheral vision was sufficiently intensified to make possible the Gothic cathedrals.

The phenomenon known as *systasis* – everything took in a single time – projects a world of departments but with the sensation of continuity and linearity, because Nature operates by opposites. Thus, also the acoustic universe – formalized by the diachronic process – projects a continuous world of close relations, but with the sensation of compartments, like the layers of an onion.

Peripheral vision – light and movement – implies the appearance of the idea of *paradigm*, typical of literary world. Curiously, the structure of movie films is, since its beginning, and excepting rare cases, that of literature.

But movie starts a new strategy: the edition.

Edition happens due to the intensification of central vision. Sets of images edited in way to create a sensation of continuity, replicating the work made by saccadic ocular movements.

Because of this, cinema privileges great plans – edition needs many elements of similarity as to establish an efficient flux of story.

Form perception implies movement. It depends on involuntary ocular movements, scanning process known as saccadic movements.

We move our eyes in a frequency of about ten sweeps per second. Our retinas need an intense sanguineous irrigation. So, there is a complex network of small arteries in front of our retinas, many of them blocking the passage of light to photoreceptor cells. If we saw *everything*, even what is *stopped*, we would also see an immense quantity of shadows – a large and unnecessary volume of information.

Our brains created, then, an economic strategy to deal with this: only what is in movement is visible. Therefore, the stopped eye doesn't see.

At any movie theatre we are obliged, without being aware, to focus our visual attention about one meter behind the projection screen – to be able to *see* the film.

That is, to see a movie implies an *education* – as well as to speak at telephone or to make a radio program.

When we focus behind the screen, we incorporate part of our peripheral vision, what gives to action a quality of totality.

But, this doesn't happen with television.

Television screens and many of computer monitors, with their sweeping frequencies, substitutes our saccadic ocular movements, making our eyes to stop. Form perception passes from the eyes to the screen, as an intelligent type of sensorial prosthesis.

Free from ocular movements, the all rest disappears, our ears are freer to hear and we dive into a television universe. This is the phenomenon we call *immersion* – which would only become popularly known with the virtual revolution.

But, there is another revolution started by television: emitted light substituting projected light.

Until then, the only phenomenon of emitted light relatively controlled was fire. With television, intensity of controlled light in movement modifies the whole perceptive visual process.

Retina passes to be massaged by light.

With television, peripheral vision disappears; but the light massage transports peripheral vision to the center, making everything a single fluid movement.

Single direction medium, television is profoundly hypnotic – and hypnotism doesn't know edition.

But, the information – almost a light mosaic – is not entirely processed. Only a small part of the information emitted by television is memorized, that is, only a small part passes to long-term memory.

As showed by McLuhan, television is a *cool* medium. Low memorization leads to a cognitive fulfilling of those *empties*, to a kind of personal participation

to complete the visual mosaic of light. An operation of image restoration by its surface – we don't fill ideas, but *empties* of the image.

Television is a superficial medium par excellence. This is the reason why Brazilian and Mexican novels quickly became a worldwide success. Also because of this, politicians who make success in television are, inevitably, *caricatural* figures.

The word *caricature* appears from the Latin *caricare* that meant "to charge", to exaggerate or, in other words, to *heat* the figure. Literal translation to English generated the term *charges* to indicate short stories with drawings.

Good part of popular movies took elements from television, caricaturing personages and situations, treating them in first plans and close-ups.

Close-up is another essential element in television – *low resolution* doesn't allow great refinement of details in image.

In television there is disembodiment of image and sound. In contrast to photography, that in certain sense works more like literature – two-dimensional images simulating actions in *low resolution* and *high definition* – in television everything is abstract, everything is out of the being.

Images of wars seen on television generally generate less impact. Societies using more television become more superficial. Everything turning around short-term memory: here and now.

Thus the world of entertainment emerges – everything transformed into superficiality.

In all this fabulous sensorial metamorphosis, the question of *identity* is always fundamental.

Identity – from the Latin *idem*, meaning *equal* – only can exist with the difference.

Alerted to the question of *identity*, Aristotle related it with the sense of *unity*. In its turn, the idea of unity is directly associated to that of repetition.

When we look to reach a certain degree of unity in a musical composition, for example, we use redundancy elements. The same happens with architecture, or any another language.

Gottfried Wilhelm Leibniz, in the 17th century, pertaining to an already strong literary society, defended that the question of identity could be understood through a simple formula: if x is identical to y, then everything true of x is also true of y – what became known as the *principle of indiscernibility of identicals*, or simply the *Leibniz's Law*.

Curiously, Leibniz applied the Aristotelian principle of the *third excluded* as content for the question of *identity* – because its *identitas indiscernibilium* establishes the impossibility of the existence, in Nature, of two *absolutely* equal things – always a new medium taking as content the previous one.

Very visual and literary, Leibniz dreamed with a universal language, uniform and standard.

The idea of *identity* here is of the individual that recognizes himself as such and, thus, different from the *Other*, but belonging to a determined group of ideas.

It is a complex and, in certain sense, paradoxical combination between equality and difference, unity and diversity. Mysterious combination of Aristotle's and Leibniz's ideas.

Violence nothing more is than the search for *identity*.

In contrast to what is many times supposed, violence is not an attribute of poverty, of material necessity. Fight for survival is not an act of violence. There are violent and non-violent poor societies, and in the same way, violent and non-violent rich societies.

Both oral and literary worlds establish strong principles of identity. For the first, identity is in the group, the clan, the tribe, in the system that allows reminding at all moments and in high redundancy, the elements of desegregation and aggregation.

With literature, identity is established with the reader in silence, supreme *vanishing point* of the whole process, and, therefore, different of all the worlds

that don't belong to it.

Because of this, the world of literature generally doesn't consider as violence the elimination of what is not literary, of what is not in accordance to its structure. From there, violence established during the maritime discoveries of the 16th century – which until today belongs to Eastern countries imaginary – is included in history books as facts of national pride. From there, the brutal violence of conquests in Spanish America, the systematic elimination of American Indians, and the phenomenon of racism.

The universe of literature is that of the exclusion – and this is the reason why Aristotle, at a moment when the literary universe still was in its beginning, elaborated the *third excluded* principle. It is not about a naive generalization, but a coincidence of logical principles.

In the end of the 1950s it was established the beginning of what it would represent a fascinating planetary metamorphosis, when the American President Dwight David Eisenhower created the *Advanced Research Projects Agency*, more known by the *ARPA* acronym, as reaction of the United States to the Soviet military technological development – especially because of the Sputnik launching in 1957.

ARPA's function was to produce an invisible and indestructible weapon. Its beginning imitated, in some way, the principle that characterized the Manhattan project, during the Second World War – the multidisciplinary approach.

It was the same time when John Cage and Merce Cunningham met at the Black Mountain College and started to assume, with Raushenberg the principle of independence and simultaneity in music, dance and plastic arts.

Some years before, still during the Second World War, at the Harvard Psycho-Acoustics Laboratories, a young brilliant scientist – Joseph Carl Robnett Liklider – used complex mathematical models to understand how the human hearing worked.

In a determined moment, his mathematical models reached such complexity that it became especially difficult to deal with them. Liklider observed, then, that when we deal with aerodynamic equations or fluid patterns, like viscosity, the classic processing of numerical information becomes without importance, and

what starts to work is what it is called *modeling*.

In 1960, Licklider launched the book *Man-Computer Symbiosis*, where he defended, for the amazement of many, that «in not too many years, human brains and computing machines will be coupled together very tightly, and that the resulting partnership will think as no human brain has ever thought and process data in a way not approached by the information-handling machines we know today».

In 1962, Licklider was definitively integrated in *ARPA* structure with the objective to invent an *invisible* and indestructible weapon. Quickly, he discovered that the most powerful weapon could only be information. Thus, he elaborated and started to coordinate a program of interactivity in the structuring of computer networks, which would be known as *ARPANET*.

By its own nature, information spread through diverse points, holografically, is indestructible – because it only could be destroyed if the *whole* would also be.

In 1985, the fusion of *ARPANET* with *NSFNET – National Science Foundation Net –* would mean the beginning of what we know as *Internet*. The National Science Foundation was created in 1981, with the objective to create an open network allowing academic researchers access to supercomputers.

Seventeen years before, in 1968, Licklider defended: «We want to emphasize something beyond its one-way transfer: the increasing significance of the jointly constructive, the mutually reinforcing aspect of communication – the part that transcends "now we both know a fact that only one of us knew before". When minds interact, new ideas emerge».

That is, everything together in the fusion of television, telephone and, also, of everything we know. Here a deep civilization metamorphosis had begun – the *virtual universe*.

The word *virtual* appears from the Latin *virtus*, which indicated the idea of *potentiality*.

In the virtual world, everything is total possibility.

Networks of networks of interactive telecommunication systems in *real time* establish a medium of media, in multiple direction of interaction.

Concepts of *definition* and *resolution* lose their sense. The universe of networks is present everywhere, from telephones to car design, from television to books.

In the center of this civilization metamorphosis a new society appears: the *teleanthropos*, concept coined by René Berger – the human being also made at long-distance, giving to the idea of *proxemy* created by Edward T. Hall in the 1960s a new dimension and projecting an unknown and surprising *teleproxemy*.

In few words, *teleanthropos* means human being formation no longer in a local context, but in a global environment. We all receive information from the whole planet, at all time. We deceive climatic seasons transporting all type of vegetables and foods through thousands of miles. We also transport all kinds of human organs, even blood, in a certain sense mixing all types of genetic information. Images, sounds and ideas traveling through the planet in *real time*.

But such formidable expansion doesn't happen only in spatial terms. We dive in ancient cultures already disappeared, languages that formed old civilizations – with our education passing to penetrate in the deepest cultural fabric, in the most unexpected references, reaching subatomic particles, Super Strings, blackholes, and even regions of the sidereal space never before imagined.

Everything forged by incredible distances in time and space, almost always melted in *real time* – this is the very first sign of the *teleanthropos*.

Proxemy, defended by Edward Hall, means a kind of local territoriality, of cultural and corporal character, that makes us to question why an African or a South American touches themselves physically more than an European from the north, for example.

Teleproxemy raised this type of questioning to the relations carried through in the cyberspace, in disembodied universes, when – to refer just one example – many times we don't know even the appearance of the person that is in the *other side* of our virtual communication system, but we can feel a high degree of intimacy with that contact.

Information and matter circulating fast through the entire planet.

Everything becoming total diversity.

Everything being global contamination.

Spaces in practically all places, past and future – everything coinciding at *here and now*.

The logic of this fabulous multiple directions universe, inaugurated by interactive telecommunication systems in *real time* and by digital modeling systems, is no longer that of Aristotle's *third excluded* – but of Charles Sanders Peirce's logic of the sign and the logical principle known as the *third included*, elaborated by the French mathematician Stéphane Lupasco.

That is, to be *and* not to be – that is the new question.

Lupasco's logic turns possible the existence *and* the non-existence, like Erwin Schrödinger's cat celebrated experience. A principle that can be synthesized in *a*, *non-a*, *a* and *non-a*, as the new condition of reality.

Telecausality announced by Schopenhauer in the 19th century emerges: the beating butterfly's wings in Australia can provoke a hurricane in the United States. Curiously, many times we remain omnidimensionally structured in temporal terms – but *telecausality* is a space-time phenomenon. That is, causality would not be restricted to a single space-time frame.

A reality of the unstable, the unexpected and the surprise at all instant is established – and, therefore, the maximum potential of creativity.

What before was characterized by a stable relation between short and long-term memories, is now completely transformed into a new informational long-term contingent produced by digital prosthesis in network, and by a dynamic articulation of other prosthesis of short-term memory.

Cyber search engines and software for edition – of any nature – are, for example, true intelligent prosthesis of improvisation, that is, of dynamic articulation between short and long-term memories.

The word *prosthesis* launches its ancient etymological roots in the Indo European term **dhe*, that meant "to place". It passed to Greek as *thê* that gener-

ated, for example, the word *thêke*, meaning "box", "deposit", or "to put inside" – from there the French word *biblioteque*, for *library*. Together the Latin particle *pro*, it became *prosthesis*, with the sense "to place something on".

Prosthesis is not only an extension, but also something different that is creatively associated with the function of the extension.

While literary world was privileged a universe of human body extensions, virtual world reveals itself potentially as a universe of *prosthesis* – not only on the body, but also on its extensions, on what it is disembodied.

In this new universe, our memories become so infinite as absolutely volatile. In immediate terms, it is enough to consider the intrusion of a virus and the sudden deletion of a huge amount of information, in a sudden process of amnesia – that can be collective.

Extreme sensorial volubility brings to consciousness the multidimensional design of this new reality as a deep civilizacional metamorphosis.

Beyond the phenomenon of fulfilling information on surface, originally generated by television screens, in a similar way to what happens with acoustic and tribal universe, our personal long-term memory also starts to demand a higher degree of redundancy, of repetition. Repetition on surface – and, thus, we have the emergency of the entertainment as the first sign of practically everything.

Cars, that before had in transportation its main function, are changed into gadgets. Cities, like Paris, Venice and many others, are redesigned in gigantic thematic parks.

Clothes are changed into trademark symbols. Everything is quickly forgotten and renewed.

Thus, stereotyped manners of social behavior – so characteristic after Gutenberg's press – quickly disappear.

Identity becomes ephemeral and volatile. Everything can belong to everything or nothing, immediately. More than this, everything starts to belong to everything and to nothing, immediately.

The planet is transformed in the emergency of the obsolete – everything turned into the continuous fabric of use and consumption.

Great thinkers who, even apparently integrated in this universe of deep transformations, practically lost all value. Politicians who freely modify old laws with the objective to cover what before would be considered crime – without any reaction.

People from the most diverse activities feeling themselves obsolete, useless – because *utility* is linked to the future, to what generates something. Ignorant people elected for important public positions, all over the world. Athletes and entertainment actors receiving millions: teachers and philosophers abandoned by society.

The uselessness is directly associated with the obsolete and, both, to the lost of function.

One of the central elements of *identity* is social function, what differentiates and joins us in society. Without identity, violence emerges, in its more diverse forms.

The volatility of the systems in network amplifies the phenomenon produced by television and telephone, generating a universe of entertainment. Everything becomes entertainment, average, variations of what is already known – all associated to the principles of the uselessness and the obsolescence.

Consumption, old social standard par excellence, gives place to *use* – what would be known as *Low Power Society*: a society of almost free access to objects that little before were restricted to the richest. Classics of movie, musical recordings of all kinds and photographic images in high definition among so many other artifacts that passed to be commercialized in supermarkets or to be distributed, sometimes at symbolic prices, through virtual networks – but, everything tending to a gigantic mediocrity, pure entertainment.

On the other hand, as if we were dealing with a huge system in dissipation, characterized by viscosity, points of high density emerge, spread out through the structure of networks.

All this structure of complexity transforms the nature of *paradigmatic* mu-

tations into *syntagmatic metamorphosis* – continuous chain changes in a nonlinear framework.

Thus, the idea of a dynamic *ideosphere* appears – beyond an atmosphere and a biosphere – term coined by Jacques Monnod in the 1960s.

The ideas of court and province disappear, giving place to megacities, where all realities converge, and to a countryside gradually closer to urban reality.

The quantity of information changes the concept of history – projecting a post-history, in a different sense of that announced by Francis Fukuyama. That is, history – as a profile of specific data concerning facts that design a sequence of events, technology produced by literature taking as content the diachronic of the acoustic universe – simply disappears.

We pass to have all possible histories about a same event, all true, and many times contradictory.

Like what is lived by a tribal leader, also in digital universe history cannot be cut into pieces.

The maximum and impossible aspiration of the sign is its object. Impossible because once reached, the sign becomes its own object. In the same way, the maximum and impossible aspiration of history, once reached, through the immense volume of information, means its disintegration.

In this way, the huge data bases that each one of us started to accumulate appear like a kind of replication of the past, transforming history into a multiplicity of fictions, all as treatment of reality – incorporating all times in a single system.

This took René Berger to question if we would not be, after all, penetrating in the universe of the end of ontology – end of the discovery of ourselves, of what we constitute while intelligence.

Alexandre Herculano, in his *Legends and Narratives*, said that «with Kant the universe is a doubt: with Locke doubt is our spirit: and in one of these abysses all ontology precipitates».

But in the average, in the entertainment, there are no more places for doubt. All duties, which are coined by doubt, are changed into certainties of the rights. And all start to fight exclusively for their rights.

In fact, there is no longer an ontology of the individual spirit, but the emergency of another type of doubt and discovery – present a little everywhere, but also absent, everything forming a volatile medium of complexity.

The ancient ontology of literary nature is transformed into the incessant deletion of discoveries and the simultaneous appearance of new and unexpected doubts, projected by an immense informational scale: perplexity.

We departed from strong teleological social structures and gradually transformed ourselves into a gigantic organism articulated by kinds of informational clouds of strong *teleonomic* nature.

The Socratic principle, according to which *everything I know is that I know nothing* – announcing the literary world, oriented towards the future – is changed in: *everything I know is everything and nothing.*

The aspiration to an absolute truth, reason of the doubt, is disintegrated with the proper idea of truth. What we call truth nothing more is than the meaning of the things. When in we approach ourselves to the thing, we no longer deal with meanings.

And, as well as only the difference produces consciousness, we gradually dive into a world of so many differences that they practically disappear. A world of nano-decisions and nano-differences or, in other words, a universe that aspires diversity on the surface.

It is curious to reflect on the fact that literature had the aspiration to a homogeneous universe, made of interchangeable discrete particles, but produced a world of deep asymmetries; and that virtual universe projects the ideal of cultural diversity and economic homogeneity, generating a homogeneous world in asymmetries, where even brutal differences, present in nano particles of actions spread out by the planet – evidenced by violence, wars and misery – is, in general, took as simple data of entertainment.

Violence and corruption are a same thing. The word *corruption* literally

means "to break into pieces", "to destroy".

Many of the acts of evident corruption had been transformed into anecdotal data for social discussions of entertainment.

We start to turn around the categories that Charles Sanders Peirce called *firstness* and *secondness*: *icon* and *index*: relations of quality and relations of existence with the object – this is the reality of entertainment.

Thus, Law starts to aspire to a planetary *ethos*, as content of a new reality, in the attempt to establish a global ethics. But it is, in fact, volatile and it no longer obeys to a systemic stability demanded by isonomy.

What we defined in West, along the centuries, as being *art*, indicated the criticism of the culture, not by contents, but by the strategy, the structure.

Thus, in the Modern period, painting, sculpture and photography were developed, beyond the most diverse art manifestations. Everything oriented towards future, to the questioning, to the change, to reflection – what gave life to the culture of what Karl Popper called the *open societies*.

The virtual universe, art and war had been transformed into continuous entertainment. But, almost in paradox, points of high density of non-entertainment emerge. Points generally dislocated in space and time, fragmentarily placed in the fabric of the non-art. Because of this, we are commonly wondered to find those high-density moments in advertisement, industrial design, movies or popular music.

All this mysterious structure of complexity has strong links with the acoustic world – by the surface. But, it brings, also by the surface, the literary reality – opposed to the verbal world – as its content. Because of this, it is a universe fast and superficially absorbed by tribal societies that, however, take it as sign par excellence of the enemy.

Thus, our structure of thought, the principles of aggregation and desegregation, our strategies of generalization, had known a deep metamorphosis.

The *human*, before related to *humus*, to *land*, to *visual property*, changed himself into *virtus* – dematerialized in total potentiality.

Old principles of organization in oral societies, *designed* by small social interlinked groups, and literary societies consolidated in the form of *urbis*, give place to pulverization in space and time.

Because of this, we find in the new virtual universe groups overlaid in a large *real time* interactive telecommunication network of networks structure.

Being the principle of *isonomy* an idea of standardization, it gradually disintegrates itself.

The tributary system, a little all over the world, starts to be inefficacious in relation to big companies or great richness, striking on the average citizen, generating an effect of deep loss of political credibility. Accounting mechanisms immediately transfer resources from one to the other side of the planet.

In name of security and welfare, everything becomes bureaucratic persecution – mainly affecting the individual.

It is then that, in the beginning of the 21st century, it emerges – a little everywhere – questions about the validity of democracy. Who would be equal to whom? An addicted miserable would have the same value for the society like a scientist? A terrorist would have the same rights like a dutiful citizen?

All instances start to be place for judgments of value, because not all are equal face to Law – and the Law itself becomes unstable.

Inequality face to an unstable system that ideally aims to submit all, produces the feeling of insecurity and persecution, as well as the aspiration – sometimes hidden – to control, to permanent vigilance.

Isonomy, departmentalization and atomization are basic elements to understand the spirit of democracy. With the emergency of the virtual world, there no more are precise departments – and, thus, there no longer are ideological parties. The ancient atomization, recognizing a fragmentation in discrete unities, disappears under the paradoxical hyper pulverization in a system of nanodecisions that – like what happens with light – behaves, simultaneously, in discrete and continuous form.

Interdependent groups, discrete and simultaneously continuous elements and an inequality of individuals face to Law: turbulent elements of an unstable and volatile system redesigning the principles of democracy.

Many of us are shocked when see – a little all over the world – the free transgression of those old principles that made the ideal of democracy and isonomy. But it is important to notice that there is practically no reaction when such happens.

While in isonomy and democracy there are no personal questions, in the universe of *real time* interactive planetary telecommunication systems everything is personal.

Deep sensorial transformation leads to something similar, in a certain sense, to the ideas defended by the Emperor Justinian, in the 6th century, justifying – on behalf of security and general welfare – the end of the principle of equality of all face to Law, the end of a stable legal *corpus*, and the end of the right of the individual as we know.

But now the figure of the prince is substituted by large planetary corporations, which have gradually took place of elect governments.

On the other hand, established in the deep volatility of the system, ephemeral networks of virtual corporations and non-governmental organizations appear.

Some historians defend that the emergency of a framework of great complexity is an evident signal of future collapse and decay.

It is, however, a false question. In the universe of biology, all superior organisms are complex.

Complexity emerges as *teleonomic* result of flexible and dynamic communication and informational storage systems. When this condition leaves to exist, the whole system enters in collapse and, of course, it is simplified.

Complexity is not, in itself, a signal of imminent decay – but an eventual loss of flexibility and informational dynamics is.

Another question that has sometimes been placed is to know how we think,

if what we know is our way to know, such as Kant defended, or if there is an absolute and mathematical truth, superior to the structure of the environment.

For example, will the establishment of syllogism, appeared with writing, represent an absolute truth?

The answer is in the scale. Asymmetrical time defended by investigators of dissipative systems works in a determined scale, as John Wheeler taught. The same happens with the nature of subatomic particles, with Super Strings or black holes.

If an absolute truth existed, superior to the environmental structure, the world would not be in continuous transformation.

However, it is not about the defense of a sensationalist way, placing sensorial faculties as sovereign in the process of mental structuring. What happen is senses, neuronal processes, verbal or non-verbal language, everything establishing a synergetic structure of action.

We deal with a world in continuous metamorphosis, where human values are always in transformation.

It doesn't mean to defend that democracy or isonomy had simply left to exist. Although in some aspects this affirmation can be true.

Most interesting is to observe this process of mutations and to reflect on the nature of changes.

Also, it is not about to change the world. «How to improve the world: you will only turn things worse», as John Cage said. The strategy is to change in a changing world.

To change it is necessary to know.

The hyper culture universe while intensive entertainment generated another phenomenon: the tendency to a *zero sum game*.

Zero sum games are those where there are losers and winners, preys and predators – like what happens in forests, in seas.

The nature of what we call *civilization* essentially is a *non-zero* sum game: collaboration.

One of the characteristic traces of Greco-Roman universe was exactly the high degree of conflict in competition between people. Papyrus and phonetic alphabet had reduced redundant inter-individual relations that before assured laces of identity in the acoustic universe.

Networks of global interactive telecommunication systems in *real time* increase even more that phenomenon. For this reason, many people join to *real time* chats, that many times don't have any sense, remaining in the surface, but that gives to users the sensation of a redundant contact, typical of oral societies.

We become everything immediately: publishers, composers, photographers, typists, secretaries, carrying through the functions of the post office, making many of the accountants' work, of the analysts, redactors, writers – everything without leaving home.

Instead of freeing human being from the work, digital systems concentrated the most diverse forms of work in each person.

It is no longer necessary to negotiate, to orient, to establish strategies between people – but only to participate, to elaborate and to enter in the flux. There is no longer future, but everything *here and now*.

The effect generated by the massive and superficial participation in the networks is the annulment of the *Other*. All people running for *concurrence*, for what became conventionally known as *competition* – just zero sum game.

A question of *identity*: the elimination of the *Other* for the establishment of the *I* who, disembodied, become ephemeral and needs to be continuously renewed, like what happens with any commercial product.

Thus, education, culture and health started to be considered, gradually, as goods to be acquired, and not as rights of citizenship.

The world of networks decreases the notion of urban collectivity; but it also decreases the notion of the super individual, both formalized by literature. It

is the paradox of earphones that transfer stereophony to the center of the head, and of the supports of music that modify acoustic environment transforming it, before collective like urban sounds, into strictly individual, but coined by a huge average; and the continuous and superficial *real time* chats, or even the participation in games, not less superficial, by people distant thousand of miles each other.

Now, it is the *fifteen minutes individual* – like the fame announced by Andy Warhol – always needing to be renewed. And, many times, identity passes to be established through some kind of violence – through competition, through devourer nihilism of consumption, or even through acts of physical aggression, everything depending on each one.

Individual passes to belong to a collectivity without *ethos*, unstable and floating.

A world made of collectivities without *ethos* no longer has *right* or *left* political wings that, born in the French Revolution, become now symbols many times used without any relation with their old meaning.

In the networks there are no longer *centers* or absolute *explanations* – because *explanation* is a predicative question par excellence.

The word *faith* – so far from the scientific world, considered as something personal, deeply subjective, without possible generalization – has its etymological origin in the Indo European root **bheidh*, that meant the idea of "to have confidence", changed into Latin *fides*.

It is from there that the principles of fidelity and trust emerge – both strongly related to the expectation of the future, amplified by phonetic alphabet and paper.

But, if the ancient idea of faith established the belief in an isolated God, placed in a parallel and untouchable universe – the *virtual* world, as total potentiality, transforms that reality, before distant, into *here and now*. Thus, the ancient faith in what it will come is transformed into faith as something immediate, free from the future.

The word *faith* was always associated with the sacred – and the literary universe, with the expansion of stereotype, decreased the presence of sacred.

The condition of sacred is that of free time, free think.

With the fusion between phonetic alphabet and papyrus, prose took the place of poetry.

Gradually, virtual revolution generated a new condition of sacred, a new condition of free time, and a new type of poetry – many times non-verbal. By this way, the old faith in a visual parallel world is transformed into another type of faith, diving in the fabulous digital universe.

The old ideal of trust, fixed in the expectation of the future, changed into the immediate experience of all information.

The world consisted of continuous entertainment, free of doubts, with everything previously known, paradoxically projects a sense of continuous doubt: nothing is possible to be known, because everything already is known and only the difference produces consciousness, thus the doubt becomes total.

Everything changing into permanent doubt – no longer a precise, specific and specialized doubt, turned towards the future, aspiring to an explanation.

The word *doubt* appears from the Indo European **duwo*, that projected our word *two*. It passed to the Latin *dubio* – that meant the indetermination between two or more alternatives.

In a post-history universe, designed by continuous change, even if on surface; everything is certainty, entertainment that is continuously repeated, but the quantity of information brings us all kinds of incoherence, instability and turbulence, in a paradoxical wave, whose fabulous scale projects a world where practically everything can be characterized by doubt.

A new civilization, enlightened by an old Zen proverb: «When there is enough faith, there is enough doubt which is great spirit of inquiry, and when there is great spirit of inquiry, there is illumination».

A thought that makes us to admire the phonetic proximity between the Latin word *mundus – world* in English – and the Japanese Buddhist expression *mondo*, that literally means "questions and answers".