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Etymologically, the word *symbol* means to *co-incide* and it is intimately linked to the idea of *substitution*.

Thomas Aquinas showed, when saying that art **as imitation of Nature in its *modus operandi*, that the period known as the Middle Age certainly was the less *occidental* moment in Western's history.**

Aparadox, as Aquinas rescued Aristotle – who was the sign par excellence for the Renaissance.

Middle Age is submerged into parallel *histories*, times and spaces, like Nature.

Daisetz Suzuki defined *machine* as something destined to abbreviate the conclusion of a work, to reach faster an objective. It is clearly understandable why the phenomenon *machine* especially occurred inside teleological societies, which are supported by *predicative* cognitive structures.

We operate and recycle old technologies, ancient knowledge of technique.

When, in 1950, von Holst and Mittelstaedt studied the *stabilizing* behaviour of *optomotor* processes – showing how discontinuous information leads to a systemic *stabilization* – they also unveiled the feedback nature of cognitive systems.

Redundancy and spatial perception.

Plasticity and cognition.

Our senses, or perceptive terminals, operate as true filters for tuning and selection, generating a neurophysiological design.

Language – in its broadest sense – is, by definition, a synergetic and, in some way, *ergonomic* projection of sensorial faculties.

Thus, each sense establishes new connections for creative situations. Decreasing or intensifying each one of that filters we operate synaptic tendencies.

Spatial mutations are processed like that, interactively.

Space zero is a kind of degree zero, a state of coherency of a spatial phenomenon – a total space that translates different logics into a single dynamical field.

The only way to elaborate a consistent methodology for the study of sensorial phenomena is to establish a *degree zero of language*, from which all relations are possible.

Brains and spaces: logical operations in open systems and interactive sensorial loops: non-regular sensorial loops, true strange attractors: an idea about the idea itself.

John Wheeler: «no laws, no continuum, no space, no time. The boundary of a boundary is zero. No question? No answer! ‘Consciousness’. More is different».

The simultaneous existence of different logical spatial patterns unveils the dynamical characteristic of its operational nature: self-replicating systems and the formation of probabilistic clusters.

The fact that *zero*, as mathematical notion, appeared so late surely is because our sensorial inputs are finite. However, the notion of *eternity* – intimately linked to the idea of self-replication and retro-alimentation – is much older.

The hieroglyph for *eternity* is the famous image of the serpent biting its own tail.

Ouroboros.

Curiously, the notion of a *space zero* never appeared until now.

The Indo European word **dheye* meant “to look”. It passed to Sanskrit as *dhyana*, which means *to meditate*; later transformed to Pali as *jhana*; to Chinese as *ch’an* and finally to Japanese as *Zen*.

In this way, one of the most integral of all philosophical systems, *Zen* appeared from the less integral and more departmentalising of our senses: the eye.

In East, the *error* when executing any manual work is attributed to lack of concentration and not to failed technical skill, like what happens in West.

Different ideas of sensorial perception.

Ezra Pound attributed to the myth of Babel tower the appearance of phonetic alphabet among Phoenicians. Such fact gradually introduced Humanity into a departmentalised informational structure, in function of the intensification of a specialised use of vision.

Thus, the previous acoustic and integral universe – poor in generalizations – gradually disappeared.

A tribal universe doesn't recognize strange spatial references to its own tradition.

When strange spatial references are introduced into an acoustic context there is a decrease of tribal identity and violence appears.

Violence as search for identity.

Rarely architects dedicate some attention to the phenomenon of identity and its tremendous effects.

Mies Van der Rohe made architecture for eyes in constant movement.

Generalization is result of informational heating.

Only in codes, or systems of codes, constituted by discrete particles is possible to weave generalizations.

The acoustical universe is poor in generalizations and rich in particularizations.

The idea of totem is exactly this: the maximum sublimation of particularization.

High departmentalisation and digitalisation produced by phonetic alphabet led to the appearance of a generalization of spatial effects: *function*. Ancient Rome is a classical example.

The *way to operate* architectural systems, or sensorial fields, fundamentally consists on neurophysiological design.

Emotion is the apparently impossible, or unexpected, **deciphering of sign relations, hidden until then: insight and emotion. Clash of different orders, or principles of relations.**

In East, from Tibetan painting to *ikebana*, all understanding passes through the decoding of hidden interconnected diagrams. A highly emotional process.

The appearance of *plane perspective* in West, during the low Middle Age, was the establishment of a uniform, standard and very efficient interconnection system.

It was necessary the introduction of paper, imported from China, and almost one thousand years of acoustic communication to turn that interconnection phenomenon possible.

Only after Gutenberg is that the illusion of *content* became more and more important, truly *central to daily life*.

Spatial information processing never is *instructionist*, but yes *selective and by chance*.

That is: *teleonomy* and not *teleology*.

When our societies will discover this, we will have a profound mutation in education.

Space is, by nature, *non-instructionist*.

A spatial *explanation* is not possible.

The whole set of sensorial data is equal zero, that is: total possibility.

Non-zero sensorial data is a design produced by the intersection of sets of cognitive environments – impossible aspiration for a total signification, for its own object.

Senses, *neurophysiological* systems, sensorial extensions and sensorial prosthesis are, all them, environments.

First idea: the nullity, in such context, of the concept of diachronic time.

Second idea: the elimination of the notions of full independence and *local causality*.

Everything is a matter of scale.

So, the Cartesian *cogito* loses its full sense.

Third idea: the end of absolute oxymoric figures like *order* & *disorder*, *figure* & *ground*, *interior* & *exterior* and so on.

That is to say: *neurophysiological design* is **order and disorder, figure and ground, floating in spectral tuning zones.**

Space Zero.

The Peircean system of sign decoding is founded on three categories: three singularities in continuous fusion.

In two-dimensional or *planimetric* geometrical terms, that triadic system reaches consistency in the figure of the isosceles triangle.

However, the passage to a three-dimensional approach knows a zone of instability in the figure of tetrahedron, where the Peircean system is conducted to constant paradoxes.

Its consistency re-appears in the figure of the octahedron.

Tetrahedron is the minimum energetic structural system of Nature and octahedron would be the minimum consistent synergetic structural system.

Signs and *intersemiotic* systems designed in fractal terms.

A central idea of *space zero* is the inexistence of a central idea. Field operations don't permit, by their own nature, the existence of a single vanishing point.

***Space zero* is a kind of ideographical texture in permanent metamorphosis.**

However several informational systems simply don't fit teleological structures, non-linear methodology applied to scientific investigation is almost never permitted.

When it happens, we have philosophy.

Curiously, both Freud and Piaget considered the impression of the omnipotence of thought as the psychological base of magic: a brilliant visual and teleological reasoning.

However, to many aborigines what happens is the non-distance between the act of thought and Nature. Then, everything is essentially iconic.

Locke believed in a world divided in two parts: one physical and the other being *information, sign.*

Berkeley, defending God, believed that the whole world would be just made by signs.

Wiener's cybernetics showed that Berkeley was right, but this time no longer defending God: taking matter while information.

Sometimes, especially for children, it is not easy to differentiate *dream* from *reality*.

What is the difference?

Short and open circuits.

Paramorphism **appears in all levels of language.**

Exactly because of this, King Lear myth gradually unfolds itself through the entire world, and Greek myths unveil themselves as powerful behaviour archetypes.

Joseph Campbell clearly showed how myth born from bioenvironmental structures.

Graphical structuring of megalithic wall paintings is the tactile translation of a special logic, a system of pre-historical cognitive fields.

In the same way, the graphical noise produced by plotters and the visual flattening generated by high definition laser and ink printers establish a specialized structuring that translates the post-historical human.

When Sigfried Giedion moved the small pre-historical stone against solar light and discovered unexpected images – hidden by our automatic visual scanning habits – he revealed a question of field: a spatial question.

The eye cannot see what are not its *schemata*.

The idea of sensorial fields leads to spatial signification and it is a notion intimately **linked to the mutation of mentalities.**

The decoding of spaces and images inside pre-historic caverns has been fixed on the apparent *content* of what is represented: a typical Western addiction.

When Giedion rotated the small stone and discovered animals in free run, a true hunting in **action, the most important was the revelation of a key for the understanding of the mind structuring of the pre-literary, pre-visual people.**

Aristotle defined *space* as the «immovable limit that contains a body».

Descartes denied the existence of *emptiness*.

Leibniz, in his turn, defended the existence of the *emptiness*, against Newton.

Newton said that space would be the attribute or property of some substance.

The 20th century introduced the notion of field: a *fifth number*, a systemic condition.

Taking architecture as sensorial fields operation.

Synergy and gravity: space as a *quasi* looking glass of the mind: mirror of mirrors.

About two hundred years, after the importation of the idea of *zero* by Al-Khwarizmi, were needed to discover its mathematical function in the West.

Buckminster Fuller: *physics is energetics. Ideas are synergetics.*

Gombrich showed how iconography was mutated during the called Western civilization.

The world, nowadays, beyond a global village, is an intense interconnection of different iconologies producing new sensorial diagrams.

Architectural post-modernism was an *intentional* reply to the standardizing approach in universities but, paradoxically, it also was a standardizing movement created inside universities.

An Ethiop eye sees differently than a Sweden one.

Roman Jakobson: only the existence of invariable elements permits to recognize variations.

Television doesn't organize its news services strictly based on rigid hierarchical order. But it creates a true kaleidoscope of attention with a lot of improvisation. In general, the most important news is placed at the end, but the average result is an informational avalanche, more or less homogeneous, all established in a specialised format.

Arthur Koestler, in *The Act of Creation*, defended that the creative process can be understood as a diagram where two matrices of thought cross each other.

However, in the East, in Amazonian tribes or even in our *virtual universe*, what happens is a multiple *crossing over* process, like an extremely dynamic network of bundled connections where the *knots* are potential *field folds*.

Koestler: the logical pattern of a creative process consists in the discovery of hidden *similarities*.

The *correct* scientific methodology is gradually changing.

Certain conclusions are no longer effect of a *principle-middle-end* condition.

Scientific conclusions are, at the end of the second millennium, only mediations between processes. They can also appear or disappear, like the result of complex combinatorial processes.

Mix different things and you will have something new – this is the base of magic.

The conflict of some ideas, or many of them, like what happens in *zapping*, projects a diagram of potential conjunctions and disjunctions.

The idea is that such a vortex of ideas organized in an apparent disorder generates new impressions, like a texture of new ideas: a huge *hai-kai*: a thing very different of what is found in the Western literary tradition.

One of the most powerful and discrete indicators of iconological mutation – brain soft structures metamorphosis – is the stereographic impression.

The appearance of photography clearly showed us how this phenomenon happened.

John Cage: «the future is invention».

Among others, Francis Bacon, René Descartes and Galileo Galilei started writing their discoveries in the local vernacular languages, and no longer in Latin.

Then, it started the phenomenon known as *audience*.

Freud's *unconscious, subconscious and conscious* were Peirce's *firstness, secondness and thirdness*.

In Zeno, Achilles will only surpass the turtle beyond the infinite and, therefore, returning to finite.

Norman Davidson: «cornea surface refracts light inside eye and the human being can see, periferically in an angle of 180 degrees. A small central area in the back of the retina, with around 1.5mm of diameter is called ‘yellow spot’ and has a yellow pigmentation. Inside it, it is the *fovea centralis*, a depression with around 0.3mm of diameter that gives us the most formal definition in daylight and also is the most important region of retina for colour perception. The *fovea centralis*’ diameter, when projected through the eye, covers an area in the celestial sphere of around one degree».

The codification of phonetic alphabet into discrete entities turned possible the survival of manuscripts along thousands of years. Unlikely, the structuring of architecture in continuous systems turns it metabolic, in permanent change.

In rigour, *preservation* is not possible in architecture, only *recycling*.

Events are errors.

The fusion of a technology constituted by discrete particles and other, by continuous systems – the fusion of eye and ear – produced the appearance of phonetic alphabet, of predication and of the illusion of contiguity.

The incorporation of vowels in Greek alphabet only occurred around the 8th century **BC.**

Four centuries later, Hippocrates of Quios launched the principle of *axiom*.

Richard Wagner, in *Art and Revolution*, quite understood the lost link between Classical Antiquity and the Eastern universe: for the Ancient Greece it was no distinction between **drama, myth and Nature.**

For the classical India it is no difference between a morning raga and the morning itself, between a nocturnal raga and the night itself.

Certainly, for Bashô, Moritake or Buson, a *hai-kai* was more than a frozen clone of a specific moment: it was the moment itself.

Curiously, this is similar to what happens to a Western person when seeing and hearing the world as a *concrete* reality.

But it is profoundly different from Western posture when it is considered that such *concrete* reality is outside the person.

Rarely in West, a person takes *reality* as an object in itself.

Music is synergy with sounds.

Sound design produces a field in mutation: natural condition of the existence of speech: the ancient power of voice.

Neuromotor plasticity nothing more is than other term for *iconology*; this is the fundamental link between space and sound.

Other types of links have been other types of illusion.

Recovering the idea of *field*: music and architecture, space and time, are mutual contamination.

For Espinoza the meaning of a sign is another sign: a surprisingly demonstration of visual lucidity.

Esposito had an idea of information as a system of discrete interactive particles.

Thus, he classifies hearing as a less noble sense.

Esposito affirmed that «for the certainty of the truth we need no other sign than a true idea», and that that *true idea* would be unexplainable.

For centuries many *explanations* appeared to attribute contents and meanings to Espinoza's *unexplainable*: dozens of confused and unnecessary explanations.

Icons simply don't need explanations.

What we have made has been just to read again and to re-link old technologies, remembering the concepts of *religare* and *relegere*.

In this sense we are a true religious civilization.

The etymological sense of *confusion* means *to melt together* – a pre-specialization technology.

But for a post-specialization – in a post-historical era – we create technologies full of fusions.

One of the most evident proofs that sensorial loops processing cannot be understood as a phenomenon of strictly specialized brain zones is the old experience of *commissurotomy*: the section of *corpus callosum* – the cut of the great tract linking the two brain hemispheres.

In *King Lear*, Shakespeare indicates, in vertigo, a fundamental moment of the passage to modern visual era, but it was not about vertigo itself. He produced a magnificent three-dimensional image, plane and static.

In physiological terms, vertigo is closer to ear than to the eye.

Art, or the criticism of culture, has been – in a sign sense – the operation of gravitational field folds.

Spatial design.

Poetry.

Metallanguage or trans-semiotic design.

Generalization is only possible in open systems.

Jesus Raphael Sotelo created, for the Olympic Games in Seoul, in 1988, a wonderful field sculpture that, when approached from a distant point, looks like a half sphere; totally different from when we are close: thousands of thin tubes – a vertiginous gravitational visual field.

For the mathematical Theory of Games, *environment* means a set of sensorial rules, sensorial filters and chance.

Started in Palaeolithic, domestication of animals was not only an artificial process of natural selection, but also a true development of genetic engineering and sensorial redesign.

Animals created far from their original environments are almost unable to recover their anterior group behaviour, their *savage state*.

For the human being, the *savage state* literally means a different species.

Human being became a kind of android of himself.

After *Dr. Faustus*, which has created general astonishment since the Middle Age, Mary Shelley's *Frankenstein* is, certainly, one of the first and most interesting literary translations of that phenomenon.

A phenomenon occurring – in neurophysiological terms – along thousands of years of cognitive revolution.

René Berger's *Teleanthropos* is the new *Frankenstein*, this time as a cyber phantom, inside an open structure.

The universe of signs is a network of aspirations and exchanges: a universe of gravitational complexes.

Environment designates the set of sets of all laws; and *field* is the set of intersections of those sets. One is the maximum sublimation of the other. One is the aspiration par excellence of the other.

No answers.

No questions.

Looking for *high resolution*, human being was faced to a fractal world: a *low definition* universe.

The period between 3000 and 2000 BC was, surely, one of the richest periods of inventions and discoveries, in the entire human trajectory.

The 9th and the 8th centuries BC were the poorest in invention – just before the importation of Phoenician alphabet by the Greek.

But, in only one hundred years, in the 3rd century BC, humanity produced more inventions than the whole previous creative thousand years.

After the 2nd century BC, apparently, creativity – in the modern sense of the term – gradually decreased to almost disappear in the High Middle Age: a period for which the word *invention* meant poor technical control, failed skill.

19th century was almost four times more inventive than the previous century.

Hardly the 20th century will achieve two times more inventions than the 19th century, but the distance that separates, in quantity of inventions, the 20th century from the other ones is simply fantastic.

Curiously, the rhythm of inventions decreased after the First World War, and it was strongly increased after the Second World War.

But, we must always remind that all these data are not *real*, they are our way to approach to things.

Certainly, all these data would sound non-consistent and non-sense for a nomadic.

All informational mutation is simultaneously generative and degenerative.

It is, at least, fascinating to perceive how the phenomena of informational turbulence occur.

Again, to operate ideas and spatial complexes is, before everything, to produce a neurophysiological design: designing the invisible.

The *ideosphere* phenomenon is an interesting example of a category in which the tuning network happens in non-linear terms.

John Wheeler: «the boundary of a boundary is zero».

The intensive use of eye, and mostly of peripheral vision – that turns possible a holistic apprehension – leads to selection, fragmentation and standardization.

Central vision is sensitive to colour and texture.

Thus, St. Augustine cleverly observed that the Latin word *intelligo* means “to select among”.

The stopped eye can't see.

Ocular movement is fundamental for image perception.

Vision means continuous exploration, or permanent informational feedback.

Plato: «the vision of day and night, of months and years, of the equinoxes and solstices, produced the invention of the number, giving us the notion of time and making us to ask about the nature of the universe; from that philosophy appeared, the greatest gift we received from gods. This is what I call as the most important good that our eyes give us».

It would be a great pretension to consider that what is *inside* us is different of what is *outside*.

Even greater pretension would be to consider **that there is something *outside* **and other one** *inside us!***

Sensorial inputs leads to topologies inside a system of loops.

Certainly, the difference between the formation of neuronal networks and the formation of synaptic networks is the same that happens between the formation of mentalities and **the formation of personality.**

Archetypical and urban systems are **synthesis generated by selection and chance, synthesis of logical complexes.**

Games.

Environmental sublimations.

Macrocosmic looking glasses of mind operations.

True maps of synaptic topologies.

Maps of the unconsciousness: a teleological *explanation* of fields or archetypes isn't possible.

The maximum and impossible aspiration of any system of language or live organism is its *environment*.

Even in terms of physiological design we are species *of field design.*

For a diachronic and Cartesian world, the notion of a co-existence in a same dimension of different topological structures is absurd.

For non-linear logic such notion is only a question of *chance.*

The idea of the formation of synaptic galaxies coincides with the rescue of *number* as a topological and quality entity – vulgar concept in Middle Age.

Cognitive process is metabolic. Because of this, many religions use artifices like fasting as hallucinatory recourse.

René Berger shows how *scripto-centrism* is a kind of apartheid that classifies non-verbal world as a *world without memory*.

Under the *scripto-centrism*, inside predicative **linguistic structures, there is a powerful *teleocentrism*, for which everything that is not strictly organized accordingly to the principles of predication simply has no sense.**

With the appearance of computer graphics, audio-visual scanners, systems of total animation and the Internet, teleocentrism was transformed in coordination.

So, in the very near future, scientific texts probably will be closer to poems and mathematical equations.

Gerald Edelman proposes a Darwinian theory for neuronal processing following which precise interconnection design of cellules cannot *exclusively* be genetically determined.

Thus, a neuronal interconnection design, as a cultural process, would start in embryonic phase opening itself to a creative life under environmental pressures.

A gradual interaction.

Three ideas: neuronal singularities, geodesic systems and chance.

The consideration of *memory* as a strict causal and diachronic chain of impressions is a trap generated by the hipotactic universe of literature.

History, as it is understood in West, is a strange technology to many peoples and intimately linked to the illusion of contiguity, to predication, to the verb.

In several Amazonian tribes, *history* – if we could use the concept – is a systemic articulation of myths.

Myths are excellent representation of Nature without time.

Organic *order* – that is: metabolic differentiation – that means: active interaction.

Colin Cherry classified *noise* as the degree of interference of a medium on information.

So, depending on each noise, or interference pattern, the information suffers a kind of plastic mutation.

To speak in television is totally different than to speak in telephone. McLuhan showed how this meant Richard Nixon's political degradation.

There are actors *of theatre* and actors *of television*.

Everything is made of noise.

An informational super-conductivity is, in this way, a contradiction of terms.

So, as everything is sign, the nature of information is contrary to its maximum aspiration: total information.

Everything is metamorphosis.

Cognitive maps are only possible in a context of loops. Oneiric nature is loop in short-circuit. Vigil nature happens in open-circuit.

Frederick Bartlett: «Remembering is not the re-excitation of innumerable fixed, lifeless, and fragmentary traces; it is the imaginative reconstruction or construction built out of the relation of our attitude toward the whole active mass of organized past reactions or experience, and to a little outstanding detail which commonly appears either in image or in language form».

Studies of perception, in linguistics, show how cognitive processes of a verbal **code operate simultaneously diachronically and *in blocks*.**

Reading *in blocks* is fundamental for the intellection of a text and shows how isolated phonemes don't constitute linguistic systems.

It also shows how *retroactive contamination* happens, that is: sounds that happen in the end of some word can literally contaminate preceding phonemes.

Those phenomena replicate holistic structural characteristics of a neurosensorial design.

Holistic and by departments.

Design of our senses.

Contamination of fields.

John Wheeler: «Tomorrow we will have learned to understand and express all of physics in the language of information».

For Charles Sanders Peirce, the idea of a sign included the primitive notion of mathematical attractors and a fractal universe – considering *sign* as a reference to other sign, of a different nature; or considering the interactive network he designed with his *categories*.

John Cage: «Everything is permitted if zero is taken as base».