Cyberpanspermia

It is better to make a piece of music than to perform one, better to perform one than to listen to one, better to listen to one than to misuse it as a means of distraction, entertainment, or acquisition of "culture".

John Cage

In 2006, in his book about the future *Une Brève Histoire de l'Avenir*, Jacques Attali described, in fact, what already was a present reality: «In a general way, we will pass from purchase to access. The dematerialization of information, in particular, will make easier to pass from the property of data to its use, permitting the access to culture, education and information. The control

on intellectual property will be more difficult to be guaranteed».

To Niklas Zennstrom, co founder and CEO of *Skype*, «the idea to make payable telephonic communications is something from the last century». *Skype* has its main offices in Luxembourg and it made possible free audiovisual communication through Internet. In only two years, *Skype* jumped from one hundred thousand to one hundred million users!

When, in 2005, Michael Powell, then president of the *Federal Communications Commission* of the United States, used *Skype*, he said: «The dice are thrown. Change is inevitable».

Continuous hyper consumption transforms old literary value of the single work in permanent presence. The author stops to bring in himself the old content of artisan, his previous medium, and starts to be actor without drama, mirror without soul, always looking for an identity, because the

world is transformed into an ephemeral and unstable metabolism.

On the other hand – as Alfred Marshall and John Kenneth Galbraith showed – continuous hyper consumption eliminates any judgment of value, any evaluation on what is necessary or unnecessary, important or unimportant. A premonitory comprehension found in John Cage's works.

A reality that, in the middle of permanent change, unveils the astonishing modernity of words attributed to Buddha, Siddarta Gautama, who was born in 563 BC: «Whatever is material shape, past, future, present, subjective or objective, gross or subtle, mean or excellent, whether it is far or near all material shape should be seen by perfect intuitive wisdom as it really is: "This is not mine, this I am not, this is not my self." Whatever is feeling, whatever is perception, whatever are habitual tendencies, whatever is consciousness, past, future, present, subjective or objective, gross

or subtle, mean or excellent, whether it is far or near all should be seen by perfect intuitive wisdom as it really is: “This is not mine, this I am not, this is not my self».

When many people believed that the beginning of the 21st century was hyper visual, a study made in the United States in April 2007 by the *Public Opinion Strategies Survey* revealed that – despite the average of time each person watched television was more than four hours per day – 51% of the interviewed said that music was the *most important* kind of entertainment, followed by television with 21% and movies with only 10% of the preferences. If 80% of the people had considered television as the *best* kind of entertainment by a different survey, it was not the most *important*.

The world changed and with it also our logic, the principles of differentiation, what structures our way of thinking.

Always we have power in mind, we also think on money. But, in a low power society *real* money practically disappeared.

In 2005, Li Pan, researcher at *Xi'an Jiaotong University*, in China, argued that «e-money is fast becoming the currency of a new era, since the use of electronic money has slowly grown over the last decade. E-money is regarded as the second radical transformation of monetary form. E-money not only impact essentially on the electronic commerce, they also influence present monetary system and the implementation of monetary policy directly and indirectly. E-money challenges the traditional monetary policy of the central bank. The central bank should make careful research on e-money».

Then, it was speculated that only about 15% of the money, all over the world, would have reference in concrete values. All the rest would be numbers, pure abstraction, without any material support, and so, being free to be *redesigned*, free for all kinds of manipulation.

In that reality of *invisible* money, the prices of practically all products dramatically fell like an asymptotic curve. The price of a television set in 1967 was only 50% of the original price in the beginning of the 1950s, and only around 6.5% of that price in 2000. Then, it became accessible to 90% of the families bellow poverty line. The same happened to microwave ovens. In 1967, the price of a microwave set was around 38% of the original price when the equipment was launched in 1955. In 2002, it was only 15% of that price, being accessible to 73% of very poor families. The price of a radio in 2000 was only 6.5% of its price in 1962, and the price of personal computers in 2008 were less than one third of what was common only ten years before.

One of the most evident and interesting traces of low power society and low cost consumption is revealed together the children.

Children's world – that already incorporated

real time global interactive telecommunication networks – is a world of exchanges and acquisition of images, music and games, without money, but in an astronomical quantity.

The acquisition of games, music, movies, photos, software of illustration and practically everything more we could imagine, stopped to implicate any effort.

The old notion of value was directly related to rarity and to the idea of limitation of the physical quantity – what no longer exists in the immaterial world of cyberspace.

For the reality of the old medium class, the price of a toy or of any other object obligatorily represented a parcel of an already made work – and the *effort of purchase* was part of a process of education: to know *how to give value to the things*, which was a classical expression of the old industrial society.

In low power society, even among children, the question gradually stopped to be about *who made what*, and passed to be focused on *how to freely circulate*, affecting everything what had been the foundations of the emergency of copyrights in the past.

Among others, two important factors were responsible for the dramatic change of that reality.

On one hand, *purchase power* became volatile and credit was immensely amplified, eliminating the old relation between work and money.

On the other hand, products and services became less expensive, practically accessible to anyone.

But it is not only about new products. The market of auctions and sale of used objects reached an unexpected dimension after the year

2000 – completely changing even the conventional idea of *product life cycle*, valid for a medium class society.

The dynamics of this new and effervescent low cost market of used objects reminds, even being inside the digital world, the turbulent movement of offers and negotiations in an Eastern *bazaar*.

The word *bazaar* appears from the Persian *baha-char*, which precisely means “place of prices”.

In the low cost universe, everything turns around *prices*.

And prices left to be a stable reference. It became common to find products that before were expensive for very low price, and products that before were cheap for high prices. Clothes or electronic equipment, which implicate a high quantity of labor force, sometimes started to be

found with extremely low prices – products to clean glasses or soaps to wash-dishes machines with surprisingly high prices.

Prices of mineral waters surpassed, many times, those of gasoline – even with the raise of petroleum prices in the first years of the 21st century.

Such irrationality of prices turned everything into the bazaar's reality where there is no *market price*. The bargain, so common in the countries where the bazaar is the reality of commercial world, was transformed in the random search in large-surfaces.

Sometimes, prices in the low cost world became so low that double collecting – without the client be aware about them – started to happen.

As claims practically left to exist – because the cost of the claim normally surpassed that of the product or service – millions of illicit operations

passed to happen in an almost imperceptible way.

If the old world of the medium class was characterized by fixed price, standard and independent from the consumer – which determined a strong distinction in comparison to the oral universe of bargains – low power society's reality launched floating strategies that obey to market variations, depending on many factors.

Thus, in the beginning of the 21st century, the price of an aerial ticket passed to depend on the epoch of the year, the distance from the date of buying and the date of use of the transportation, the quantity of people who had already acquired tickets for that flight, the place, the type of client and so on – an unthinkable thing few years before.

The same started to happen to hotel and many other services. A reservation of a room in a hotel, to rent a car, for a travel in a ship, a tourism excursion or vacations in a resort, for example,

became very similar to true auctions.

In television the concept of *noble time* – which oriented, as a kind of *vanishing point*, the entire daily programming – disappeared. All moments passed to identify some kind of audience, spreading out a fragmentation of *noble times* in continuous flux.

But, low power society's brave new world also counted with an increasing presence of aged people that are quickly integrated into the universe of *continuous consumption*. «The aging process meant less velocity and inactivity, fidelity to trademarks and sub-consumption: now, it became a period of life characterized by hedonism and consumption over-activity», as Lipovetsky underlined in 2006.

In 1900, about 4.1% of the population in the United States was composed by aged people, older than sixty-five; in 1950 this number was of about 8% of the population. In the first years of the 21st

century they would be around 15% and studies pointed to about 30% of old people in 2030.

In France, according to statistical data from 2008, life expectancy grew one semester per year!

The old culture of the medium class – which was *medium* also in its average age – clearly valorized the individual effort and even old secret organizations like Freemasonry gave a special attention, at least in its origins, to individual effort and personal achievement.

All this left to make any sense in the reality without effort of the new low power society.

For the old social strategy of the medium class everything should be verified by the client – each individual, before buy anything verified the price and the quality of the product. He looked to never buy moved by impulse. But with the generalized low cost, verification and no-impulse

habits practically finished.

Consumer passed to move like if he was designing great statistical averages, always knowing, approximately, the general costs of his consumption, but not individualizing prices.

In 2006, it was estimated that, in average, up to 60% of the consumption made in French supermarkets resulted from *non-reflected* impulses.

What before designed the sense of *differentiated quality* practically disappeared, passing to be confined to small and strongly specialized niches of market.

Thus, for low power society everything that in some way makes reference to the difference, to something beyond mediocrity, gradually begins to be considered negative and despised.

Such condition of great average without

classes, of a gigantic and amorphous category of happy and eternally dependent consumers is based on digital systems, without which it simply could not exist.

And this is, exactly, the image of Internet – a gigantic mass of information without *standard format*, in great part low repertoire information.

In the 1990s, Mark Weiser, former director of *PARC Xerox's Computer Science Laboratory*, defended that in few years computers would be everywhere, crystallizing the idea of *ubiquitous computing*.

Nanotechnology, appeared a few years before, passed to permit the possibility of computers literally spread out a little everywhere – from buildings covered by an ink composed by molecule-sensors, to the material of construction, or even to the fabric with which we make our clothes.

Computer is a formidable accumulator and articulator of memory, that is: *energy*.

Real time hyper connectivity projects strong informational and energetic dispersion.

Consider nanocomputers present everywhere means to consider a *horizontal* distribution of information.

The transformation of all kinds of materials into complex systems of computers indicates the amplification of the concept of memory and an unprecedented expansion of *material culture* dematerialization.

Everything becomes matter and memory in *holographic* terms: everything permanently related to everything.

With nanotechnology, the fabric we use for our clothes can be quickly transformed into an information system able to registry all organic

and environmental fluctuations; or the walls of buildings identifying the presence of everything – inside or outside the building.

Intelligence is economy, and economy nothing more is than implicitness of terms. But, because everything in this new reality reserves us a full spectrum of paradoxes, the principle of total economy finishes to establish the aspiration for total control and regulation.

The reality of literary universe, simplifying all relations through a phonetic alphabet formed by about twenty-five basic signals, established a non-contradiction, coherent and stable scenario, for which the maximum aspiration was no-control and no-regulation – like what characterized the ideals of the French Revolution and of the formation of the American State.

On the other hand, the metamorphosis of digital universe and of low power society turned possible complex relations through a

fabulous system of amplification and prosthesis of intelligence, establishing a framework of profound contradictions, incoherent and unstable, for which *security* passed to be its maximum aspiration.

Jacques Attali pointed to the year 2050 a reality that already was strongly present in 2008: «All companies and all nations will be organized around two demands: to protect and to distract» – that is, security and entertainment.

In this sense, personal computers like what we knew in the beginning of the 21st century – compact concentrators of information like points established in a network, manipulated with a keyboard, mouse and screen – will tend to finish, simply disappear: they will become content of new media.

If we take a small personal computer of the beginning of the 21st century and compare it to what was known as *computer* only forty years before, we will see that they have little in common.

The small personal computer could be taken as a huge ensemble of old computers, which scale totally changed its functional design.

A small personal computer in the beginning of the 21st century was more powerful than all computers in NASA forty years before, when human being reached Moon for the first time.

Between 1950 and 1995, digital processors knew an increase of their memory and capacity of information processing of around ten billion times. Between the first digital experiments from the 1920s and the end of the 20th century, that increase was of around one trillion times.

In 1965, Gordon Moore, cofounder of *Intel*, made a prediction that would be confirmed along the next decades: the capacity of information processing of a chip would duplicate each eighteen months.

It is estimated that, because of the quantum

nature of materials used in the fabrication of microchips, that increase would find its limit near 2020, when its components would become so small that they would make impossible the continuation of the miniaturization process and the consequent increase of velocity.

But then, when that limit would be reached, it is predicted that nanotechnology will establish new parameters of scale, accelerating even more the information processing speed.

That expansion of information led Paul Saffo, forecaster and writer, to announce, in the 1990s, the birth of a new discipline he called *electronic ecology*.

An affirmation by Saffo, of 1991, clearly illustrated the dynamics generated by the virtual universe: «We are hanging eyes, ears and sensory organs on our computers and on our networks asking them to observe the physical world on our behalf and to manipulate it. The more connect

computers to the physical world the more the issue of interaction becomes important».

The dematerialization of material culture, the ephemeral, the distant closer – even in the context of a hyper superficiality everything is *personal* in a low power society.

Low power society is articulated as an amorphous mass of countless classes without clear distinction, where the person is the only value – not as individuality, but yes as statistical data. For the previous literary society, characteristic of the old medium class, the value was in the relation between individual and society. It was about a subtle difference.

For low power society, the value is in the quantity of aspirations oriented to a tendency. The value is no longer in the *relation* between people and society, but in the intensity of the aspiration to consumption.

With low power society, reality left to be the *city* or the *global village*, to become the planet transformed into a *hypercity*.

The *hyperurban* transcends geographic and temporal limitations. Everything passed to be linked in parallel dimensions.

Together the explosive low cost universe, a great quantity of excluded survives.

In 2001, in Europe – continent considered paradise of welfare – around 15% of the population, around one hundred and ten million people, was poor according to *Eurostat*'s data.

In 2008, in Portugal, miserable already represented more than 20% of the citizens. In 2006, official data about poverty in the United States indicated a number closer to that of the European Union, with more than six million miserable people – and that more than forty-five million did not have access to any health care.

But, even those excluded participated, in some way, in the low power wave. By the prices practiced in 2008 by low cost aerial companies, even a miserable homeless could travel from London to Paris, with the result of his mendicancy in one or two days in the streets.

Yonghee Jung, anthropologist of design, from South Korea, makes researches for *Nokia* in Brazilian *favelas* and poor settlements in other countries, looking to find information for the development of new mobile phones that could be consumed faster in those poor environments!

On the other side, a report by the *World Energy Council*, of 1993, already alerted to the fact that if excluded people in the world became consumers without a dramatic change of the energetic sources, this would mean a quick planetary bankruptcy in energetic terms.

In 1985, the average of American citizens

consumed forty times more energy than the average of citizens in India.

In 2007, the *Cercle des Economistes* in France demonstrated that if only China reached the European *per capita* level of gasoline consumption, which was around four times inferior to that of the United States, five planets Earth would be necessary to attend the demand!

It is estimated that until 2015 around 80% of the *continuous consumers* will be, for the first time, located out from the called *industrialized countries*.

The brilliant Canadian historian Harold Innis, who so deep inspired Marshall McLuhan, argued that «concentration on a medium of communication implies a bias in the cultural development of the civilization concerned either towards an emphasis on space and political organization or towards an emphasis on time and religious organization». And, in fact, it happened like that along the last

thousands of years.

But, with the appearance of digital systems' networks of networks, it simply finished to be about concentration in one or in other communication medium, in one or other sensorial system – what passed to happen was a revolution in all senses, in the nature of memory, and its exponential amplification through intelligent prosthesis.

The logic of sensorial *extension*, of the *copy*, and all values that alternated around the principle of *concentration* along thousands of years, simply finished.

The passage from a logic – with thousands of years – coined by *concentration*, to another one designed by *distribution* finds some curious references in the political world of the beginning of the third millennium.

The *United Nations' Millennium Project*, of 2005, firmly proposed, in its final recommendations,

the reinforcement of help to *local* organizations.

In that same year, the *Earth Institute* at the *Columbia University* launched the *Millennium Villages Project*, a «bottom-up approach to enabling villages in developing countries to lift themselves out of the poverty trap».

What in fact begun to exist was a new logic, a new human being.

Even so, 95% of the whole energy consumed in the planet in 2008 still was of fossil origin, with a high concentration design in its molecular structure.

Unexpectedly, this new world launched us, through mysterious paths, to some part of the ancient Greek world.

Around two thousand and five hundred years ago, the philosopher Anaxagoras imagined that life was constituted by very small particles

distributed in the Universe.

According to his texts, which survived indirectly through Simplicius' hands, his about the beginning of the Universe, as we know it, were similar to modern *Big Bang* theories: «All things were together, they were infinite both in quantity as in their small scale; because even the infinite was small», then, an explosive expansion happened, distributing seeds of life everywhere – phenomenon from which the word *panspermia* appeared, apparently coined by Anaxagoras himself.

The concept of *panspermia* would be forgotten until the year of 1743 when Benoît de Maillet – diplomat, anthropologist and responsible for the first evolutionist hypothesis to explain the appearance of the human being – recalled it, suggesting that germs of life would had arrived on Earth, from the sidereal space, producing the first fishes, which had gradually evolved to amphibious, reptiles and mammals.

The idea would remain sleeping, another time, until the 19th century when various scientists – among them the genial Hermann von Helmholtz – recalled it again trying to explain the appearance of life on Earth.

Later, the astronomers Fred Hoyle and Chandra Wickramasinghe would become other important defenders of that hypothesis.

In the 1990s, René Berger would propose a new approach for the principle of *panspermia*, this time in cultural terms. According to his new hypothesis, seeds of knowledge would be spread out a little everywhere. With global interactive real time telecommunication networks, those particles of knowledge would be more and more distributed through the planet.

René Berger called this phenomenon *cyberpanspermia*.

So, even if low power society manifests a general mediocrity, particles of knowledge would be free, each time in larger quantities and, now, articulated according to the *distribution* principle, preparing a new and formidable human mutation.

Between 1995 and 2005, only in the United States, the conventional book publishing knew an increase of 50%. From 1880 and 1980, one million and three hundred thousand books were published in the United States – only between 1980 and 2000 more than two million books were printed.

In twenty years, after 1980, France increased book publishing in about three times.

A new world with a new logic, a new esthetic, *operating by coordination* – an idea I have defended since 1982 with my text *A Brief History of Time Design*.

A reality of the planet transformed into

a *hypercity*, where the old notion of territory is disintegrated in the middle of an accelerated process of dematerialization of the material culture.

A sensorial universe for which «the essential is no more to dominate a territory, but yes to have access to a network», as Jean-Marie Ghéhenno defends.

Trajectory to a logic of hydrogen and photon, from the city to the *hypercity*, in a metamorphosis to a *Type I* civilization.

A new civilization that seems to have definitively subverted Nietzsche's affirmation when he said, in his *The Desire of Power*, that «the objective is not happiness, but the sensation of power».

For the low power society, happiness is power.

Planetary revolution is here:
But there are options –
A hot-headedly conducted,
Bloody revolution –
Everyone loses;
A cool-headedly conducted,
Design science computer-accommodated
Wealth-accounting revolution –
All humanity wins.

Richard Buckminster Fuller