

## WHAT DOES “ETHICAL MATERIALISM” MEANS IN THE 3<sup>RD</sup> MILLENNIUM ?

Abstract from the writings of Giorgio Fabretti. ©2012

Ethical Materialism is a scientific philosophy on the ‘human vision of the reality’, also called "Weltanschauung".

It is scientifically based on discoveries of the experimental methods of investigation on the matter of the universe, also called "nature".

It historically became a systematic philosophy with the studies of Giorgio Fabretti, Doctor *cum laude* in Philosophy and Anthropology, at the Universities of Rome and Berkeley in 1973, on the cognitive discoveries around quantum physics, cybernetics and Dna; it was while the Soviet type of Communism and the 1968's idealisms were failing.

Ethical Materialism is therefore rooted in the western category of the empirical philosophies and anthropological sciences, ranging from Aristotle to Thomas of Aquino, from Roger Bacon to Descartes, from Leibniz to Newton, from ‘space-time’ of Einstein to Dna discoveries by Watson and Crick.

It is a 'copernican' revolution, in its vision of the matter and its knowledge, as a synchronic property in the logic implementation of an ‘ethical’ originary field, meant as an axiomatic complex of original values leading to a material design and its cognitive representation. .

Such a vision, therefore called "ethical materialism" is not only present in most of the ancient philosophies and religions, including the Bible, but it is a logically necessary copernican revolution - or rather a 're-evolution' – of the cognitive systems and of the sciences, after the 'quantum theories', the 'big bang' and 'string' theories in physics.

The reality beyond our senses can only be scientifically imagined as made of logical and mathematical concepts rather than of physical matter, whose materiality can be homogeneously represented as a statistically compelling function of some logarithmic fractal sketches of our perceptions.

It is like an updated ‘logarithmic’ Sistin Chapel fresco, imagined through the ‘sixth sense’ of logics, capable of giving to a network of computers instruction to portrait the material universe perceive by our 5 senses.

Matter directly comes from the logic. It is made of logics. It contains logic things. It never lose its logic drive. It is driven by the logic that operates with time, in what humans nowadays tend to represent with compelling stringent algebraic fractal statistical logarithms.

The 'stringent' factor is the 'human factor': what we call "the material properties of the reality". It is not subjectivism. It is a matter of reality, and real limits of cognitive skills.

The Copernican radical change in such a perspective, is better understood by meditating on the recurrent paradoxical question: "Who is born first: the egg or the chicken?".

The ordinary answer is usually none. The ethical materialism instead answers: "The egg"; being logically and empirically evident in its vision, that the egg has the Dna code and the chicken is its material carrier. The small size of Dna, and its resilience in time, makes the primacy of the egg over the chicken.

So the universe rotates stochastically around a 'genetic' code, as well as the human mental 'micro-universe'.

The crucial difference with so called 'ethical materialism' of Thomas Hobbes is that hobbesian philosophy is not based on science and it is just a political philosophy, and rather a mechanical one and an ethical sociology.

A mechanical materialism was also among the Illuminists, who abandoned the newborn science and Arcadia of the 17th century, to follow the social needs of a decadent aristocracy first, and of a raising bourgeois later. Illuminists supported Mechanicism until today, that is the decadence of the industrial consumerism.

The crucial difference with Idealism is that codes and ideas are a subtle materials, not 'ideals'. 'Ideals' historically became a mild synonymous of 'failures'. DNA is instead a very small matter, but it is a crucial one to human identity. A software key is very small, but it can support a computer's network.

On the other side, the crucial difference with Scientism is that science, and matter, are logical constructions based on not-the-same logical premises of their construction, but on free founding choices, called 'ethical'. Science is a tool of knowledge, or at its best 'an efficient portrait of reality', but never an end of reality.

Try to hang an overcoat on itself: it can happen only on surrealistic paintings. Try to hang the universe on sciences; and you will build a self-serving cynical tautology. Self-referential attitudes to such an extent can sometime become psychiatric cases, like in "Doctor Strangelove" movie: a danger to humankind.

What the biblical metaphor is saying is that the Logos created the universe, as a carrier of its code, called 'ethical', because in our vision it is oriented to implement a final design.

Then all the matter contains a logical code, which needs matter as an implementation to its ends. That is why we need a philosophy defined "ethical materialism", capable of unifying ethical spirituality with its axiomatic synchronous implementation, from the logical to the physical matter, where nowadays the sciences start their work.

The Copernican revolution - of the 'Columbus's Egg' type - consists in relying on the informational logics of cybernetics, to break an ancient 'nonsensical wall' between logic and empirical evidence, consciousness and matter; and thus connecting spiritual investigations with the originary metalogical axiomatic foundations of all mathematics of empirical reality.

Our one is a deeply materialistic philosophy, spiritually founded and consequently ethically guided, in a scientific way, open to a spiritual search of ethical codes.

It is a solution for the scientific community, to clarify that spiritual and empirical quests have always been a 'Continuum', not only in the Middle Ages, but overall in the informational technological present; in where chosen codes guide visions and constructions of matter, from steel, hardware, software, to living and self-conscious beings.

The Ethical Materialism is therefore a philosophy that lays the logic foundations of a joint approach of religions and sciences to spiritual and realistic bioethics.

Ethical Materialism is 100% a laical philosophy, and an intercultural 'link' for all religions, including Agnosticism, that it holds all in a great regard, as masterpieces of spiritual and material intelligence, as some of the highest contributions to human civilization.

Our Ethical Materialism sometimes quotes the Bible and Catholicism, because it was conceived in Rome, and no philosophies grow from no-cultural roots. Also in this regard, materialism is 'non-idealistic', because it observes that every matter and every spirit is born in time from its roots.

The biblical episode of Adam and the Apple in the Garden of Eden, is the ethical materialistic instance to explain that the Fruit is born before the Man, who has been created around the fruitarian code, in order to carry and to implement the ethical synchronous ends of the fruit's genes.

That is the sense of the Bible's Genesis, 'revolutionarily' re-proposed by ethical materialism in the fruitarian nutrition, as a discipline of eating to implement the ethical code contained in the fruit: in the consequential behavior and culture of human beings evolved around the fruit's common or complementary (with human Dna) genes.

That is why fruit is seen as a synchronous 'gift of nature' to frugivorous man, in order to let him spread seeds of ethical material content and ends.

So a cultural 'Copernican revolution' means looking at man rotating around fruits, rather than fruits rotating around man.

That is - by the way - why Ethical Materialism layed the ground for Giorgio Fabretti 're-founding' the Franciscan, Arcadian and Gandi's fruitarian movement in 1972 in Rome.

The Original Sin in the Genesis, is the presumptuous inversion of the Creation's sequence, by stressing the 'matter', and ignoring the 'ethics'; these prepared the ground to both nature and man, letting the nature to "serve the Man", in order to implement the common ethical ends.

Note that fruits and seeds in the Genesis were created in the third day. Animals were created in the fourth and fifth day. Man was only created in the sixth day, and given to him a fruitarian nutrition, being the grass for the animals to help the man in the common end of doing Good, as God wanted.

In the Genesis, predatory animals and human carnivorous instincts are only implicit in the mentions of "wild beasts", meaning that it is a human ethical duty to convert wildness into a more harmonious order, possibly by feeding predatory beings through intelligence and abundance.

So the spiritual foundations of science confirms the technological achievements of physiological sciences; and it confirms the compatible use of nature to implement an ethical metaphysical choice.

Such a founding method leads humans to use science and technology to preserve and to implement a natural order, rather than to destroy it with their anthropocentric presumptuous and lazy perspectives, or vices.

That is why science leads to a Copernican evolution in culture, toward harmony rather than extinction.

Religions are the spiritual search of the ethical logical substance of the matter and its understanding, while their actions aim at the material implementation of ethics, as well as sciences should do, not to let 'technologies' out of control, and toward the humankind extinction. The episodes of Noe, again in the Bible's Genesis, clearly metaphorically explain what biology confirmed: that is why human extinction is a real risk.

Religions and sciences follow both a common ethical direction in operating matters.

The faith in God and his existence is 'ana-logical'. The atheism is a misunderstanding of the sixth sense: the logic.

An example of logical misunderstanding is Marxism, but not in its good pray for social justice. It wanted to be an historical and scientific theory, but it was an 'idealistic-born' philosophy, and it developed back to Idealism, based on often vain 'good will', of supposedly envious human nature. It was too much of logical contradictions. Technology was supposed to be the engine of evolution in civilization, while idealistic 'class struggle' completely overshadowed technological factors. Mainly the Confucian pragmatic philosophy was able to re-cycle Marxism into an ethical ideology, for social purposes of public administration.

'Class envy' was consequential to the industrial excesses. Inversion of causal sequences in Marx was due to what his friend Engels later revealed as a 'lack of anthropological studies' of man's nature.

Marx and Engels failed to be materialistic, because they ignored the chronological functions of ethical cognitive values, changing the society through technologies, which can be 'time-machines', 'clockworks', regulating the construction of the social material reality.

An ethical culture of time and of synchronous technologies were, in facts, empirically observed as the real contribution to social justice, rather than the 'idealistic class struggle'. We had to wait computers to let the Old Marxists to understand it.

Our era, counting about 2000 years today, is due to the progressive perception of the logic in reality. This process dematerialized reality in favor of self-consciousness, that is made of logic 'subtle matter'. That is why, if we need the concept of God: that is the way he revealed his existence; in facts simply truly truth, made of subtle matter, as faith and coherence makes meanings.

The new technological world is substantially based on a growing consciousness of logic. Its message is: human central biological value is 'medium', or: 'balance', 'coherence', 'harmony'. 'intelligence'.

In the 'jungle zoo' of million years ago, evolution of anthropomorphic monkeys began by shaping them 'not-too-big-size' and 'not-too-small-one', not too much grass-eater and not carnivorous, not passive and not predatory, made to be 'in between different animals and plants', and to use intelligence rather than force: in his biological matter there was an 'ethical imprinting' of a harmonious nature.

It is then spontaneous that humans have developed 'artificial' technological skills in their 'dia-logic' relation with the nature: not to exaggerate and to overdo, but rather instead to restore and keep an ethical balance for themselves and their environments.

Since 'balance', Equilibrium, is a logic concept, the rationality had to be developed within the boundaries of 'moderation'.

A Supreme Being or Logic Principle was then the necessary discovery, as a matter of chronological 'gravity'; that is of a general 'synchronous coherence' of all: like the orchestra director, and the logical pentagram of universal symphonies.

When someone has ears to listen, some sounds will be heard. How to deny that those sounds exist, and existed before our ears?

So humans were meant to develop logic and the idea of God with it. It is a matter of 'seeing-through-matter'; and that is what the logic is made for.

Abstract logic thinking guided civilization and all its technologies. That is why Prof. Fabretti founded the new discipline of the Cognitive Anthropology of History (see his book published by Ed. Franco Angeli, Rome, 2005). But all technologies together say nothing about the glue that sticks logics together.

There is no 'logical demonstration' of the starting codes of a logical system within the same system: that is how even an academic logician like the author of 'the theory of incompleteness', Kurt Godel, close friend of Einstein, arrived to demonstrate God's existence.

Fabretti was used to say: "Relax, please: matter has a soul". It is ethical. That is why the more advanced and complex the man is, the more human and ethical he has to be. That is why technologies have to be ethical, or they become just 'special effects', or exaggerations leading to apocalyptic catastrophes.

"Nowadays technologies have to be 'friendly human engineering', or nothing." It is logic. It is Dna. It is ethics.

No more bloody wars, but softer 'software conflicts', where suffering is waiting for your turn, while you would possibly be meditating on 'if-what-you-already-have-is-maybe-enough'. "Cure envy and greed rather than excite and abuse them."

The moral conclusion of these considerations on technological 'abundance/scarcity', or on the ethical sense of matter, is: "There is a time for everything, when things are set in time."

This is an ethical sense of things.

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*(Until here what is above has been published on Vixra website on Dec.24th2012 6pm)*

*Appendix "Ethic Mat 2 and 3" to "Ethical Materialism" of Giorgio Fabretti, published by Fondo Fabretti editors on Vixra on December 24<sup>th</sup>, 2012.*

*Note:*

*This double appendix was requested after the first comments and questions raised by the publication of "What Ethical Materialism means in the 3<sup>rd</sup> millennium", mostly about simple daily examples of what is meant by the philosophical principles of the authors, and namely how his education and early experiences brought him to develop such a 'copernican type' of an empirical vision of materiality as a carrier of logic-matter-in-time operations. Here is a tentative synthetical answer. Indeed global visions are always glocal sprouts and return later to fertilize the next sprout.*

"Ethic Mat 2" appendix

Subtitle:

## **"How the Apple fell on Giorgio Fabretti standing under it"**

"Reality is then 'choice+logic', or 'codes+matter'.

Matter has the same stringent consistency of logic, and vice versa.

Without password codes nobody can pass and break the time's wall."

God made an original ethical choice by giving a password code for logic (Logos) to operate nature.

Since then, since the 'Big Bang', nature use that password to proceed and navigate in a logic time field created by the original password ethical codes.

Then reality is a potential logic field, equivalent to abstract metaenergy. It gives way to event's creation through an ethical start, that is a shaping initial force of the potential field that becomes from 'metadata' 'real data', ethically & logically ordered.

It is then matter of time that events enchain into stringent combinations to appear matter's properties, among which we note energy, mass, space, speed, probabilities, logics, DNA, minds, and reflections of reality as this string of written concepts: nothing else than a single human monadic version of the original God stringent string of passwords.

Understanding is stating the underlying 'temporologic' passwords of events in reality.

In other words Understanding Reality, or Knowledge, is synchronizing mental events with ethical logics, and that is why the basic source of understanding has always been mystic inspiration and intuition.

By adding experimental logic we got medieval empiricism, the greatest achievement of pragmatic knowledge, which gave way to modern science and technologies, that are nothing but a consequence of a mystic synchronization, the most fruitful understanding of reality.

Understanding is to proceed in logic and then in time, since logic passwords are 'gatekeepers' of Times. Reproduction or natural death can be the consequences of Opening the Gates of Time.

As Walter Benjamin understood, art in contemporary times is understanding its codes to reproduce it technically. That is by the 'death' of the original pattern into a multitude of copies.

That is how a logic idea, a code, passes the gates of time and generates reality or real living species like ours, capable of continuing the process through new ideas, to try to pass the original natural non-negotiable ethical gates, and possibly continue the implementation of its teleological design.



That is why ethical materialism is dynamic and depicts a cycle going , that is a time-cycle, a logarithm in reality. A synchronized depiction is therefore a physiological function of the mind, helping to continue life in the reality's flow (the 'fluxus'), that is adaptation to the environment, passing the selection and evolving.

A 'weltanschauung' is a logarithm working to synchronize our actions to the environment. It is repeated multiplied times daily. That is how cultural materialism explains civilizations, specifically in the ad hoc discipline founded by Prof. Giorgio Fabretti for the 3rd millennium: "Cognitive Historical Anthropology" (Franco Angeli publ., Rome 2005).

The Cognitive Anthropology of History is the application of Ethical Materialism to Social Sciences. In Man, ethical choices shape like axioms do, the logic systemic vision; and actions follow to implement the implicit ethical design contained in the vision, consequence of the primary choice; that thus informs, shapes like genes and virus do, the entire life, culture, civilization, minds and their visions that so finally implement/confirm the initial input in a logic circle/cycle of the personal universe, homogeneous and homomorphous like the ethical reality, or the physical universe.

The secret original core of this new "r-evolutionary" (as he said) 'copernican type of vision' is in such homogeneity. To make a parallel with the apple that inspired gravity to Newton, or parallel asynchronous trains that inspired relativity to Einstein, what indeed inspired to Giorgio Fabretti his unified concept of spiritual, logical and material reality, came to him by an apparent matter of chance, that is by observing in 1972 the compelling force of computation and computers that validates results of operating numbers, independently from material samples, that is the energy of calculation and mathematics.

Since being a child of five, he had been obsessing his father to receive a computing device as a Christmas gift. As a child he had been precociously fascinated by the fact that numbers were 'authoritative among themselves', just like persons, in the world of elementary arithmetic, namely the Pitagorean tables.

Fabretti's intuition was that the original energy that finally produces matter, is of an abstract material, which has the subtlety of symbols and the gravity of materials. If 2 by 2 makes 4, it is not only a convention, but it is based on a reality, not of a platonic type, but of an empirical one.

The empirical experience of abstraction had to wait 1972, and Silvio Ceccato cybernetic experiments in Milano and in Rome, together with the english experiments of Turing and the american computing theories of Von Neumann, with the first operating computers during the Vietnam war experienced by Fabretti, to generate evidence in his insight about the capacity of specially ordered data (codes) to (logically) inform an abstract environment and to compel it to conform to a result contained in the operational premises. And this was the skeletal frame of his "Ethical Materialism".

Such a 'force' gained empirical size and evidence in computer drawings experimented with his cousin, artist Carlo Grifone. Some logarithmic inputs in the computer interfaced screen with optical perception, raised evidence that a logical premise (of the same symbolic substance of an ethical principle) set in motion in a synchronized logic structure (software of an electronic hardware device) was able to drive visual matter and screen lights, to represent a material design, direct expression of the abstract premise, then considered 'ethical' because it was possible to link its initial orders with the final design appearing of the computer screen.

It was a computing game to let Giorgio Fabretti, already teaching seminars of philosophy and anthropology aside senior academics like Prof. Armando Catemario (Cultural Anthropology) and Gianni Statera (Social Sciences Epistemology), to synthesize all the necessary concepts into a new empirical vision of matter and reality as an abstract property of logic operations. The revolutionary insight of 'matter as empirical logic' was born.

Since then, for over 40 years, Prof. Fabretti experienced all kind of cultures and technologies in over 170 countries, in the light of their histories and material developments, to have his intuition empirically confirmed (like in the long traveling of Darwin). In facts key abstract ideas gave people access to matter and nature and social manipulation, even regu-

lating their personalities, social conflicts and wealth, as long as they logically fitted in timely preset patterns of synchronous evolution.

Fabretti observed that, at those logic fitting stages, then time cycles were accelerated and material designs implemented. Logic properties were able to penetrate the resilience of inertial time walls, also called 'stochastic probabilities', and implement significant material reality.

The platonic and the idealistic intuition in history of philosophy, were brought by Fabretti in the empirical kingdom of sciences, thanks to his special insight of computer and information theories, especially in the DNA genetic studies.

Finally, and with great epistemological relief, Fabretti understood the reasons of the mathematical extraordinary material efficaciousness, that is the unity of reality, basically made of ethical premises of logical systems in which physical properties, and real objects and persons, were a product of complex but partially 'under-standable' (the mind stays 'under' such functions) abstract functions.

"That is why the Turing Universal Machine could work and generate Von Neumann computers. That is why we can input a small instruction in a computer and generate an ordered inflation of marks on a screen, finally drawing a meaningful imitation of a living universe, like in any videogame.

We say that "sums confirm additions". That is because there is an energy in operations that comes from a metaphysical logic field, using time for being shaped by inputs and rules, in which evolving operators (as humans are as well) are allowed levels of liberties within stochastic compelling designs. Time can reverse from addition to sums and vice versa, and that is why universes are born and die, raise and fall, history foresee the future, and energy runs in waves.

Realities are time-machines in which logarithms spring events and timely things. We see images of reality springing from the computer screen because we and the material machine

are set on the same wavelengths, where the substance is logic and the consequences are material.”

And here is the synthetic intuition of Fabretti, that has finally made homogeneous the rudimentary distinction between material and immaterial, just by observing the compelling force of elementary computing operations; then confirmed by computer's interfaces, and by DNA logic power of instructing bodies building and bodies reproduction in time.

Fabretti concluded that roots of matter are logical and stay logical, since we need to act logical to change matter. So matter is as real as it 'materiality' generates also a subjective 'sense of materiality' to be scientifically logically tested.

But to overcome material hardness and to mold matters, we need to descend into the under standing logic. To enjoy drinking you have to walk down in the basement to collect a bottle of wine. To reinforce a building you have to restore the foundations' pillars.

Fabretti was used to say: "Logic makes hardware software. Intelligence makes the world human. Matter is only 'logic-stuck-in-time', a still pause-frame picture waiting the video projection to restart and play the video flow of reality. Find the 'theor-ethical' key-button, and you will mollify still matter and time, and speed it. Reality is nothing but logic in time. The practical problem is that we stand under logic, and so we have to 'understand' reality to make it subjective, synchronous and modifiable. Objectivity is the residual 'immense' invincible measure of human ignorance and asynchronicity. The reason why Nature let the bodies die, is to try a more synchronous version of their genes according to its ethical drives. And the scientific and the spiritual search are due 'tentative remedies' to such an immensity".

“Ethic Mat 3” appendix

Subtitle:

**“Ethical Materialism: the historical return trip ‘faith-empiricism’ ”**

This analysis shows how experimental sciences and most advanced technologies are ‘feeding-back’ the faith where they historically come from.

Let us imagine that time is the thickness of the operational sequences and space the the condensed enchase of times.

Let us imagine that reality is not what it looks like to our 5 senses, but rather to what looks like to our 6th logical mental sense, and that is we don't walk on what looks like a walkside, but rather on a bed of muddy data where the speed of our feet depends on the watery solution of thick mud.

The mud is a logic field, dense with mathematical problems, the logic is also a name for the abstract tools to find solutions to those problems, and so making them liquid in which our feet can speed their steps. So, solution by solution we can let events of our program happen and our logic finalistic design to fulfill.

Let us imagine that we float in a flow of data from a muddy riverside, where muddy clay is the logic matter of numbers enchased in the operations, and water is the diluting property of logic solutions that allow computation proceed.

Let us now imagine that all this mud and river is flowing inside a computer, and that the final result is our face on the screen of it, maybe you get an image of what logic reality is. You maybe have then imagined how 01 digital combinations can shape a unique facial feature. How computer can solve your material problems by translating your common language into the mathematical language of the matter: a logic mud of what you also are made of.

The extraordinary efficaciousness of mathematics in science and technology, is not less extraordinary of you being an aware operator that controls his manipulation of his own data. We can call both of them 'miracles', and possibly they are. But we can also explain them 'materially', that is by translating them in our sensorial empirical language, to reinforce their evidence, like the Apostle Thomas did.

Self-consciousness is the symptom of human complexity, that is of thing happening within the perimeter of our skin. Our mind is a problem solution processor, made to handle variables to drive them to one single thermodynamic stability needed for survival.

Feed back and reversal verification and adjustment are our physiologic constant operations. No wonder that it can develop a more sophisticated complex of interactions, that uses many inputs to relate and to control the environment. In such a process, a depiction of environment is needed, and produced by the mind as a part of its survival ends.

It ends then that the humans get an idea of themselves and of God in the universe, that is rather a consequence of the miracle of the creation, rather than a miracle independent from it.

Incarnation of data is a property of data in the logic field. And spirit in incarnated data is as natural as any scientific phenomenon.

Religions should understand that they deal with the same substance than sciences, and be religious complex sciences, or they will let the sciences become rudimentary improper religions.

The big problem with some clerics is that they fear the cynical attitudes of merchants and their military and technical servants, often taking refuge in the mysteries rather than explaining them. Those clerics make a mistake, since the mysteries are in the explanations rather than in what is still ignored. Each discovery is a miracle in the temple of intelligence, where merchants and their servants have to bow to enter.

The light of human intelligence, through the rationality of logics, sees how arbitrary is the miracle of reality, and how it is splendid in its ordered construction, starting from a free will and ending in a wanted design.

The determination of a free will is the miracle of a creation informing the entire reality, whose scientific understanding is a thanksgiving to its creator, and thus a religious prayer to which all men, clerics, laymen, scientists, technicians and merchants are called.

The logic fields become operational systems by being fertilized by an intentional starting logic rule, aimed at shaping it toward a final design, that can also be an equilibrium confirmed. The spirit in the logic matter, that later will become material matter, is there from before the beginning of time, and not only in the Sacred Books, but in the simple logic evidence, because it is clear that God wanted to reveal himself even to our simplest minds.

So let just open our mind to simple true logic and we will see the spiritual side of reality and all the special effects of technology will be seen as a natural result of a bigger simpler miracle: the coherent consequential creation of a mathematically ordered universe and life and self-consciousness of our spiritual souls.

Cutting down to nil/zero the 'miracle' of scientific order is not agnosticism or atheism, is just lack of 'intelligence', defined as the ability of finding solutions that are not deducible from the apparent data; that is being able to restructure data in an insight penetrating process, to reset and translate them in a better understandable perception.

Physicist Einstein and mathematician Godel, good friends and reciprocal inspirers - both adored by atheists and agnostics - were eager to save scientists from the superficial illusive scientist faith in an auto-referential a-logical materialism, so 'ideological' in cutting its ethical spiritual axioms, to behead sciences and cause their tragic abuse, that indeed happened.

Even an atheist religion should avoid crimes against logic, like believing in a self-sufficient empirical language of reality, that has no meaning without a signifying mind, and over all is so logically scientifically systematically structured, that it cannot escape the axiomatic metaphysical laws of logic and mathematics, leading to free ethical foundations, in no way deducible through an imaginary self-supporting logic system. Ethic originates logic and cannot be logically demonstrated, if not as an axiomatic foundation of logic including non-logical factors.

Such a simplistic sin against logic is the predecessor of many social holocausts and ecological catastrophes, and it can only be understood as a semi-illiterate acculturation process to scientific culture. It is quite a common mistake among the archaic or ideological enthusiast followers of sciences and mathematics (still surviving even in Princeton, Oxford and Turin), before they are gradually re-educated by the more advanced cultures of non linear complexity, progressively spreading in the efficient global compatible scientific thinking.

Godel starved himself depressed to death, after demonstrating the 'uncompleteness' of mathematics and the 'existence of God'; while Einstein became theoretically unproductive after his long ethical peaceful fighting against military abuses of atomic sciences.

Being our processor our mind, the epochal time has come that our empiricism will shift from the material 5 senses - that will remain an anchor and a vessel in the newly perceive ocean of logic. This shift is a millennial duty of our 3<sup>rd</sup> millennium. Not by chance the DNA discovery came in time at the end of the 2<sup>nd</sup> millennium.

In the social and political life the correspondent 3<sup>rd</sup> millennial duty is to refurnish basic material forces of capitalism with the logical forces of science and ethics. Ethical logics will redirect material forces of capitalism, in a realistic way (and no more in an idealistic extreme and superficial way as it has been attempted in the 20<sup>th</sup> century).

Like Columbus at the end of Renaissance and 15th century, sailed to the unknown continent, so we sail, at the end of the second millennium, after a modern era of 500



years, in a new era, in a new unknown wide ocean made not of material matter, but of logic matter where spirit swims like fishes in the waters.

The two eras are translatable into each other languages, so let us not fear the change and sail, both eras have the same star for orientation in the dark nights on the ocean.

In history, all cultures elaborated their own vision of time. The global culture of our contemporary era is finally elaborating time as a fundamental reality, that is what matter and space come from.

In one sentence, such a 'time' can be conceived as "the speed of logic", according to our empirical experience of experimental sciences and technical operations, based on the extraordinary natural and manmade efficaciousness of logic. While logic appears as the potential design implicit in an operational field. Logic is that shaping force that makes any result possible, and time is its measure.

Information and time is what becomes mass and space. Time and Space are dimensional containers of Logic and Matter.

Logic is informational gravity. Two symbols are attracted each other in the result of an operational field, like in the space field of a newtonian type of laws.

The most advanced theoretical physicists have shown how sciences can advance beyond their limits, only by the help of mathematical hypothesis. It implies that all the material phenomenon can be translated into a logical language where properties are informational.

Basic computing is nothing different from translating bits of information into sensorial objects. Before the power of the computing machines, we hardly could imagine the reverse virtual process of dematerializing physical bodies in their DNA formulas, and materializing formulas back into virtual 'almost real' reality, simulating the natural processes from the highly logical subatomic particles to the highly material empirical bodies.

Empiricism revealed itself being a deeply abstract inspiration to penetrate matter deep into its logical, informational, spiritual essence: that is a materialistic way to the spirit. It revealed superficial the impression of empiricism as opposed to spiritualism.

Indeed empiricism was born out of deeply catholic medieval clerics, like Thomas Aquino and Roger Bacon, when the Papal Court was in Viterbo, who restarted from ancient greek mathematics and islamic algebras in order to better understand and manipulate material observation into instructional informations useful to the medieval smiths and artisans in the newly founded Communal towns.

It was a drive to spiritualize matter without escaping from it. That is how modern sciences did sprung from faith.

An informational entity is an ordered element of an integrated system (therefore called 'logic", like a part of a whole, like a  $90^\circ$  corner of a geometric square, as 2 is part of a total result 4, when summed to another 2.

As the space is occupied by matter, the time is occupied by symbols. The material quantities (that is mass relations and properties) measure the matter, as the informational quantities (that is the logic relations and properties) measure the time.

When rules are set in a system, a stringent reality is set. That is why reality is logical, and matter is hardware. Software is the lighter matter made of logic. There are not a fixed boundary between logic and matter. Matter is still logic. Stop time and logic properties become material. Let time flow and matter vanishes like a self-timed switch off.

Logic (symbols and information), like matter (masses and energies), can be objects and processes.

Once a logic symmetry is perturbed and set in motion, the logic field is shaped and its tension is logical in time, like algebras are symbols in equations.

Matter is a sensorial version of a logical one. It is a matter of translation. The original version is unknown. Knowledge is not a matter of reality, but of functional versions of reality.

Logic is partition. By adding sequence, it becomes numbers. By matching numbers, it becomes operations. Matching events becomes time. Event is an operation to an operator.

Physical light waves are material because it is perceived by our eyes. In the experimental laboratories its properties are studied and 'understood', refined into logic data strings called "mathematical laws of nature". We believe that these laws are somehow independent from us, and at the same time linguistic 'labels' that we stick on the reality.

In the English language, such translating sensorial data into logic data, is empirically called "understanding what stands under what we call the material reality of our senses".

Such refined translation from the language of sensorial survival to mental logical order, imitates what the nature does in the reality; where the precious unique materials of our body are resumed and synthesized in the DNA logic sequence; where we come from, and where we are going through reproduction into our descendants.

As well we can say that the computer is a little machinery that translate complex visions and realities in strings algorithmically readable.

The "Big Bang" theories on the origin of the material universe, as well try to translate it into few logical formulas: a sort of DNA string of the cosmical body.

The scientific way to reality, is based on the belief that an abstract (and 'abstractable') local reality is standing under the sensorial one. This is the most peculiar trait of so called 'Western culture'. Abstract understanding is crucial to all monotheistic religions, but also to Eastern Taoism. Still abstract understanding is fundamental from animism to shamanism, to paganism, to the most ancient philosophies.

This abstract way have been historically suggested by the spiritual faith. It is just a systematic applicative construction, from its ethical logic to the materiality of our senses.

If we believe that there is a reality under our perceptions, we have to believe that such a reality is better understood as a logic reality. Indeed mathematical laws revealed themselves extraordinarily efficient in technological description and modification of the sensorial material reality.

The DNA is the true complex 'miracle' in scientific discoveries, potentially reconciling ethics and science, if properly understood by scientists, religions, politicians.

The spiritual search has led to logic search, and to a scientific, technological mastering of the reality. In reverse, starting from technologies and sciences, we can track back our investigation to their spiritual ethical logical inspirational start.

The 'ethical materialism' of the 3<sup>rd</sup> millennium – radically different from any generic previous use or meaning of its words - is an original new philosophy, based on the realistic achievement, that the scientific empirical logical understanding, of the materialistic universe, has guided to its 'genetic' ethical code, partially 'free', even if embodied in a stochastic evolutionary design.

It can be said 'a philosophical way from science to faith', because it empirically shows the spiritual origin of ethics, and their logical nature, then originating the mathematical laws of nature, leading to the complexities that our senses call Reality, and back from it, to its logical and spiritual roots, in a two ways trip circle: that includes science and faith, reality and sentiments, creation and its creatures.

*(Note: These philosophical outlines come from the introductory premises to empirical application of the Ethical Materialism to the new discipline of the Cognitive 'Anthropology of History', as in its foundations, resumed and re-published in the book "Antropologia e Storia cognitiva" by Giorgio Fabretti, published in 2005 by the Franco Angeli Company, in Rome and Milano, Italy).*