LOCAL ANTHROPOGENIES - ONTOLOGY

FROM METAPHYSICS TO ANTHROPOGENY

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LOCAL ANTHROPOGENIES - ONTOLOGY

FROM METAPHYSICS TO ANTHROPOGENY

To all those mad for the truth, docents and fellows, who from 1938 to 1950 conveyed such a magnificent sunset of metaphysics

Ever since the Palaeolithic Age and maybe even for the Neanderthals, Homo has been asking himself metaphysical questions. These can be reduced down to three. A) What is the status of the Universe? B) Where does Homo stand within this Universe? C) What is Homo's behaviour according to the place he has given himself within this Universe?

It is not the task of Anthropogeny to answer these questions but to query how they arose and how they continue to exercise Homo's anthropogenic abilities. Furthermore how do these abilities determine the pitch of questions regarding their substance and form.
FIRST PART - METAPHYSICAL QUESTIONS

Chapter 1 - The status of the Universe. (A) The technical questioning

From an anthropogenic point of view Homo is first of all a technician. What is technique? Animals too use tools and instruments, like when a see otter disposes a stone for breaking an egg. But Homo, as being the angular primate, angularizing, orthogonalyzing, transversalyzing, not only uses instruments and tools, but organizes them into panoplies (starting a space) and protocols (starting a time) ; in short, he uses not only tools and instruments, but utensils (from the latin uti, to use something the way only Homo can do it). Then, technique is the way to use everything as utensils stricto sensu, i.e. as tools or instruments inserted in (transversally along) panoplies and protocols. Wherein every element is somehow referred to every others around, first practically.

Then, a technician faced with or inserted in whatever situation, cannot help asking: ‘Why is it there?’ and subsequently ‘Made of what?’ and ‘By whom?’ So it is not surprising that such a technician being has never been able to consider the Universe around him without applying to it those questionings, to him connatural, genuine, spontaneous.

1A. The technician eye : two opposite looks

Homo's technical investigations concerning the Universe have evolved dramatically. Think of the situation in which Kant found himself at the end of the 18th century. Like everybody who thought about Life before the breakthrough of Biochemistry since 1950, Kant imagined that living formations (Gestaltungen) were the result of a plastic action, of modelling, e.g. Yahweh sculpting Adam, or yin and yang shaping the mountains and dragons of China, or Plato's regular polyhedrons disposed together forming rocks, plants and animals.

So that, in the final part of his Critique of the Judgement Faculty at the height of his career in 1790, Kant stated that the fame of Reimarus (a contemporary botanist and zoologist) would be everlasting. Indeed, Reimarus had shown that plasticity and modelling could never explain what goes on in the trunk of a growing tree. Being a Deist, he came to the conclusion that a Creator must exist. Kant the logician and author of the Critique of Pure Reason judged that the Reimarus argument was not a theoretical proof of God existence, but nevertheless an decisive hint of the intervention into our Universe of a principle having "means and intelligence very different from our own".

According to the same Kant's text, this principle might not differ much from the aesthetic experience we feel in front of a landscape, where we find eminently those
compatibilities between man and nature. In the same way, he said, we are affected by works of art whose scope is to show thematically those compatibilities of Nature and Man by the means of rhythm, gracious (apaising) or sublime (disrupting). Man and Nature declare concordances, probably as proceeding from the same or at least similar sources. The argument will survive with Schopenhauer, and the post-kantians of Heidelberg who will influence the young Beethoven.

However, since 1950, biochemists have learned that living formations (Gestaltung) depend not only from modelling, but from sequences and ressequenciations, fundamentally those of 20 amino-acids capable of forming chains, curling up under the actions of a handful of basic chemical relationships (bonds) into myriads of different proteins, and consequently of organelles, cells, organs, organisms, species. Hence the Evolution, gradualistic with Darwin, rather obeying punctuated equilibria with Eldredge and Gould.

These amino acid sequences can replicate themselves identically, but they can also sequence slightly differently under diverse causes such as cosmic rays, infection, trauma etc, giving rise to innovative re-sequenciations and thus creating unexpected proteins, often untenable but sometimes sufficiently viable to initiate the emergence of other organelles, other organs and other organisms, thus creating other species, genera, families, classes, orders and kingdoms. As a result, given the selection of species in constantly changing environments, we arrive at the essence of Darwin's *Origins of the Species by the means of Natural Selection*. Darwin himself, he confessed, did not know how to explain this, being unable to give any reason for the formidable Variation supposed to his Selection. Now that we do understand this, the growth of tree trunks has lost the mystery it once had for Reimarus and Kant, when they hinted at a cosmic constructive principle different from ours.

However, this new knowledge of 'how?' gently aids to underline the questions 'why? and 'for whom?' that have become an obsession for Homo Technician. A technician works according to designs. But are not designs totally compromised by the resequencing that triggers a prodigious number of degrees of freedom, in the cybernetic sense of the word. It is these degrees of freedom that ensure the variation supposed by Darwin and Heldreged-Gould, yet they make Evolution totally unpredictable (according to the "evolutionary chance", versus "probabilistic chance", of Eble, "Paleobiology 25", 1999). If there is a deliberate or spontaneous design in the Universe the principle behind it would be that of an usual architect, but of a player, who marvels at the surprising anatomical and physiological inventions of millions of species and strictly unique individuals each producing billions of actions, all of them unique to their tiniest details. Einstein's phrase "God does not play dice" would miss the point, and Baudelaire would be closer to the mark when alleging "la nature dans ses terribles jeux."

And yet, so discoursing, we forget that in certain organisms like vertebrates, some cells are grouped into neural networks that are capable of making ever more unpredictable connections, disconnections and divisions. In other words, those cells are equipped with a brain. As every cell is polarised, some of them are polarised in such a way as to undergo only two distinct states : action potential / rest potential. Such are the neurons. In addition, those neurons, equipped with numerous dendrites and a diversified axon, connect through synapses, those pockets where the current flows, no longer flip-flop as in the neuronic body, innovate modalities of transmission, in the way of neuron mediators, either (topical) neurotransmitters or (diffusive) hormones.
In this way the brain, combining rather distinct physical decisions (flip-flop, 0/1) and usually subtle chemical modulations, is an almost indefinitely receptive recorder of the diversity of environmental stimuli. At the same time it is an almost equally reprogrammable trigger of motor responses. These countless degrees of freedom, receivers and transmitters, allow to understand, in different societies and organisms, the sufficiently compatible performances of men and women, the acculturation of populations in two or three generations, and how an infant can learn a language ab ovo in three years.

After this account, the ‘how?’ of the Evolutive Universe of living things is not only explained by the resequencing of amino acids forming proteins, but by reshaping of neuronal bodies and synapses. In his studies on the invertebrate sea slug Aplysia, Eric Kandel has patently shown, c. 1970, that learning and memory are "anatomical" modifications of neuronal cells, that in short term, but also in medium and long term. If certain people, faced with the sophistication of Homo's sensory and motor organs, see in it a sign of "intelligent design" pointing towards a very clever Designer, they would dare to indicate how this Designer, clever though he is, could govern a Universe which evolves in such unpredictable ways and therefore ungovernable for any technical planifications. Even the Portuguese proverb "God writes straight with crooked lines" would seem here too timid.

Anyway, it remains that the "mores" (habits) of our Universe allow Homo the Technician to look in two inevitable directions. (A) One runs from complex objects to their principles, through neuronal reticulation, then to polarized cells, to amino acids, to elementary chemical connections, going as far back as a Big Bang of the entire system. And the technician can exclaim along with Einstein: "The Universe is chaos! Why does it exist?" (B) Nevertheless, the persists a look in the opposite direction: from the primitive chemical connections to amino-acids, to proteins, to the three RNAs (collectors, sequencers, messengers RNAs), towards the orchestrating DNA, then as far as organelles, cells, organs, physiological systems, organisms, bacteria, tortoises, great apes, Homo sapiens, Parthenons, symphonic orchestras, heart rending smiles, heroic actions, at a point the Technician must exclaim with Plato: "The Universe is a Cosmos, such a beautifully crafted order implies a Maker (Demiurge), and a maker who is somehow good". So that Mozart's Magic Flute was right to end on the words: "Schonheit und Weisheit mit ewiger Kron' ". And also that Einstein, who a moment saw a chaos, would with the same eyes (or ears) see and hear just the opposite, and equally loudly exclaim "If there is a proof of Jehovah, surely it is Yehudi Menuhin when playing as he does this evening the "Erbarme dich, mein Gott, um meiner Zähren willen", a transcendent piece, he said, as others do, of the Bach's Saint Matthew's Passion.

Until recently, Homo has been dominated by the latter point of view. That of Voltaire's "There is no clock without a clockmaker". That also of the Indian Dharma, of the glorifying psalms of Israel and of Bossuet's Panegyrics. On the contrary, modern biochemistry and neurophysiology, especially since 1950, favour the former point of view, or better an intermediary between both. They turn Voltaire around, thinking that there would be no clock as stunningly inventive to produce the Eble's evolutionary chance, if not exploiting principles of so disarming simplicity such as amino acid re-sequencing and neuronic reticulation. Provided, of course, that Nature would have fifteen billion years of Evolution at its disposal.
1B. A third look: synthetic apriori sentences

However, anthropogeny calls for a third look, a combination of the other two. This view, amid the exciting adventures of the Evolution of living things and of the Universe, focuses on certain processes that are at the same time infinitely diverse and astonishingly reconcilable, and therefore able to produce great complexity. One discovers them a posteriori, thus by experiment, giving rise (for the logician) to "synthetic judgements." But, on reflection, these judgements appear so fundamental that one can ask oneself if they are not somehow a priori. Putting both altogether, that prompt propositions resembling those that Kant, in a different register, termed "synthetic a priori judgements." Expressing matter of facts, but facts that could belong to Nature in general. To our Universe. Much more, to any conceivable universe. Let us collect a handful of those a priori synthetic judgements.

(a) One of the first cases can be found around 1900, when Henri Poincaré was writing about the Second Law of Thermodynamics, which postulates that, in a closed system, the total energy, remaining constant according to the First Principle of Thermodynamics (1853), can only increase its entropy, that is to say, its disorder (gr. en, tropia, confusion). This promised, the physicist underlined terrified, a fatally insignificant end to our Universe, in a last whimper. However, at the same time, Pierre Curie became aware that, within the context of global entropy within the Universe, bursts of local and transitory neguentropy could take place and that living things could be considered as neguentropic islands. In brief, the general chaos decompressed itself by moments of local antichaos, although this occurred at a thermodynamic price, an increase in ambient entropy, as Japanese physicists demonstrated it later; so that living things are "dissipating systems", in the words of Prigogine School, c. The 1960s. It is that for sure an a posteriori conclusion. But can any Universe be anything other than a similar combination of general chaos and local order? To the point that one could (must) contemplate a kind of Kantian synthetic a priori judgement. Any Universe is necessarily a combination of global entropy and partial neguentropy.

(b) Around 1950, Schrödinger put forward a similar logical phenomenon. He knew, as did all physicists of his time, that our own Universe described itself a posteriori through Relativity, with a continuous (differential) mechanics on the cosmic scale, and Quanta with their discontinuous mechanics on the nanoscale. But he thought it advisable to add that perhaps it ought to be thus, even to some extent a priori. In fact, can we imagine a Universe without objects? Now, objects are impossible in a Universe governed solely by continuous differential equations, like those of Relativity. It needs Quanta, as Democritus, the Greek atomist, suspected; every object needs discernability, would say Leibniz more than two millenaries later. And another Kantian synthetic a priori judgement could consequently present itself: A Universe inevitably comprises General Relativity and Quantum mechanics.

(c) Biology lends itself to the same game. For, to have living things, one must have anatomies and organs and also certain fundamental designs for organs, let us say tubes, sacs, valves, which assumes fundamental shapes or templates. In the 1950s, the mathematician René Thom established that Differential topology predicts seven elementary catastrophes (gr. strepHeïn, kata, radical changings) with seven singularities ("singularity, a point of the space-time where the curvature of the space-time becomes infinite", Hawking) : (1) the fold, (2) the

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break, (3) the swallowtail, (4) the butterfly’s wing, and (5-6-7) the three umbilic forms: hyperbolic, elliptical, and parabolic. He noticed immediately that these seven mathematical catastrophes were enough, within a structure capable of mathematical description, to anticipate the tubes, sacs, valves, shifts, stop mechanisms and enfoldings that support all possible organisms. And which also give rise to the basic "catastrophic" verbs of our languages: to drill, to enwrap, to split, to bend, to contain, to scatter etc. Later, René Thom was pleased to remember that it was in front of a display case in the Museum of Embryology in his home town of Montbéliard that he first experienced this biological logic of "catastrophes" that Aristotle had suspected in his studies on animal parts (De partibus animalium). Once again, this gives birth to an synthetic a priori judgement: No morphogenesis without structural stability of elementary catastrophes. That is pretty the title of Thom’s key œuvre: Structural Stability and Morphogenesis, of which the first edition (Benjamin, 1972) has on its cover a geometrically rendered foetus.

(d) It is still the same feeling of apriority and experimentation altogether that one can experience when at the basis of the formation of all living things you discover not only the plastic transformations systematized by Thom, but strictly revolutionarily the biological formations (Gestaltung) by sequences and resequencings; let us write shortly: (re)sequenciations, fundamentally those of the twenty amino acids of the Living, generators of proteins. In fact, how could adapt living things to a terrestrial environment with solar flare, volcanic eruptions, continental drifts, without a principle of variation which is simultaneously quick and determined, light and digitalizable, as are the resequenciations? Does this not also imply that these (re)sequenciations play a part in living things at their most basic level, not that of organs or even organelles, nor even proteins, but at the initial level of amino acids. So basic are the latter that they can be obtained by an almost spontaneous energy (e.g. electrical discharges) when applied to the five most widespread chemical elements in our terrestrial environment: hydrogen, oxygen, carbon, nitrogen, sulphur; just what Stanley Miller showed when he obtained biogenetical amino acids under laboratory conditions in 1953. Consequently, let’s risk yet another synthetic a priori judgement: For living things to exist Evolution necessarily, implies (re)sequenciations (analoyzing and digitalyzing).

(e) That is yet not enough. For the (re)sequenciation to be fruitful it has to apply to elements which are able to form a chain and to be differenciated. This entails that each of the biogenetical amino acids is made up of two parts. (1) One shared by all elements whereby they can be linked into a chain because this part is polarised in such a way that allows its negative pole to connect to the other’s positive pole. (2) Another where the elements are retained and arranged in slightly different ways; more precisely, in twenty ways, accordingly to the dispononibilities of DNA of any kind. In short, to evolve the resequenciation assumes that each amino acid has a part which calls for the making of a chain and another differentiating part within a restricted inventory e.g. of twenty elements. That is exactly what the experimentation demonstrates, a posteriori, but could be largely anticipated a priori.

(f) Since the first Nobel Price of Chemistry winned by Fischer in 1903, it has been sufficiently established that the prominent action between proteins take place following “key and lock effect”, so supposing in every protein a unique well determined sensible operating (connecting) point. To obtain this strict determination, since the 1950s, particularly with Linus Pauling, it became clear that the chemical bonds intervening in the formation of proteins starting with the (re)sequenciations of amino acids must, to assure such a precise sensitive point in the resulting protein, respond to two complementary couples of qualities: either attractive or
repulsive; either strong enough to establish stable structures or fragile enough to guarantee
general plasticity. And effectively one discovers a posteriori four prevalent bonds: (a) Covalent
bonds (by sharing of massive elements), (b) Hydrogen bonds (by sharing of light elements), (c)
Ionic bonds (mobilizing electrical attraction), (d) Hydrophobic interactions (mobilizing
electrical repulsion). In 1991, in Discovering Enzymes (Sc.Am. Library) the biochemists
Dressler and Potter were so sensitive to this logic of compensating properties that they talked
about the chemical music of proteins. A bold comparison that suggests a new synthetic a priori
judgement: For an amino acid chain to generate a protein, it is necessary to have a limited
and mutually compensated system of chemical attraction and repulsion.

(g) An example of the same kind of theoretical necessity might well be the case of
Quantum coherency, when we verify a posteriori that the same particle is simultaneously in
two opposing states, or also can perform a quantum transportation when one of his proprieties
is transferred to another place (another one) without passing through intermediary locations. Is
does not that implicating a different understanding of space, time and occurrence? Creating
individuations and ubiqutities of another essence than that of the ontological proprieties of our
daily space-time (those of Quantum discoherence), where two objects cannot be in two
different states at the same moment (obeying the Leibnizian intrinsical discernability)? New
occasion for a synthetic a priori judgement: There is no configurable and evolutionary
Universe without quantum coherence and quantum decoherence.

(h) Finally, since 2000, why not use the same logical sophistocation about the notion of
"Multiverse" introduced by Weinberg et alii? So arriving up to the most general of the synthetic
a priori judgements: Any Universe presupposes a Multiverse whose it would realize a special
quantification of the universal constants (speed of light, charge of electron, etc.), so that they
would be original and yet compatible with one another.

Obviously the a priori aspect of the previous statements does not have the solidity of
identity and equivalence proper to "analytical judgements" of mathematics, therefore
tautological (Wittgenstein), especially since they have been formalized and axiomatized c.
1900. Our "synthetic a priori judgements" presuppose some experiences and therefore are
revisable and approximative as is the case with any experience, and even experimtations
(verifying hypotheses strictly defined). However they involve apriority in the general sense of
the word, since what they state is not simply factual, nor solely constant, but somehow
necessary (what cannot not be, Leibniz).

1C. The why? and the what?

All these contemplations of the Universe, even if they do not respond to the "why?", the
"how?" and the "who", illuminate considerably the "what?" Above all, these questions show
Homo the Technician that the Universe is not a technical object, as he is prone to understand,
and therefore that it is pointless about the Universe putting forward technical questions such as :
"with what purpose?", "by what means?", "by whom?" So, even in the most technical West,
Homo has frequently persevered referring to the Ultimate Reality in terms such as Physis
(pHuestHaï, to generate itself spontaneously) or Natura (nascere, to be born spontaneously), in
which the Universe is experienced, not as a technical object, produced voluntarily, intentionally,
but as something which, for want of anything better, we routinely label a "natural object" to mark an almost autarkic event.

Meanwhile other question, more appropriated, emerge. Is this natural object a **Cosmos-Mundus** (non-immundus), as the Greeks and Latins claimed, a reality rationally ordered according to eternal and intelligible principles to such an extent that Homo could see himself as the Microcosm within (of) this Macrocsm? Or, very differently, is this natural object **proprio sensu** a **Universe** (something simply just "turned-towards-one", lat. versus unum) in a combination, as we have just seen, of entropy and negentropy, Relativity and Quanta, (re)sequencing sequences, alternating quantum coherence and discohherence, **universal constant** specifying **multiversal constant**? In particular, in the conversion of "quantum coherence" into "quantum discohherence", which has undergone intense testing for the last few years, are we encountering the "spooky reality" that Einstein was afraid of in 1933, or rather an "ordre of another kind"? A principle not of Order but precisely of **Evolution**? In such a way that we no longer must say that our Universe experiences Evolution, but that only an Evolution, or better "the Evolution" as such, can give rise to a Universe. So the sentence : "**Evolution is the sole conceivable process of a Multiverse"** could be a synthetic a priori judgement even more basic than "the whole Universe presupposes a Multiverse".

Whatever the outcome, we begin to understand that Homo the Technician is always about to become, simply as a **physicist**, a **metaphysicist**. According to the two meanings of the Greek prefix "meta" : (a) following spatially the Aristotelian texts on Physics: (b) going epistemologically and ontologically beyond the physics.

In such a globally metaphysical and ontological context, it possibly remains an ultimate **synthetic a priori sentence**, final and primordial altogeth. **That any ‘universe-multiverse’, being neither a technical nor (a fortiori) a semiotical objet, is fatally, evolutionary or not, a pure factual one.** A mere ‘est tı’, ‘est <aliquid>’, ‘there is’, ‘il y a’, ‘es gibt’. So underlaying the Rudolf Otto's "das **Heilige**", "fascinosum et tremendum", sometimes translated into English with "wonder", or Vonnegut's "sacred" ("all music is **sacred**") And consequently invoking as practical attitude the Wittgenstein's "silence", also all the disturbing rituals (hitt. Saclai-, rites) of the religions. This silence taking the form of the buzzing in the common prayer and litany to the riots and clamors of the Greek PanatHênaña and the suffocating smell of the Amerindian human sacrifices.

**Chapter 2 – The status of the Universe.** (B) The semiotic questioning

Homo, we have seen, the transversalizing Primate, uses his tools and instruments along panoplies and protocols, referring to one another transversally, in short as **utensils** (lat. uti, to use as a Human). But, after a while, there was no reason that those references between technical objects could not become more and more merely **referential**, and not only practical, for instance when a master showed his pupil how to use something as a means to an end by a set of simple gestures. Then, the elements of the technique (tools, instruments, objects, qualities), referential operatively, have a lot of chances to become merely **referential**, thus to operate as
signs. Let us wage an anthropogenical definition of the sign: **signs are segments of the Universe which refer to other segments of the Universe when fading out in this reference**, i.e. without operative designs, at least intrinsically. Homo is the technical animal, also consecutively the semiotical one.

Among the signs, Latin, French and other Roman speechs (and indirectly Germanic too) carefully distinguish between lat. *indicium-indicia* (signs conveying from the object to the subject), and lat. *index-indices* (signs conveying from the subject to the object). Let us delve in. (a) When a stroller aroving in his field hits a hole in the mud, and the latter signifies (*signum facere*) to him the footprint of a wild boar, or a hunter, or a shotgun, or a village of hunters, an objet sends a message to a subject; it is a latin-roman (german) *indicium-indicia*. (b) *When this stroller points to the hole to signal its presence for a companion*, he emits a latin-roman (german) *index-indices* (indeed, in latin, the ending ‘ex’ signals the actor, operator of an action; the ending ‘cium’ signals the result, the actum, operatum). Unfortunately, in English, this fundamental distinction has been usually blurred, even with Peirce, yet the initiator of the semiotics (1880), with a catastrophic lost for the anthropogeny. [Anthropogénie locales, Logiques de dix langues européennes, L’anglais]

In the latin-roman-german way, the indicium-indicia are **full signs**, overflowing with innumerable meanings for Homo as Sherlock Holmes; whereas index-indices are **empty signs**, without determined meanings, and adapted to whatever referent: the same pointing gesture can points out a mud hole, an appel, a gun, a word, an abstract idea, a divinity. For sure, the distinction *indicium / index*, and *full /empty*, is the source and base of all **understanding**, but also of all **paranoia**. It cannot be overweighted in metaphysics, in common sense, nor in the decision of everyday life. Lat. *indicia* and *indices* initiate human **ontogenesis** when a baby discovered the lat. indicia of his environment from the rim of his cradle, and begin to want to grasp them with a hand that is simultaneously a tool and an indexing sign (Bauwer, *Development in Infancy*, c. 1965). But they initiated also human **phylogenesis** in the time Homo habilis and Homo erectus-ergaster pointed new landscapes or objets for their companions. [Anthropogénie générale, chapitres 4, Indices, et 5, Index]

2A. Metaphysical dependence: from semiotics back to techniques.

It is true that signs, either as lat. indicium-indicia or lat. index-indices, give Homo almost infinite powers. Indeed, signs are **generalizable**. Lat. *indicium-indicia* can progressively regroup into species, genera, families, classes, orders, kingdoms; forming impressing trees of Porphyre. And lat. *index-indices* (pointers) can refine themselves until becoming the pure indices (discharged, disindicialized) of straight lines, angles and curbs of mathematics, or pointing to God in the heaven. Then, being physically and above all mentally light to displace, signs are conveniently and quickly **redistributable** according to various points of view, each time revealing other aspects of the same things.

However, purified though they are, indices and indicia never forget or preclude their technical origin. Lat. indicia always end up referring to perceptions, whereas lat indices (pointers) can only thematize extension, duration, angles, texture, density, evanescence, phasing, attraction, repulsion etc. Thus all our semiotical "representations" reduplicate our
technical representations, which in turn are neuronal representations "which at every relay, afferent or efferent, represent in another way an outside input in order to prepare more appropriate motor reactions". (J.Z. Young, A Model of the Brain, 1964).

Do the signs, which give Homo such great advantages for his physical questioning, make his metaphysical questioning more pertinent and powerful? Or rather show they us that the most vertiginous semiotics does not make a break with the physical order but simply redistribute the latter for acting more efficiently. We will check out some eloquent cases of those reallocations.

2B. The metaphysical limits of language

Among the signs enabling metaphysical openings, one thinks initially of language. A speaker is able to talk about anything, himself included and maybe even the beyond and the behind (Augustine). We should take a look at the years 1900-1930 ; the moment that neo-positivism and the 'crisis of fundamentals' occurred in science ; a moment when Homo thoroughly explored his linguistic capacities and limits.

In 1921, Wittgenstein's Tractatus Logico-Philosophicus showed that all mathematical use of language was tautological. Also that all current language trying to go beyond or behind experience and physical experiment became swiftly "petitio principii" (begging the question). He concludes his analyses with his well-known maxim, understood as sceptical or mystical according to the impact attributed to silence: "That which cannot be spoken of must remain silent". However Wittgenstein only remained silent for a few years, giving him time to build a house for his sister. From 1930 on he started to explore the inexhaustible virtuality of language-games, in his Philosophical Investigations, carrying it on until his death in 1951. After Austin, this work was eminently continued in Searle's Speech acts (1969), leading to referential, phatic, expressive, poetic, conative and metalinguistic functions of language ; a field indicated but not explored by Jacobson.

Wittgenstein's particular merit was to sense that one could understand nothing of the language if one were to follow the synchronic view of the structuralists Saussure and Hjelmslev and not the ontogenetic one held by Jacobson, e.g. in his deduction of ‘pa’ (‘ba’) and of ‘ma’ as the first syllables heard and produced by a breast-sucking new-born baby. The Philosophical Investigations begins with an entire page from the Confessions in latin, where Augustin ( around 400AD) wonders how the infant constructs his idiolect in his cradle. Indeed, what can this little man encounter if not spatio-temporal coincidence between some objects (technique), some gestures (technical) and linguistic sounds (semiotic) emitted by his parents. In such a surrounding, while mixing gestures and prattle, the infant will accumulate, little by little, what have been known, since 1980, as language modules : phonematic, semantic and syntactic. In three years these modules will be bound in sets, so that the infancy idiolect socializes into a dialect. A dialect whose idiolectal roots will never be forgotten by poets and pedlars, the daily life poets.

In developed societies, i.e. using grammars and dictionaries, the dialect will stabilize into languages in a strict sense. Structuralist linguists nourished the illusion that a language is
a system with a structure, an organizing principle placing each particularity according to the whole. It is hard to understand how an infant could perceive such a structure during the first three years of life. Consequently Chomsky saw this undeniable fact as requiring something innate. But, in carrying out experiments of the Comsky's thesis, already theoretically suspect, one realized during the 1980s that Augustin's and Wittgenstein's modular construction was the only observable and conceivable (The Emergence of Language, Sc.Am.Library,1991). What has been confirmed by the way also modular of losing the language, as in brain damage caused by accidents and senility.

Being modular, 'language-games' and 'speech acts' can express an infinite number of physical situations but, clever though they are, do not obtain, behind physics answers, metaphysical ones to ‘the why? ‘, ‘who’?, "how'? of the Universe-Multiverse. A scepticism already shared by Wittgenstein, Austin and Searle.

2C. The metaphysical limits of Archimedean signs.

However, we are not yet clear of language, because Archimedian science, given its dominant position today, deserves a special attention. Henri Poincaré pointed out, at the beginning of the 20th century, that the formula "f = mg", remarkable in opening the door to many other pertinent formulae, gives us no one intuition of the force behind \( f \); nor the mass behind \( m \); nor the acceleration or gravitation behind \( g \). What only is needed for a 'physical theory' is to list, by using pure lat. indices (mathematical), things able to be measured (temperature, weight) by means of measureable ("indexables") elements and measuring ("indexing") utensils (scales, thermometers etc). And it is true that today's physicists repeat exactly the same things concerning the formula : \( e = mc^2 \), whose forecasts are infinite but do not tell us what light, mass and energy are, nor their nature and even less what they implicate about Nature or Universe in general. Not forgetting that lat. indices are empty signs, all the more empty as they are purer, i.e. less loaded (charged) and more desindicialized, as is the case in mathematics. When physics and chemistry are indicializing, they become Astrology or Alchemy, indeed more talkative on the question of ‘why?' In 1973 Mario Bunge's Method, Model and Matter contains a chapter entitled : Is scientific metaphysics possible?

The same can be said of signs used by biologists. As physicists, the latter list pure lat. indices and do not pretend that this is life, which from now on is humbly defined as ‘the set of physico-chemical and behavioral properties which characterize living things' (Helena Curtis, Biology, c. 1980). So Archimedean science brings nothing new to metaphysics. It only helps in a negative way by preventing impertinent questions such as the continuity between inanimate and animate, sufficiently explained since 1953 by Stanley Miller' experiment having produced technically amino-acids in his laboratory. Nevertheless, by reason of his anthropogenic nature, Homo physicist, chemist and biologist rarely forgets the "ultimate question" (Nobel prize winner Christian De Duve uses the formula knowing that the solution lies beyond our reach). This epistemological remorse often leded to quasi mysticism behavior among scientists as in the Gnose of Princeton described by Ruyer in the 1960s. We have aforeseen Einstein manipulating the two extremes of metaphysics : Chaos and Jehovah.
Anyway, those Archimedean views were ignored until the beginning of the 20th century. Throughout all his history Homo has always believed that linguistical signs allowed him to rise to exotic experiences of the mind. Therefore, for not missing an essential factor of the anthropogeny, we must recollect this unshakeable (as connatural, consanguine) illusion from the beginning.

2D. The predicamental way: realism and nominalism

Homo's first resort was to exploit the fact that species and genders, as used in language, are capable of increasingly intense and sublime generalizations. May be up to the first or ultimate principles of the Universe. Let us start with predicaments within predicaments according to Locke's *Linea Predicamentalis* which can be used among physical beings as well as metaphysical ones. The Trees of Porphyre (classification of the species) succeeds in distinguishing between the beast (plants and animals) and the rational being (Man). Next, between the corporeal (animals and man) and the spiritual (angels), and last between *finis* (creatures) and *infinite* (the Creator). Porphyre was a neo-platonist.

Evidently, this type of argument stress the general question that has haunted the Western world. Do the above-mentioned species and genders correspond to the *essence* of things (*realism*) or are they simply nominal useful conventions (*nominalism*). Do 'cats' and 'dogs' exist as such, realizing fundamental or even eternal (Aristotle) essences, or only are they objects that we find useful to call 'cats' and 'dogs' because they have certain traits in common with other animals exhibiting a similar appearance?

Yield us to write a few paragraphs about this topic, which might seem quite strange to Homo today, but which during 2,500 years kept Homo litterally spellbound around the Mediterranean and elsewhere, under the nickname, especially in the Middle Age, of "Querelle des Universaux", opposing chiefly Platon, Aristotle (Thomas Aquinas) and Occam.

In the views of *Aristotle*, *equine* (‘of horses’) was an eternal substantial essence giving rise in the concrete world to "substantial forms", one for each living horse. The multiplication of this eternal substantial essence was purely numeric (*multiplicatio mere numerica*), and occured by his hold over two kind of matter: (a) a ‘first matter' (materia prima), which was completely neutral (*neque est quid, neque quantum, neque quale, nec alid quidquam quibus ens praedicatur vel determinatur*), in order not to alter the substantial forms when receiving them; (b) a ‘second matter' (materia secunda), confering to the materia prima perfectly neutral some general determinations (say, vitalitas, animalitas, mammalitas, in the case of Equus). Finally, on those determinaciones of materia secunda intervene the determinationes of the *forma specifica*, here the "forma Equus", giving rise to individual "equi" when received by the materiae prima and secunda. More precisely "receivd" here means "is educted out of potentia of" ("forma educitur e potentia materiae"). That is for ontology.

Epistologically, acknowledging a particular horse consists in "abstracting" from a perceived horse in the fiel the set of its forms (vitalitas, etc, up to the form of Equidae), until to conclude : "this is a horse". That all makes Aristotle a *moderate realist*, since he recognized in the ‘names Equus' on the one hand something realistic or *objectal* (the formae specificae of
Equidae), and on the other hand something artificial because of the necessary abstraction. Following the same scolastic terminology, Plato was a perfect realist, because for him, in a horse, the viewer could immediately (intuitively) perceives the formae (say, the regular polyhedrons of geometry, and other mathematical proportions that constitute the Cosmos following Timaeus). The question has been universal. Many degrees of realism could be found in India, where the Sanskrit had been called ‘the perfect' because its terms express intensely the nature of things, or in China, where the strokes of Chinese handwriting, partly arbitrary, are supposed having a realistic origin.

However, even in Greece would start another view, neither soft or hard realistic, but nominalistic, supposing that names are given to things by mere accomodation. Cats are ‘cats', and dogs ‘dogs' because we experience that some animal have some traits in common. Nothing ontological therein. That was the way of Democritus, for whom all thing are the results of inseccable atoms falling in the void. But, in the Cosmos, Archimedes too, we have seen, kept uniquely purely indexables qualities and quantities (lengthn, weight, etc) common to physical things, and bypassing substantial essential forms. His experimental Physics was strictly nominalistic. In the 1930s, a Theory of induction asks the question : those two chungs of matter, one white, another red, are they ‘phosphorus', or anything else? The answer, said Dorolle, depends only to the most easily manageable system of reference, here the Mendeleyev's chart. Brief, nominalism started to assert itself definitively when, at the end of the Middle Ages, there was a first irresistible shift from Aristotle's qualitative physics to Archimedes' quantitative physics. The name of Guillaume d'Occam comes to mind.

The so-called Querelle des Universaux, having opposed violently Realists and Nominalists during the whole Middle Age, had not entirely faded out by 1900. Charles Sanders Peirce, the creator of the semiotics, excellent logician and good physicist, also an American transcendentalist following in Emerson's footsteps, insistently declared his kinship with Duns Scot, the Medieval doctor subtilis, with his famous et very sophistiquated distinctio formalis a parte rei, acknowledging in our words and terms an arbitrary part (the distinctio formalis), but not forgiving a natural, intrinsical, ontological origin (the pars rei). As a warhead, he invents the word 'pragmaticism', which he himself found sufficiently ugly to distinguish himself from the simple Archimedean 'pragmatism' of the time, that Dewey and William James, and chiefly of Mack and Poincaré, the latter denying physics any semiotic realism and even all realism in the current sense. For him physics was only a coherent theory corroborated by experimentations, or simply compatible with them (Cf. Meyerson, La théorie physique). Surprisingly, Peirce, who could not ignore Darwin, never explained how species and genus could be 'a parte rei' while they are evolutionary being.

For science history, Peirce is a stunning example of systemetism at any price, be it honest or dishonest. As creator of semiotics he must have the insight that the distinction between lat index-indices versus indicium-indicia, were a key of ontology and epistemology. Yet, he never distinguished between them, although his familiarity with Latin should have shown him that etymologically a nominative ending in ‘−ium' indicates an object (indicium) and that a nominative ending in ‘−ex' indicates a subject (index). Nevertheless, he did not make the distinction which would have enabled him to forecast the Anthropogeny. Given such a subtle logician, it is vain to allege here that English blurs usually the distinction. In fact, Peirce had a penchant for Christian and Occidental Ternarity, and as the creator of semiotics, he has divided the Signs into Icons, Indices and Symbols, 'the most fundamental division. Ontologically, he contemplated the Universe as : ‘Firstness, Secondness, Thirdness'. Distinguish between lat.
Indices and lat. Index would have shattered his metaphysics until its roots, or its heart. The Peirce's heart was a poetical one. And for the aroving mind of the poet, spontaneously the indices are indicia, and indicia indices. "La nature est un temple. L'homme y passe à travers des forêts de symboles », says the sentence of Baudelaire, translator of Poe ? That is of Emerson, a spiritual relative of Peirce ?

2E. The transcendental way.

However, the Ancients followed another way. In their metaphysical search, instead of going back to species and genera, to families, from below to above, possibly to reach a Devinity, why not go directly to the top, to universal principles that organise all the things in the world in a way that, enlightened by this perfect source, they become objects of intelligible knowledge? Such is the transcendental way. Its tracks could be detected somehow in all civilisations, but we will only deal with the Occidental one as that where it has been most systematically explored. Much more, the occidental transcendentalism, through its audacious "intuctualism", has indirectly contributed to the birth of the Archemedian science, which finally in turn will obliterate it.

2E1. Ancient transcendentalism

Echoing the ancient Ionian doctrine of macro-microcosm (Altionische Makro-mikrokosmoslehre, Kranz) in the Greek colonies of Southern Italy, around 500 BC, numbers and figures began to establish themselves as ontological and epistomological principles. Pythagoreans heard music and also universal ethics from the cithar player, who divides his string into whole numbers, thus producing octaves, fifths, quartets, descending major and minor thirds. Their silent listening, known as 'acousmatique' (akousmatikos) led to the perception of 'heavenly music'. That was the start of 2,500 years of Mediterranean awareness: alongside generated events there exists the Eternal, determinable, determinant, purely mathematical Beginning and Ending. Homo's ideal life became, by consequence, the theoretical life (bios theoretikos). That seems to have reached up to the Celts who at this moment were expanding on the Mediterranean sea as a result of their mastery of iron.

Around 450 BC in Sicily, still in the era of the Greek colonies, this kind of eternity took on another form, no longer Pythagorean numbers and figures, but physical elements, perceived as substantial elements, whose the daily events were only combinations under the effect of Attraction and Repulsion, metaphorically said with Empedocles Love and Hate. According to him everything originates in various doses of Earth, Water, Air and Fire (ether). He expressed this in hexameters, deemed 'Homeric' by Aristotle, converting his Peri Phuseôs into an unanimous cataclysm of substances, essences and words, conferring a quasi priestly role to the political philosopher.

However, still around 450 BC, this time not in a Greek colony, but in Athens, Anaxagoras, inspired by the phonosemical equilibrium of the novel athenian prose and verse, begun to look at the perishable events as borne from a principle he called noûs, that we to hastily
translate as ‘spirit’. Indeed, Anaxagoras' Noûs no longer governs quantity but quality: "Hair is necessary to generate hair", he said boldly. Otherwise Anaxogoras continues the Pythagorean discipline which stated that \textit{theoretical} life, here the comprehension of things by the ‘Noûs', is the goal of existence ("\textit{tHeôrian tou biou telos einai}"), and thereby ‘the source of liberty' ("\textit{kai apo tautès éleFtHerian}"). The division between contemplative (bios \textit{theôrètikos}) and active life (bios politikos) will dominate the West from here on, as Hannah Arendt underlined in \textit{Human condition}. Anaxagoras' friend Pericles, endeavoured to understand the \textit{intellectual} and \textit{judicial liberty} as a \textit{political liberty}. Anaxagoras's disciple Euripides, in his tragedies, translated it into a \textit{moral liberty}.

Thus all was ready around 400 BC, for Plato's decisive entrance. Earlier, the Greek language itself had become the object of systematic studies by the Sophists and in his \textit{Cratyle} Plato looked into the etymology of words, pointing out their phonosemical power. Protagorias and Gorgias had already demonstrated the relativity aspect of all language, which in their view led to the evasive character of the events that it expresses. But peoples from around the Mediterranean remained obsessed by the eternal light, just as in Valery's 'Midi le juste'. In opposition to sophistic relativism, the Pythagorian \textit{quantitative eternal} resurfaced. Plato reckoned that there \textit{were numbers} and \textit{figures} and furthermore \textit{mathematical proportions} (larger, smaller, equal, double, half) that escaped the general flow. The word \textit{Idea} asserts itself to signify something immovable, as eyesight is even more inflexible than the Pythagorian hearing. And ‘eidos', from the root *Fid, to look at, will express the absolute look in the strong white light of the Aegean.

Briefly, Plato's Theory of Ideas invented not only the \textit{ontological} and \textit{epistemological a priori} but also the \textit{transcendental}, i.e. the conditions of possibility (or presupposed condition) for every object as an object, and ultimately for every being as a being. Platonic 'ideas' are so much \textit{a priori} that you do not even have to learn them. They have always preexisted in your mind, they \textit{are} your very mind, even if you are a slave, as insists the \textit{Menon}. All essential pedagogy is maieutic. Its only task is evocating (vocare, ex) preexisting ideas.

This transcendental view underwent various misadventures. Firstly, Aristotle, less a mathematician than his master and more a biologist, placed the eternity of the Cosmos in \textit{species} and \textit{genera} of plants and animals rather than in Plato's mathematical regular polyhedrons. Aristotelean syllogisms formalize a predicamental view in the sense of Locke : Socrates an instance of Man and Man of Mortals ; thus Socrates is (a) mortal. Later, at the end of the following century, already embracing a Roman turn of mind, \textit{Epicurians}, \textit{Pyrrhonians} and \textit{Stoicians}, preoccupied with practical (political) life, were less metaphysicians than moralists. The Stoicians even invented the \textit{hypothetical syllogisms} peculiar to daily life, and Archimedes' science : ‘\textit{if} it rains, I'm not going out', ‘\textit{if} iron is heated, it expands'.

Consequently, Plotin's neo-platonism, c. + 250, became the dominant metaphysical thinking of the time, carrying to an extreme the transcendentalism of the Unique (One), which Plato had questioned in \textit{Parmenides}. A \textit{transcendental} and \textit{a priori} \textit{Heaven} had come to stay and cast its glorious light over the Mediterranean sea. It covered the whole of the West. In \textit{Phedon} Plato had already sums it up as follows : "There goes the soul, towards the pure, the being, the immortal, the unchanging" ("\textit{ekheise oikHetaï <psukHè>, eis to katharon, te kai aei on, kai atHanatov, kai ῥανιώτα ῥανιώτων ekHone}"). It is made clear that this passage (movement) of the soul is defined by its close relation to all this (\textit{zugunè autou}). This \textit{transcendental} program will be strengthened by the coming of the Christian \textit{Transcendent}. 
2E2. The Transcendent as the essence of Christianity

Year One of our era was a major turning point in anthropogeny. It is the moment that Mediterranean, let us say roman-christian-stoic-neoplatonic, even neo-Hebraic thinking, discovers a domain as yet unexplored: the interiority and consequently the person, the conjugal equality, as seen in the frescoes of Pompei, and in the universal fraternity of Lucan's Pharsale. Guilt is interiorized, whereas before it was exteriorized in the early sense of peccatum (the stumbling of a horse). Paul de Tarse, co-founder of Christianity, went as far as to imagine the whole of Humanity as a mystic body whose members are in spiritual sympathy and empathy (agape). Spiritus and animus, two masculine latin words, give way to anima, the feminine gender which had already made such headway as to be prefigured in Socrates' psyche. It is not surprising that an in-depth psychology and a genetic or dynamic psychology developed, a first model of which Augustin of Hippo decisively put forward around 400 AD in his revolutionary Confessions.

As a result, for more than 1,500 years it is no longer abstract, impersonal, inaccessible transcendental that play the role of Ultimate Principle, but a concrete and even personal Transcendent. The Absolute becomes intimity, and at the Council of Nicea in 310 Theos-Deus is defined (patriarchaly) as the Father and the Son, with the Spirit as the respiration (pneuma, breath) which links them. At the heart of the world and Man is now the Infinite intimateness, almost intimity: Deus interior intimo meo ("God more intimate than the intimatest of myself") as Augustin wrote around + 400. If such is the Transcendent, then the transcendental can only be attributes of it. In Plato's Timeus, the Creator made the world with an eye to the transcendental Ideas, to which he himself was subjected. Henceforth these Ideas are only manifestations of the Creator. The substance-spirit from Hegel's Phänomologie des Geistes is en route.

As the Transcendent cannot be determined by anything except itself, there can no longer be any matter that preexists to it (to Him), neither a Hellenic Hulè nor even a Hebraic Tohu-Bohu. The world can only come from nothing. The verb creare (to make grow, actively) won over crescere (to grow, (inchoative). Creation replaces Nature, which originated from 'nascere' still linked to 'crescere' and the Greek Physis. The creative will of the personal God is strictly autarkic, even no longer constrained by mathematical facts. So in Descartes (Letter to Mersenne, 1630) we read : « Et je dis qu'il a été aussi libre de faire qu'il ne fût pas vrai que toutes les lignes tirées du centre à la circonférence fussent égales, comme de ne pas créer le monde. »

What is new in this Transcendency is that the divine and the human are intimately brought together. Since the year 1000 AD, Homo, a finite engineer, became the co-creator of God, the infinite engineer. It is no longer a question of adapting to an outer world, but of transforming this world as co-creators; and these infinite and finite engineers understood one another so well that Descartes in his Treatise on the World, knew how God had created the world by imagining how he would have made it himself. In this community, in this Intimacy of the Being, the transcendental are common properties of all beings, infinite and finite, creator and creatures, each according to his "degree of being", as Thomas Aquinas put it, combining Aristotelism and Neo-platonism. In 1250, the doctor communis removes even the contradiction of God's intimacy, supposing He is One and Three at the same time, as the Council of Nicea.
put it. Henceforth no contradiction at all. God is 'One' as substance (as transcendent) and ‘Three’ as relations (as love of lovers). The idea of relation, which nowadays has often replaced that of substance, first appeared theologically, as noted by the young Hegel.

Nevertheless it is only with scholastic hindsight that the words ‘transcendental’ and ‘transcendent’, ignored by the Latins and even by Thomas Aquinas, became firmly established. The four chosen ‘transcendentals' that summed up the West mind were: one, true, good and active: "Ens est unum, verum, bonum, activum". (a) One accounts for the mathematical prominence of the number One, that reigned from Pythagoricians until Dedekind, c. 1900 (cf. Badiou, Le Nombre et les nombres, 1990). (b) True makes sure that everything is intelligible, putting Archimedian science first. (c) Good concludes that there is a natural moral and a natural law. (d) Active marks, in opposition to the East, that the aim of Homo is to intervene in the world and to change it, as was the case since the + 1000 AD engineering. Some people even wanted to add that every being as a being (transcendentally) is also beautiful, if it conforms to the One, the True, the Good, the Active. That cleared the way for the reconciliation of Homo and the World by the aesthetic experience, as appearing in Kant and Schopenhauer. In any case, these four or five transcendentals deriving from the Transcendent were shared by the metaphysicist and the man in the street until the triumph of biochemistry, that will conceive formations (Gestaltung) not only by modelling, but frequently also by sequences and resequenciations of amino-acids and neurones, c. 1950.

2E3. Kant's critical transcendentals

However, while remaining within this general framework, Kant, since 1770, totally changed the meaning of "transcendentalism". During his youth, he witnessed the implacable struggle between rationalism and empirism, a ridiculous spectacle questioning the dignity of philosophy. (A) Rationalists, kind of "realists" in the sense of the Querelle des Universaux (cf supra), made use of kind of a transcendental a priori. So saint Anselmus believed that the idea of Infinite, when comprehensively produced in our mind, implies its existence. Descartes believed the same implication for the idea of Perfect. Spinoza for the idea of Zelstandigheid (what stands by itself), clumsily translated by himself, a clumsy latinist, into ‘substantia'. Leibniz for the idea of Necessary (defined "what cannot be not being"). This argument called "ontological argument", was the supreme fruit of a "comprehension logic" (vs. today "extension logic"). (B) On the contrary, the English Empiricists, Bacon, Hobbes, Locke, Hume and Berkeley continued being 'nominalists' in the sense of the Querelle des Universaux (cf supra), starting from facts which could be certified, or even simply from sense data. Metaphysical generalizations were accepted "predicamentally" by Locke, blithely dismantled by Hume, transsubstantialized by means of the Berkeley's "esse est percipi".

Kant realized that to resolve such a feud, it was presupposed that Homo took the time to measure as precisely as possible the limits and powers of his cognitive skills, what he called a "critical" process. Apparently instoppable. No Universe without objects. No objects without the possibility to conceive them as objects. Consequently, a philosopher has to explore previously the possibility conditions of every object as an object, like to be in space and time, like being cause or effect, like being all or parts, etc. In order to designate those possibility conditions of all objects as such, what a better term than "transcendental", and what simpler than call "critical" every consideration from this transcendental point of view. In this
"Copernican revolution", medieval **transcendentals** emigrated from **ontology** to **epistemology**. A "critical philosophy" was a preliminary to all metaphysics. Opening or clauing a priori the paths of the latter.

The 500 pages of *Kritik of reiner Vernunft* listed the Kantian transcendentals: (a) the *a priori forms of sensitivity* (space and time), (b) the *a priori categories of understanding* (cause and effect, substance and accident, whole and parts, necessity and contingency) : (c) the *ideas of reason*, that are thee: World, Soul, God, not at all something that exists, but precisely efficient *ideas*, sufficient to organize the human mind into a coherent, cohesive system, although not existing as real *beings*.

In his preface, Kant takes care to distinguish between three kinds judgements, we have alleged in our first chapter. (a) **Synthetic judgments**, those that make you aware of exterior experience (‘this table is brown’). (b) **Analytic judgments**, those where the attribute is included in the straightforward analysis of the subject matter, without need of new experience, like mathematical propositions, and some physical ones (a table weighs, 2+2 = 4). (c) **Synthetic apriori judgments**, those of geometry that suppose exterior practical experience (the ruler and compasses demanded by Euclid), making them *a posteriori*, but nevertheless commanding proprieties of all possible physical objects, thus a priori. So ‘the three angles of a Euclidian triangle equal two Euclidian right angles’ is an *synthetic a priori* judgment needing without doubt, at that moment, intuition of Euclid's parallels. Or ‘no object without substance and cause’ and even: ‘no unifying theories of the Universe without the regulatory ideas of the Soul, the World and God'. Bear in mind that a ‘regulatory idea' is truly regulatory, and therefore necessary for the unity of knowledge but remains only an idea and does not imply that it shields an existing idea, or the idea of some existing being (like a God).

This solid and prestigious edifice inspired a glorious past, in particular for the three most metaphysical of all human metaphysicists: Fichte, Schelling and Hegel. Since 1850 the positivism of Archemedean science during the 19th century showed by its use that it had no need of philosophy to express its logic. Already by the 17th century Pascal had shown that mathematicians and mathematical physicists develop their own logic without any help from philosophers. Stuart Mills' theories of induction were miserable and finally are no longer mentioned today since simple *induction*, that they tried in vain to establish, has been replaced by the *cross-bracing* of current science.
2E4. The Emergence of the nowaday "transcendentals in the making"

We have seen, in our first chapter, that recent Archimedean science posited possible synthetic a priori judgments such as: 'Every Universe presupposes general Relativity and Quanta to Homo technician.' In this form does it not mean what we could dare to call: "transcendental in the making"?

Mathematics would be the perfect example. In fact there are mathematical ‘truths’, or more particularly ‘coherences’, or better simple ‘consistencies’ that do not exist before having been formulated. After formulation, after writing, after demonstration and today after formalization and axiomatization they become conditions of possibility for unbeatable mathematical knowledge. In general, the same applies to physical, cosmological and even biological knowledge. Certain mathematicians, as René Thom, amazed by this mathematical consistency, believe it to be the reflection of somewhat eternal Ideas, as it appeared to Plato. Others stick to an empiric vision: exact writing such as the mathematical text, creates by its exercise, new objects, whose significance become established by their adaptation to mathematical situations, as for all products of evolution, but here for ever, not in punctuated equilibriq. The idea of a transcendental in the making might reconcile these views and give them their perspective. The mathematician René Lavendhomme, familiar with the anthropogenic views, found adequate this assertion. formulation. [Anthropogénie générale, ch. 19]

Having gone through all these adventures, the metamorphoses of the notion of transcendentalism may have summed up the essential stages of Western metaphysics, even the Metaphysics as such. (a) First of all epistemological-ontological with Plato. (b) Second, ontological-epistemological in the roman-christian-stoic-neoplatonic, even neo-hebraic mentality. (c) Third, epistemological and indirectly ontological with Kant. (d) Finally, evolutionary in the shape of "Transcendentals in the making". Pointing out that the semiotic evolution in question is also, as with all living things, ramifying, "bushing", and not candidly orthogenetic.

Straightaway one would think that "transcendentals in the making" are sounding the death knell for metaphysics. Contrary to traditional transcendentials, which prevented all questioning to the extent that they emerged as a single block as a priori, transcendentials in the making, by the very fact that they appeared gradually, may have awakened in Homo the question: what is in its nature this Universe that lends itself to such successive illuminations? Are they a series of phenomenen that would have nothing to add to noumena? Or would they posit that here noumena were evolutionary in their turn? After the Universe as Evolution are they pointing towards Evolution as Universe?

2F. The negative way : the capacity of semiotical negation

There is nevertheless a metaphysical use of the signs that we have not yet mentioned: its capacity of negation by itself. Yet metaphysicists have made great use of negation and self-
negation as a tool of position, or at least of...... Indo-European languages were privileged in this respect, as they can easily turn a noun or a nominalized verb into a negative by adding an ‘a-’ as a negative prefix. A good example showing how grammar leads to metaphysics and metaphysics consolidates grammar. Pre-Socratic Anaximander's a-peiron (not limited, without frontier) made all limited events come from non-limited events. Neoplatonism and the negative theologies of the first millenium, above all in the Middle East, used this process to highlight the Transcendant by describing it as "non-intelligence", "non-will", "non-justification" etc. In the sense of " beyond all humanly conceivable intelligence, all will, all justification." Cankara and Ramanuya, writing in Sanskrit and in the subarticulatory spirit characteristic of all Indians, say the Baghavad Gita, overexploited this resort.

Apart from linguistic applications, the best known case of signs as negative springs is Hegel's Grande Logique, where the negation or better negativity is the driving force for Dialectics, both epistemologically and ontologically. Still in 1943, in Sartre's L'Etre et le néant, subtitled Essay on phenomenological ontology, it is the non-entity that defines the kind of entity propre to consciousness. Already, Descartes had experienced a kind of negation-position, when his initial radical negation ("I doubt universally") did an about-turn to a phenomenological position ("therefore I am thinking") which transforms itself (prematurely, thought Husserl in Méditations cartésiennes) into an ontological position ("therefore I am") : nego, ergo cogito, ergo sum. So when it comes up with the 'Why?' of the Universe, could the negation of the sign not go just there where the position of the sign cannot go? This claim will be better placed coming after the anthropogenical experience of presence-absence, which we still need to examine.

Chapter 3 – The status of the Universe. (C) The consciousness questioning

Consciousness, in Hamilton's sense, which was unsuspected in Latin and even until the 17th century, is a double phenomenon among animals as well as humans. It combines : (a) contents of consciousness that are describable phenomenologically in a direct way, but also indirectly by the cerebral functionings that support them ; (b) a strange phenomenon that could be called presence – apparitionality – autotranslucency, which is indescribable.

3A. The indescribability of presence

This indescribability was immediately pointed out by Hamilton : "Consciousness cannot be defined : we may ourselves be fully aware of what consciousness is, but we cannot without confusion convey to others a definition of what we ourselves clearly apprehend". He meant then consciousness in its entirety, but underlining un it its aspect of presence-apparitionality-autotranslucency, since the conscious contents are to a large extent able to be communicated.
And doesn't it follow that the indescribability that characterises the phenomenon of presence-apparitionality-autotranslucency qualifies in turn the way, causal or simply 'occasional' (alluding to the Malebranche's occasionalism, if the latter was not a piece of a different, very peculiar metaphysics), this presence accompanies in the Universe some functionings, e.g. cerebral functionings, versus the non cerebral functionings. One could think that this kind of presence takes place only when connections, deconnections, cleavages intervene very numerous, rich, packed spatially and temporally, obeying Chemistry more than Physics, even they both are required. That the case of animal and human brains when the billions of neurons with thousands of synapses are in the state called awareness.

Underscoring only that the cerebral functionings are more a matter of tracks and nuclei than of sites. Then, and that is essential, the conjunction of cerebral functioning and presence-apparitionality-autotranslucency does not make to appear the state of a brain where it is supposed to become, as if would be the case in an ordinary causality, but eventually uncertain state of the whole Universe only specified by a particular state of a brain. Indeed, the presence is from the start coextensive to the Universe whose she reveals some events shaped as events in that place at that moment through the operation a neuronal system in a particular state. Partly as in a relativistic and quantal physics every event, even very local, is a specification of the Universe, or the Universe as to one of its specification.

3B. The Autarky of Presence-Absence, and Intercerebrality

Presence-apparitionality-autotranslucency, whether animal or human, is autarkic, i.e. self-sufficient (arkein, suffice, autos, self). Is it not even outside time and space? To the point that it becomes both presence and absence, let's say presence-absence?

Yet this autarky is not necessarily solitary (at least outside the Occidental mind since Aristotle to Kant). It even culminates in states of intercerebrality, when several brains, animal or human, function in such a closely exchanged perceptive-motor interaction that they appear to form quasi a single brain. Contemporary neurophysiologists are nowadays studying mirror neurons, thanks to which a brain is so closely coupled to another, friend or foe, that it not only shares the perceptions and motor actions of this other one, but it also shares the situation where the perceptions and motor reactions of the other take place. These neuronic effects show, within both animal and man, the advantages of binary intercerebrality, especially when it mates organisms of complementary topology and cybernatics, e.g. masculine and feminine.

The autarky of the presence-absence-apparitionality-translucency, shared by cerebrated animals and Homo, yet takes with the latter a peculiar intensity because of its holosomy, this quality of the human body resulting of its angularizing, orthogonalizing, transversalizing, possibilizing character, so that Homo is global in its kinesthesies and proprioceptions. And that, even if in the human brain, the Homunculus of the sensory-motor neuronal 'headband' between the frontal and parietal areas strongly vary according to the parts of face, fingers, belly, sex, feet.

Holosomy and intercerebrality contribute to Homo having a horizon and thus seeing himself as a centre from which he extends and contracts. Consequently, he puts himself at the
heart of a World, Welt, Wereld (*Woruld, environment as appropriated by man) and even of a Universe (versus unum) infinitely extending the Umwelt, this immediate world that von Uexküll, with Rilke, attributed to animality. In this respect, recent treaties of Ethology, studying the perceptive-motor system of the animal species, clarify Homo's originality among earlier animals, making us aware of what a dog can see (in its world of smells), a fish (in its world of flavours), a bird (with great depth and narrow scope of view), even apes (where thei bilateral symmetry is however blurred due to being quadruped or quadromanous). A rationale why the sphere is Homo's favourite geometric figure, the most "perfect" (facere, per) according to Plato. Only the sphere is suitable to suggest Homo's extensions and retractions of presence-absence. Football and handball plays are bodily and mentally dominant in all human societies.

3C. The presence-apparitionality-translucency obtained by neutralizing nerve functionings. Its culmination in orgasm

In the couple functionings / presence that is consciousness, the latter, to appear strongly, has no need to suppress the cerebral functions, a result which would suppress itself, but subtilely, indirectly to put them into states where they are both maintained and neutralized. With Homo, this is made possible because his motor-sensory system, techmemes and signs (analog and digital, and also lat. indicia and lat. indices), give place to perceptivo-motor field effects and logico-semiotic field effects, wich, by reason of their nature, can be diversely neutralized (although not supressed) by rhythm and rite.

The field effects are proper (convenit omni and soli) to Homo, who is dependent on diverse, even heterogeneous stimuli, because his whole organism is at the same time physical, technical, semiotic and presential. For Homo, most of the stimuli are thus under tension, creating between them pools of attraction ("bassins d'attraction", René Thom) with field effects. Just before his death, the biologist, Francis Crick wrote Ten Hypotheses with Christof Koch, computer scientist for 'Science', where he summed up his observations on the phases of neuronic elaboration necessary to grasp an object in situ (say a bottle on the table). Those 'Ten Hypotheses' help us to understand cerebral strata of perceptive-motor constructions which provide the field effects. Several of these strata consist of neuronic interactions, both multispatial and multitemporal, made up of potential elaborations, both unstable and metastable. Fifteen years earlier, the first computerizations of visual perception proposed by David Marr in his seminal Vision at the M.I.T. had already predicted it.

Those field effects would probably never be theoretically co-ordinated, that is placed exactly in co-ordinating systems ; they implicated too many spatio-temporal interactions to be countable, even if they are not physically or biologically mysterious. What is certain is that Homo can compatibilize them in practice, which is the familiar function of rhythm and rite. As also of endomorphines and other drugs.

Rhythm blurres (neutralizes) functions, sometimes sparking them up as in the scherzo of a symphony, sometimes smoothing and polishing them as in a caress. In these two cases the neuronic reactions are sufficiently synchronized as to get mixed up and drowned, detaching (liberating) pure presence, or presence-absence. What obtain debauchery, the "crime" according to Genet, the chamber music, the hatha-yaga, the arabic dikr. With this scope, the poets make a
subtle effort to blur senses, and mystics often exploit 'negative' philosophies as does Master Eckhart. As for rite it can be defined as a socialized and economical rhythm, schematized and recurrent. Both rhythm and rite have wrought around since the origins of Homo, perhaps even since the Neanderthals. Concomitant with humane latent taste for pure presence, or presence-absence.

So sexual caress and orgasm have played a fundamental role in anthropogeny. First, they were selected simply in order to assure that mating was sufficiently long and tight to ensure the success of sexual insemination. However, due to evolutionary change, a special biological invention took place. While other perceptions of the Living are informant of immediately identifiable objects or actions - in pursuit of a prey or a sexual partner, avoiding an enemy, bringing about the building of a nest, hoarding, upbringing, - this time, as noted Bergson, the philosopher of "concreted duration", it is a question of non-informant perception, raw sensation with no other aim but its own maintenance (Baldwin reaction). This non-informational performance reunites two results: (a) two organisms become a unit with another complementary organism (making one, in a rhythmic sharing), (b) both altogether are raped into a state of ecstasy (stare, ex) exceeding any functionings.

Sexual ecstasy, where functionings are neutralized by uncertainty, leaves room for an ever purer presence, even a presence-absence, maybe an absence-presence. Briefly, the pre-orgasmic caress leads to a progressive neuronic synchronisation up to the point where this overactivation breaks down into energy holes. The "beast with two humps" (Shakespeare) achieves the orgasmic caress in a closed system, where mirror neurons can attain really closest intercerebrality, no longer searching for anything beyond themselves. The Frech aphorism 'les amoureux sont seuls au monde' reaches something physical and metaphysical.

With Homo, a female orgasm pairs the male orgasm, partly to sustain a sufficient copulation with a female now techno-semiotic, and therefore more whimsical, but above all to respond to the intercerebrality opened up by technical collaboration and language. It is not by chance that Homo, in almost all civilisations, has set up as the ultimate being, divine couples, Shiva and Cakti, Vishnou and Lakmi around an image of an interwoven Yoni and Lingam. "Man and Woman, and Woman and Man strive towards Divinity"', concludes the first part of The Magic Flute. As for the rest, although patriarchally masculine, the Christian Trinity is more dual than trine: a relation of Father and Son essentialized by a third relation: the Holy Spirit. 'Son' and not 'Wife' or 'Daughter', because for the West, in the Greek way of thinking, femininity is only an accidental (non transcendent) request of finite generation (Thomas Aquinas).

3D. The status of the Universe in the initial distinction: functioning / presence-absence

If the initial distinction of the Universe is that of describable functionings and of indescribable presence, how can these two aspects be pondered? Looking at Homo's history, the three solutions, considered up until now, form the extremities of a triangle. They are antinomic in the Kantian sense of the word. It could also be a matter of aporia (a-poreuein, to be without passage). In both cases, the impasse as impasse contains a truth, a light, an impulse.
(a) Around the Mediterranean, Homo has often cultivated the audacious aporia of a functioning presence. The Hebraic Ell Yaweh, the Christian Deus-Theos and the Muslim Ell Allah, are, each in their own way, first and above all a pure presence in an eternity avoiding, bypassing all functionings. However, their presence ultimately creates a world. Is that not a function, a functioning? The difficulty, in this case, is thus to conceive a non-functional act of creation, therefore a creation non-causal in the current sense of cause, since all cause-effect relation is describable regarding its two terms, and here the causal presence is supposed to be indescribable. Homo hardly seems to have feared this type of antinomia; for Aristotle and Dante all movements of the Cosmos were dependant on a primary immobile motor, "moving without being moved" (kinei ou kinoumenon). Kant established the act of creation in a presential causality, that he called "noumenal" (a word awkwardly conceived by himself, from the Anaxagoras's "noûs"), as opposite to phenomenal functional causality. These solutions were, without doubt, aporic, even for their authors.

(b) Another aporia that has been largely accepted was that of ontological inconsistency of functionings, reduced by Parmenides into a doxa, a being not "beingly" being (to on mè ontôs on), an echo of the Indian maya, that sort of unreal reality, between illusion and simple appearance. Thus more or less cleared of functionings, presence-absence is then so pure as to hesitate between a presence-absence and an absence-presence, as Indian Buddhist nirvana (nir, without, vana, breath), and Chinese Taoist void. The antimony is still around, because walks and eats, ascetic though they are, remain undeniable functionings. The sole solution is "to act as if not acting", or to "function as if not functioning". In the Baghavat Gita, the god Vishnou-Krishna advises Arjuna to kill his brothers, since the ways of politics demand it, but to do so with indifference. The rupesrian edicts of Emperor Açoka (250 BC), "co-founder of Buddhism", proposed the same behaviour. Paul de Tarse advised the first Christians "to be part of this world as not being of".

(c) Homo of the 20th century, basking in the triumph of Archimedean science, elaborated a third aporia, in supposing that the describability (mathematical) is reality's sole criteria, so that only functionings are real, and all presence-absence is illusory. However presence-apparitionality is so naively undeniable that a qualification had to be found, and it were called 'epiphenomenon'. As this word brings to mind 'phenomenality' and thus apparationality, which was exactly what was to be ignored, the best way forward was to avoid 'presence', 'presence-absence', and to talk exclusively of 'consciousness', this ambiguous word, where conscientious contents and conscientious presence are muddled up to the point where describing and explaining the first seems to lead to an indirect explanation of the second. A scientist as eminent as Francis Crick, the co-discoverer of the double helix, was a familiar practitioner of this confusion. To introduce his ten theses on cerebral functionings associated with visual perception, a normally serious scientific magazine, La Recherche, was not afraid to publish them under the title : How neurones produce consciousness.

It is understood that between these three risky points of the ontological triangle, Homo has also experimented with innumerable, less vertiginous intermediaries. First of all animism, this way of seeing, everywhere and always, a vital principle, kind of a Polynesian mana, functional and dynamic altogether, more or less presentative-absentive. Louis Pasteur was still "animistic" around 1880, when he reckoned that fermentation assumes that the chemical properties of the fermenting agent, thus the strictly describable 'functionings', must be accompanied with Life, thus for him implying an indescribable principle. It was only in 1898 that the Buchner brothers established definitively that chemistry (chemical functionings) was
enough. This did not stop the vitalists from continuing to invoke an indescribable vital principle, at least for the morphing from inanimate to animate, up until 1953, the year that Stanley Miller produced amino-acids by the means of his laboratory.

Another intermediary has been polytheism, where the essential forces of Nature, such as War and Love, Fecundity and Death, Earth and Water are supposed to be incarnated through an array of Gods (since Empedocles), who as well as being ambiguously presential and functional draw between them a social system. Göethe is the chief German poet because he has given this view its whole wholeness: „Alles geben die Götter, die Unendlichen / ihre Lieblingen / Ganz /// Alle Freuden, die Unendlichen. /// Alle Schmerzen, die Unendlichen. // Ganz“. More simply: „Wo fass Ich dich, unendliche Natur!“. Ultimately simple: „Die Mütter! Die Mütter! Es klingt so wunderlich!“ The polytheists Gods did not really exist distinct from mortals, nor from the phenomenas of Nature (Physis, Generation in general), except through their immortality. They interact with the kings and queens of the Homer's Odyssey. In the Virgil's Aeneid they help the sons of Anchise to go from Troy to Rome. In the Amerindian Popol Vuh from the Maya Quiche, they are part of a magic fabric where the three beings, celestial, terrestrial and underground interfere, sustained by the same thick blood (Quik), with only three female gods: the Grandmother, the Giver of Monkeys and the Blood Virgin. The gods of Rain, Earth and Maize being male.

3E. 'Presence' as mystery

After that all, the ultimate metaphysical question ("la question ultime") could well be: should one write presence or presences? or even: presence(s)? An Anthropogeny ought to bring up at least a few of the ways in which Homo has brought up for sure not answers, but at least questions about this question. In a disorder of his own making that where you don't understand you do better to be pertinent (Wittgenstein) than where you understand.

Here a handful of those questions. Did presences in the plural, in our Universe appear only with the first brains, at the end of fifteen billion years of absence or of sleep? And again, where did they spring from, since they are not 'productive', 'causative' in the habitual sense of causality and production? Are presences creations (products) of a singular Transcendant, as the Christian God, or the form of a Singular Immanent such as Spinoza's substance? Or could one yet conceive innumerable degrees of plural presences, or of one unique presence, so that everything would always be in some way 'presential', although "slumbering", even the tiniest degrees of the neoplatonic One, or the meanest points of view on the Whole which make "discernable" Leibniz's Monads. Is there ontologically a presence(s) region in the brains? Or is the presence-absence-apparitionality-autotranslucency coextensive to the Whole, at least in a diffuse, metempsychotic way, which explains the prevalence of animism in anthropogeny? Or rather coextensive to an Evolutionary Universe? So that wisdom, after having been the adequacy and the acquiescence to the Eternal, would become the restlessly surprised Admiration of the amazing brilliance of Singularities.

To write presence(s) would be a cunning way of summing up the mystery, and distinguish it from the problems. Problems are multiple questions, if not solvable, at least able to be put into words: probléma (ballein pro) is a promontary, a shield, a task to be done, an
stochastic object of scope and controversy (the aim of the Greek stokHadzein). Mystery is inevitably singular, although translated into plural apories. It is a matter of mystes, appearing or disappearing within it, or making a lot of noise or howling to create silence (acousmatikally, said Pythagoras). In the case mystery, not only are there no answers to the question, but the question is not able to be put into words neither de facto nor de jure. Therefore the question is unsolvable, or paradoxically solved before being asked, by reason of the impossibility of asking it.

Then, the "That which cannot be spoken of must remain silent" which concludes Wittgenstein's Tractatus logico-philosophicus (1921), does not mean 'Don't look any further', but 'There are silences that speak volumes', as the Pythagoricians used to say. Rhythm and rite - and thus rhythmic and ritual silences – are, by their field effects, the only theme of mystery, and the only resolution, as when talking of resolution chords in classical dance music. Homo walks, dances and sings to actualize his Universe by interweaving presence(s), absence(s) and functionings.

It could be envisaged that the entire Universe is self-sufficient from the sole fact that it consists of beings endowed with presence-absence. In 1938, when Lavelle took into account the presence (before the "conscience-presence" of Sartre-Beauvoir, and after the "pensée" in the right meaning of their common master Descartes), at once he entitled his essay: The Total Presence. Those questioned in the course of history on the 'why?' of the Universe, and who have replied such things as "a thought of thought", noësis noèseôs (Aristotle)', or "an intercourse of Lover, Loved and Love" (Athanasius), did not expect an ulterior question: now, what the "why" of this reflexive thought or of this Love of Lovers? It's as if the presence-absence, by its autarky, excluded all further questioning. As if it could be the implicit intention of an even non intentional (merely factual) Universe. Somehow intended by the Mazdean man-yu, where "man-" would mean an intention either intentional or non intentional, with –yu, this indo-european substantive-verbal desinence (that of lat. mot-us).

Bateson, at the end of his life, stated that: "There is only one philosophical question, that of consciousness". Had he rather said: "that of presence(s)-absence(s)" anthropogenetically he would have been definitive.

Chapter 4 - Homo's place in the Universe. The living and the dead

Homo, being a space-time of Universe, or a modality of Universe, has always been concerned with the place he holds in the process of the Universe. Is he the microcosm of a macrocosm, as the Greek believed? Is he essentially a soul that is in some ways all things, anima est quodammodo omnia, as the Stoics and then the Christians wanted in around the beginning of our era? Is he a 'lice of the Universe', just good enough to introduce the disorder of its indiscreet ambitions and its questionings, as thought some Chinese? Consequently, is it ephemeral, immortal, metempsychotic, what else?
4A. Physical death

4A1. Before biochemistry

In WORLD 1A, that of the Continuous Close and non-scriptural, death was envisaged as the progressive fading and dispersion of the vital breadth over three or four generations after death. Homo was helped in this faith by the conception of animist confraternity of all Livings, humans and animals and vegetals. On the other hand, as singular beings were meant to be a result of plastician forces, and since the images of the sculptor or the painter were then obtained by tracings, the traced masks and statues of the Ancestor ensured a sufficient continuation to guarantee that of the clan and the tribe. Finally, this was made particularly easily that the hominoid specimens were not perceived as 'individuals', nor as 'I and me', but as kinds of 'we'. In WORLD 1B, that of the Continuous Close but scriptural, i.e. that of the primary empires of Sumer, Egypt, China, India, and Amerindia, the Pharaoh's 'mummy' was immortalized by joining to his image (analogizing) the narration (digitalizing) of his titulature and prominent feats. In India, the metempsychosis Samsara was even so tireless that severe asceticism had to be practiced in order to exit out of it and reach the nir-vana (without breadth). Everywhere, death was in the continuity of life, some of its modalities.

On the other hand, in the Greek WORLD 2, that of the Continuous Distant and Totalizing, death was tragic. It even triggered tragedy as a literary style. Indeed, for the classic Greek, who only saw all around them wholes made up of integral parts that stood out from their background, the passage from life to death was the absolute catastrophe, from all to nothing. Since - 460, the Tragic have made death the decisive action of the hero's life, whereas it was still only the conclusion of his days in Homeric epopees. Around - 450, Anaxagoras destabilises his friends when they come to tell him of the death of his child. Stoically, he answers 'that he had always known that he had engendered a mortal', ēidein (eidenai, knowing) tHnètov gennèasas (having engendered a mortal). At the same time, Empedocles denies that there is only 'birth' and 'death'. He attributes these words to the daily language of the nomoi (the laws of men), whilst the THemis (the ontology Justice) knows that there are only ever agglomerations and dispersions of the parts of a permanent Whole, which is meant to be unwaveringly complete since Parmenides said: 'being is, non-being is not'.

As for Pindar's Olympics, still around the same era, they chose to stress on the contrast of the living and the dead as much as possible. In a first while, the most beautiful bodies are exalted in the plenitude of their sporting performances, before their unforgiving decrepitude is marked without transition: 'O Ephemeras! What then someone? What no-one? From a shadow a dream Anthropos?' Epaméroï ! Ti de tis ? Ti d'ou tis ? Skiâs onar anthropos. The 'skia' that is convoked here, the feminine and concave shadow with its fleeting forms, is the most terrible designation of the nothingness for the shiny, masculine, convex, phallic, Greece, which is enamoured with integral parts.

Hence, in - 400, the contrast: death/life, form/formless supposes a drastic solution. The most decisive : the body perishes while the soul subsists. In the Phaidon, Socrates – whilst he drinks and lets the poison take its effect, good-humouredly explains to his disciples, as Plato the narrator insists, that his soul will avoid the injuries of death, being immortal (a) for reasons
of metempsychosis supposed by 'maïeutique' (if our knowledge consists of reminiscences, our soul inevitably comes from an anterior life, and therefore, souls in general stay as a reserve of return after death), and (b) because it participated to Ideas that are *a priori, transcendental, eternal. In the same vein, Aristotle supposed an immortality at least of the intellect agent, noësis poiëtikos, the principle operating abstractions. Sustained by Plato and Aristotle, the belief in the immortality of the soul spreads across the Mediterranean and reaches the Jewish world, which had not given it a thought until then. Furthermore, this immortality was conceived in many different ways, as the first Christians only expected it after the return of Christ, which was awaited shortly.

The immortal *glory* was a roman modality of it. Initially, it was political. The latin *gloria*, a sort of autarkic state, is so self-sufficient that it made physical death insignificant. Upon Nero's orders, Petronius and Seneca slash their veins without protest, only with those refinements that will perfect their glory amongst their circle of friends. In his film *Roma*, Fellini showed this link between glory, Italian lighting, and suicide. It is also glory that convinces gladiators to fight until death before entire roman cities. The notion was at the root of *Fortuna*. Soon, the Christians would say that God had created the world for his 'internal Glory wide spreading in external glory', and the portraits of the Fayoum tombs showed painterly this glance of immortality. Seventeen centuries on, the memory of the Roman-Christian glory saves the characters of Corneille (*Polyeucte*) and Honoré d'Urfé (*Astrée*) and almost certainly inspired Goethe. One afternoon, Eckermann asked Goethe how he envisaged his after death. He bad humouredly replied : "I feel myself such a potent *entelechy* that my disappearance is unthinkable to me". The world 'entelechy' was well chosen. In Greek, *tel-ekHès* (ekHein, telos, en-) means what has the means and the ends *in itself*, in an autocratic manner, as is fit for an integral form on a background from which it stands out, bathed in a light of triumph or humility. Spiritually glorious.

Generally, Homo supposed all survivals relatively easily. So much so that he did not specify its content. The two main exceptions belong to WORLD 1B. The first is the horrors of the after-life detailed in the Sumerian epopee of *Gilgamesh and Enkidou*, as if, in the temerity of the infancy of writing, at the era of the cosmogony of the *Supersage* in -1750, the magic of writing allowed to visit everything, even terror. The other exception is the *Tibetan Book of the Dead*, probably because according to the indefinite sub-articulation of Indian metempsychosis, the confusion between life and death made the latter almost familiar, pictorial, friendly, a momentarily street scene or a fantastic episode of the Mahabharata (in today cinematic Mumbay).

In WORLD 2, the discretion surrounding the survival modes of the immortal soul went so far as to avoid the thematic of *sleep in general*, lest it be alluding at the *last sleep* to be envisaged. Yet Athenian *Anaxagoras* dared say, although it was before Plato : "There are two lessons (didascalias) about death : the time before birth (*ton te pro tou genestHai kHronon*), and sleep (*kai ton Hupnon*). *Shakespeare*, whose language never hesitated, dared speak of "human life as a bird's flight crossing a lit room between two windows opened onto the night".

Furthermore, the same discretion was also used for *birth*. Indeed, when precisely, during the gestation process, are we dealing with another human being? And if we suppose that with each birth, a new soul must be created, when exactly does this creation occur? The question was not relevant to Homo before modern laws started questioning from what point, in the
generation, there is no longer one sole being, as the foetus is part of the mother, but two beings, each with his own distinct legal rights.

The consideration of abortion came rather late, as did the abandonment of a child and even infanticide. It did not occur before the eighteenth century and then, was very much subject to geography. It is thereby very indirectly that it is mentioned – circa 1250 – in Thomas Aquinas *Summa Theologica*. The vocabulary is unsettling but crystal clear. If we admit that there are three forms for the human being, one vegetative, one animal, one rational, all three – seeing the resistance of ‘materia prima’ and ‘materia secunda’ (supra) where they must be inscribed (forma edicitur e potentia materiæ) – can only be borne in a frankly successive manner. **At first**, the foetus is vegetative, **then** it is animal, and **finally** it is rational. In the three texts in which we find this proposition, the three adverbs of succession are so strongly marked that they are rendered using a renewed vocabulary. In a word, this vision, formulated halfway of the history of the western world, the WORLD 2 of Anthropogeny, c.1250, is that of most contemporary laws and rulings when they have to statute on abortion. There is thus probably something obvious in it.

Yet abortion was an event so secondary, or ordinary, to Thomas Aquinas that the item "abortio" does not even figure in Marietti’s index. For the medieval doctor communis, the problem aroused only on the occasion of Christ, the only human being to have had, being God, all three human forms at the same one time.

4A2. Since biochemistry

Biochemical WORLD 3 shook up, for a large part, the fears of death along with immortals. It constantly sees a luxuriant Evolution where each *living* are the temporary specimens of a species, which itself is the temporary relay of other species and genres that in turn are temporary relays of the *Living*. The Living, capitalized at the singular, is this *unique* organism, whose cells, which are perishable and renewable, sororal and mutational, have progressively invaded Planet Earth since 3.8 billion years, and whose genres, species and specimens are state-moments that are neither stable nor unstable, but *metastable*.

For biochemistry, if some living are presential – particularly cerebrated vertebrate and Homo – their presences-apparitionalities-autotranslucencies are transitory, particularly fading in sleep and definitely in the last sleep. Furthermore, even their moments of presence-absence do not belong to the 'entelechies' postulated by Goethe (supra), but to specimens conceived as constellations of interfaces between an interior and exterior milieu, both of which are moving in a metastable manner. The western **I-Me** of WORLD 2 left its place to an **X-being**. [ Anthropogénie générale, ch. 30 ]

Furthermore, it is here a good occasion of remarking that, even in WORLD 2, the elusive character of presence-absence of consciousness had not been ignored or massively negated. So when we hear Bossuet exclaim : "I do not know if what I call staying awake is not a part of a deep sleep that is more excited, and if I see real things, or if I am troubled by fantasies and vain simulacrums". In this passage, he had just quoted Arnobe, a North-African who, in around +300, in the dawn of the Augustinian psychology of depth, had already written : "Vigilemus aliquando, an (unless) ipsum vigilare, quod dicitur, somni sit perpetui portio" (we are sometimes awake, unless what we call awake is only a portion of a perpetual sleep).
However, despite the dispersion of the perceptions and mobility of hominoid specimen, the latter – as many an animal – enjoy a feeling of being 'same', meaning that their experiences are those of one organism, and in some way belong to it and to no one else, or even, are in complete opposition with those of others. Today, we are beginning to see, for instance with Damasio, what the cerebral foundations of such continuity would be, of this 'sameness' of the cerebrated living. Francis Crick, near dying, was pleased to imagine this cerebral hearth of the self in the claustrum (supra), a secretive part of the brain densely concentrating many different nervous relays.

Ultimately, it would mean that there are, in the brain, certain referential and referencing systems that ensure a particular aspect of memories through which these would no longer be solely linked to neuronal chemical modifications that make the short, medium and long term memories (Kandel, 1970), but rather add, to all those memories, a kind of organical continuity. With Homo, the systemic coherence of a technical environement and the systemic solidity of languages would play a reinforcing role there. Chiefly establishing first names and pronouns, such as 'I', 'my', 'I-me', even 'I-myself' vis-à-vis 'you', 'he', and even 'us' 'you' 'they' and of course, 'mine', 'yours', 'his', 'ours', 'yours', and 'theirs', according to morphologic and semantic modalities that greatly vary according to the topology, cybernetics, logico-semiotics, presentivity of great linguistic groups : Indo-European, Semitic, Finno-Ugrian, etc. There are however some universal traits, such as the fact that infants begin to refer their actions to the third person before attributing them in the first person to one of the language forms of the 'I'.

Pronouns, because they directly concern this exercise of 'sameness', are the more declaratively metaphysical facet of languages. Jakobson called them functors, a case where his linguistics borders on ontology. For instance, the Fichte's "Ich bin Ich" (I am Me) originates in the implicit ontology of Germanic Indo-European grammar and supposes some particularities of the German Wille, which is not a simple Latin wish [5C] to a goal, but a pervasive 'Macht' without definite goals and results. The Indian 'tat tvam asi' (you are this <indefinite and faraway>) comes also from the Sanskrit ("the perfect") Indo-European grammar ontology. The famous Greek archaic gnō̂thi sa̔lfō̂n (know yourself) of sage Kilôn led the whole ulterior Western world right to psychoanalysis. Already the introspective French language had transformed it into a "Connais-toi toi-même", the basis of a reflexion that became Maine de Biran's reflexivity.

Marking or not marking 'I', 'you', 'he' are already ontological fates-choices of existence. Here pronouns are rendered by isolated words, elsewhere by simple adjunctions of affix to the verb or the substantive (ell-I, my god), elsewhere by the sole conjugation, as is usual in Italian which follows Latin. Elsewhere still, they are direct or reflective, reflexive, intensive, anaphoric. So French is constantly anaphoric, while English, which gladly suppresses relatives, is not. Decidedly substantivist, French, where the determining term follows the determinated, in opposition to English, enjoys starting off from a dense point on a blank canvas : 'Je pense, j'éprouve, je doute, je nie. Je vis très évidemment et très certainement que j'étais.' (Descartes), 'J'actionne une résistance' (Maine de Brian), 'J'agis' (Blondel), 'Je dure' (Bergson). To the contrary, German starts off from the whole field of consciousness : 'Wo fass ich dich, unendliche Natur' (Goethe), from which it articulates the layers of angles of apparition of the Greek phenomena, the beings as appearing (Leibniz, Kant, Fichte, Schelling, Hegel, Husserl, Heidegger). This opposition has been made, c. 1950, by André Thévenaz, having roots in the two cultures. In L'Allemand, Jacques Rivière had deduced the German phenomenology from
the 'all is possible' of the Wille in Germany, versus the French ontologism of the 'point of departure' from the decisiveness of the opinion in France itself bound to the canonic French accentuation of the last syllable of the phonetic group. For the eyes of Anthropogeny, all human languages are implicit and explicit metephysics fates-choice of existence [Anthropogénies locales, Linguistique, Logiques de dix langues européennes]

4B. Semiotic survivals

Still, even for those who adhere to the biochemical viewpoint of an ephemeral life, not all immortality is abolished. Homo is semiotic and semiotician. Its specimen are perishable, but the signs that are attached, the analogizing images and digitalizing names, have very long term permanence and powers. Furthermore, Homo is intensely intercerebral. Hence, the disaster of bereavement is not the sole loss of an object or a close one, but the shattering of intercerebrality. This means that Hugo's verse of the Booz endormi: "Elle à demi-vivante, et moi mort à demi" can be turned around: "Et moi mort à demi, (hence) elle (still) à demi-vivante". As an exemplary Renaissant, Pantagruel comforts himself that after his death he will continue to 'devise among his friends as he wishes', meaning as he was accustomed. As long as the lover subsists, the loved one is immortal. A saying goes: He that we recall is alive. Yet, he is dead. The conciliation of the two is the requirement of bereavement.

On the other hand, Homo edifies what the Greek call the erga, Latin the opera, French œuvres, English works, meaning objects that go beyond, secularly and sometimes for thousands of years his existence. Through works, each (every one) continues his predecessor in the same way as he will be continued by his successor. These "works" are villages and towns, solid furniture, opus of art, religious or political rituals, and particularly the transcendental in making (supra): Mathematics, Physics and Biology, the great sums of History, the ordinarily millenary Metaphysics. We cannot measure the survival of Homo if we forget how much his actions are inter-cerebral, both temporarily and spatially. The monument is essential to hominoid groups. It is an 'ergon', thematized as 'ergon'. Monere, at the root of monumentum both signifies remembering and preventing.

With Homo, we are continuously measuring the extent to which the visible living are (still and already) invisible predecessors and successors. The Etruscans designed double cities, one half for the living, and the other half for the dead. In these cities, they had placed fake doors that could only be crossed by the deceased. The Roman house remained so intensely inhabited by its ancestors that the word lares defined the two, the house and its Lares gods. Today, our domestic libraries are our Lares Gods. The Parthenon sparkles with its million of past and future contemplators. A little girl is the continuation of her grandmother by wearing her bracelet.

Such is the disconcerting status of great men. 'Mozart' is in the room every time he is played. Nonetheless, however popular he may have been throughout his life, at a time when savant and popular music were not yet disjointed and when one could go from one to the other without changing the audience, 'Mozart' was never Mozart for Mozart while he was alive. In the case of geniuses, the living man and the dead man do not conceal each other because they create new referentials whose range they do not fully grasp, and which will only be objectivized later. In the temporality of Homo, what we know as the present (esse, prae) is a plaiting of
historicities and projections. In the most invading sense, each hominoid specimen is part – or rather is a part – of its living, its dead, its descent, its congeners, and not very much of him. English allows for a fecund reconciliation between corpus and corpse, as though it was necessary to have the status of the latter to accede to the status of the former.

The concept of a Unique Evolutionary Living is the most important since 1950. It contributes to grasping the Universe as an evolutionary suite once-never-again. Has it not always been more familiar than we could be led to believe? Because it is it that actualized the animism of the ascriptural WORLD 1A and even scriptural WORLD 1B in the ’genuit’ that punctuate the Genesis. Insofar as WORLD 3 now extricates the idea of a great continuous Living of billions years. The personal immortalties of WORLD 2, supposing wholes made up of integral parts and detached out of their bacground, appear now as punctual interruptions in the general course of the Anthropogeny.

A suite of implication is then appeasing: Homo is a specimen belonging to a Species, which belongs to a Living, which belongs to a Planet, which belongs to a Star, which belongs to a Galaxy, which belongs to a Universe, or even a Multiverse. The ad-part-enance is here understood literately, adequately, Spinozially.

4C. The intrication of life and death. The rhythm and the rite

Homo encounters and realizes (makes real) the paradoxical relationship between the dead and the living, death and life, in the rhythm. The rhythm is arsis, from the high step, and thesis, from the steady step. It conciliates the being and the non-being in an almost synchronic succession where contradictory propositions live off the other: the absence triggers the presence, and the presence triggers the absence; it is a sort of Baldwin reaction, where a position engages a cancellation that re-engages it as a position. Mental illnesses are these states where a hominoid specimen looses his rhythm (Maldinez). ’Normal’ Homo is rhythmed from moment to moment, even down to the way in which he brings the cup to his lips, the manner in which he stands up, sits down, falls asleep or still, awakens. The animal cannot be rhythmed; it would not know what to do with rhythm, which would embarrass its behavioural evidences.

On the other hand, Homo invented even thematized rhythmisations, among which the most common are poetry and music. In Oedipus at Colonna, the old blind king enters the Obscure Wood pronouncing a last hymn to the Athenian sun in iambus. However, it is in music that the alternation between life and death is most closely thematic. It is remarkable that the last page of the last sonata by Mozart, then Haydn (if we omit a conventional final), then Beethoven, then Schubert is an ultimate addition simultaneously as it is an ultimate annihilation, as though the living universalized their singularity before their extinction. Bach wrote his thirty Goldberg Variations in the sunlight of the major G. These pieces were composed to favour the sleep of an insomniac prince, inducing him into accepting the last sleep. A crippled fifty-years-old, set on hastening her death fantasizes it as a ’return to Great Nature, in a Patagonia desert, to the sound of Vivaldi’s Four Seasons’.

Here, the rite can reduce the rhythm to a few rules, schematize it, and hence adapt it to the unanimity of communities and vast societies. The rite of the old Inuit woman who, incapable
of chewing skins, walks on the ice field at night, a *defunct* living, meaning that she is discharged of her useful functions (fungus, fungi, off, off function). The rite of the child playing unrestlessly hopscotch. The Plato's *Phaidon* tells us that Socrates' last words were a recommendation to his disciples not to forget the rite of sacrificing a cock to Esculape. The last order of Emperor Augustus, the greatest of politicians, required that the end of his comedy – the sung banquet of his life (com-oedia, kômos, after banquet feast, and oïda, öde, song) - be saluted by clapping, the most elementary exercise of the rite: *Plaudite, amici, comoedia finita est!* Beethoven, who knew that a symphony occurs between two silences, repeated the same formula in the same circumstances.

**Chapter 5 – Homo's and the greed of ultimate justifications**

In a World whose uses overlap him, Homo still has a mastery, a last resort, that of *doing well*, thinking that he *must* do well. A possibility that seems attainable for a technical and semiotical primate, the technique and the semiotics being articulated following 'ends and means'. That supposes also that Homo can do evil, and we find an *original sin* almost everywhere. Good and evil are relate to an underlaying ordre of the World, an Indian *dharma*, to which Homo can confront himself. Greek Stoics made an ontology, and even an epistemology and a logic to confort their moral. The same intention sustains Hegel's *Great Logic*. Aristotle's *Metaphysics* – hence that of the western world – is dominated by the firm belief that "the final cause‘ (the ultimate goal) is the noblest of all causes". In China, this was in no way denied by the *Analects* of Lao-tsu, Lie-Tsu, and Confucius.

**5A. Divine moods**

To quench this thirst of justification, in the ascriptural WORLD 1A, Polynesian Homo reassured himself by coinciding with the *Mana*, a universal vital principle, according to a few rites of his clan or tribe.

In the scriptural WORLD 1B, in Mesopotamia, the Justification was to participate – always ritually – to conflicting parties, early a cohorts of Gods. That until the Egyptian *Aton* stood out for a brief moment as master of all gods, around 1350 BC, announcing the Mesopotamian *Marduk* celebrated at the top of the seven floors of the ziggurat of Mesopotamian gods, circa 1150 BC. As for the Hebraic *Ell, Yaweh-Adôn-aï*, he was more jalous than Marduk, and forbade the Ben-éi Israël to adore any other *EL-ohim* than he. He inaugurated an unpredictable relationship with his people, and Hosea, one of the first prophets (~ 750), describes him as telling : "I will undress her naked, I will make her like the desert… She ran after her lovers, and she forgot about me… This is why I shall seduce her, I shall take her to the desert, and I shall speak to her heart… There, she will answer like in her days of youth, like in the days when she went up to Egypt". Homo's justification was to obey his God's
unpredictable moods. Abraham, known as the father of believers, had to kill his son for no other motive than a divine order received, accepted, finally interrupted. The tower of Babel was destroyed because it undermined the power of the jealous God. This jealousy seemed so crude that the Targoum amended the original tale. In other primary empires, the gods were rather despotic too.

5B. The THemis of the western logos

A revolution intervened with the Greek WORLD 2, a Cosmos which demanded wholes made up of integral parts. The justification of Homo wanted to draw its fundament from a rational Justice to which, in Empedocles, the gods or the god themselves had to obey. This was the THemis, a justice emanating from the Being as Being, without common measure with the Nomoi, these simple practical laws of the cities ruling economic and political divisions (gr. nemein, to divide). When, in around Year 1, the Greek transcendents were absorbed by the Christian Transcendent (supra), the Greek THemis was personalized to the extent of being frequently unpredictably, under the traits of the Byzantine Pantocrators. The Themis and the Transcendant begun to coincide peacefully with Plotinus (+250) and +Augustine (400).

Since Archimedean seventeenth century, Homo sought justifications that were enunciable in rigour and merged the principles of Justification and the principles of Physics. This gave way to panic among the casuists. But it also engendered visions of eternity. With Descartes, the required action was enlightened by the 'perfect'. With Leibniz, by 'Necessary'. With Spinoza, by the 'Substantia' that gave way to an Ethica more geometrico demonstrata. By combining casuistic and metaphysics it was possible to promulgate a 'Natural law' that begun at around 1600 and that will one day become the 'Rights of Homo' (les droits de l'Homme) for the Latin. To the contrary, the English Empiricists, who were more biologists than they were legalists, only perceived in the THemis a 'predicamental' generalization (supra) of customs that were useful to Homo, as crudely expressed in Hobbes' Leviathan. Without aiming at 'Rights of Homo', which suppose a metaphysical conception of Homo, this was more modestly the prelude to 'Human rights', which paved the way to 'Animal rights' according to the successive consensuses of the successive societies.

Finally, Kant – in the same way as he had established fixed transcendentals in knowledge – acknowledged a transcendental in morals, preparing epistemologically for a transcendental in making (supra). Indeed, his Kritiek der Praktischen Vernunft contains the famous proposition: "Act in such a way that your personal maxim may become a principle of law (Gesetz) that founds Man'. Fichte – in the work of which Kant recognized himself sufficiently that he favoured his first publication – even stated that the THemis hence constructed by human Will is not the daughter of the Being, but its originator. These are the 'conditions of possibility'of Morals making the proprieties of the Being. Hegel concluded this pretension by putting the Substance and the Conscience on the same level, to the point that force and law coincide historically in the end. In the Hegelian way, Homo was ontologically justified up to his contingent historical feats. Maybe up to his meanest acts.
5C. The Germanic 'Wille'

This meeting of Kant, Fichte and Hegel, without forgetting Schelling, invites us to insist a moment on Germanic moral. The latter is destabilizing for the Latin, but is consonant with many other morals of the anthropogeny. Let us refer - in the force of their original language – to the Niebelungen, from which Wagner made a Ring, the Ring der Niebelungen.

The Latin 'Voluntas', and justification, pursues goals. Aiming towards the final cause (ultimate goal, finis ultimus debitus), it seeks success and conquest, triumph and glory. To the contrary, the Germanic 'Wille' suffices to itself. Fichte has just told us that it is a primary and ultimate substance. There, the Schicksal, which French rather rapidly translates into destiny, is etymologically a geschehen (letting be), that is so intensely accepted and assumed that it becomes Geschichte (history), without even seeking an accomplishment. At the end of the day, what desairs Hitler is not defeat, but the failing of the German people's Wille, where Berlin burns in apocalypse, like a painting by Altdorfer. "In the world of fatality where he moves, nothing, not even what men call success can serve as a criteria" (Goebbels). This mixture of momentum and no-hope, in the tradition of German – and perhaps even Celtic – illuminism, was – according to its first theoreticians – the essential reason for the seduction of Nazism. Already, right after the First World War, Jacques Rivière had noted in L'Allemand the frequency of the 'Das ist mir egal'. It is this Wille of all possibilities, 'beyond good and evil' that produced in Germany – between 1730 and 1870 – the vastest musicians, and – between 1780 and 1830 – the vastest metaphysicians of the history of Homo. Theoretically, metaphysics, and practically, music, are the most infinite openings for the Possible as such or for the pure Possible.

However, also in India, the Baghavad-Gita suggests to Arjuna to kill his brothers indifferently. We know of Nero's philosophical joy as he witnesses the burning of Rome. And the artistic joy of Cezanian painters when they looked upon the Provence pines flaming up in the skies. Dostoyevsky conceived Raskolnikov from the same pen than Aliocha. During classicism, Rodogune's Corneille, where a mother kills both her sons through ambition of power, notes in his Examens that "if we do not admire her actions, we admire the source they proceed from". Jesuit Joque, who was ritually cut in pieces by the Iroquois, fraternizes with them, and, after resting in his country for a while, returns to Saint-Laurent River, perfectly aware that they will start the torture all over again. A little before, in Honoré d'Urfé's Astrée, Célideé slashes her face with a diamant in order to be loved for what she is, and not for her appearance. In 1916, a letter by Teilhard de Chardin tells us of his mystical sentiment among the mass graves of the Somme at night-time. As for Apollinaire, he sung the poetic (metaphysical) illumination of bombings. In India, that all is ritualized every day for every one in the most popular Cult of Shiva.

We see, the Germanic Schicksal is only a better-documented key to an universal of Anthropogeny. We shall note that Jesus of Nazareth, the hominoid specimen who triggered the greatest sacrifices of adhesion and the most powerful artistic and metaphysical edifices in West and Middle-East, or still, who triggered through Paul de Tarse the dream of a universal human-divine intecerebrality (Corpus mysticum), was precisely, according to a scholar thesis – after the man-god Alexander the Great – a crucified god-man. Resurging from their flailing and dismembering, the Egyptian Osiris and the Greek Dionysus had opened the way.
Piero della Francesca's *In hoc signo vinces* is possibly the major painting of the Western world. It depicts Constantine on the Milvius Bridge as he founds the Empire on a Christian cross at the end of his extended arm. A cross with a high strut is possibly the most powerful plastic respondent for the body of Homo, the transversalizing and lateralizing primate. In Vinci's Homo, the extended arms are the high strut. This christian roman crux gained in intensity – one that is even political – because it carried a human being that was nailed onto it. This throws a light on the antropogeny, a light that required the entire invention of projective geometry by Piero. Rubens's *Elevation of the cross* in Antwerp is the baroque response.

"Perfunctorily she caressed her cross (...) She stood between two fluidities, caressing her cross", we read about Lucy at the end of *Between the Acts*, posthumous writing in which Virginia Woolf anticipates her own suicide by drowning (1941), leaving her glance wonder on floating water lilies in a fishpond below, under which the fish swim across streaks of shade and light. This goes to prove that, in a Roman spirit (see Fellini's *Roma*, after reading Seneca and the *Satiricon*), some suicides result not from despair but from ultimate accomplishment.

5D. **A female saint of WORLD 3**

Yet, for biochemical WORLD 3, Justification – whether ontological, epistemological, judicial, or voluntary – has lost a great deal of its prestige and consolations. Where indeed should its place be in a biological Evolution that is technician, then semiotic, but always luxuriant, resulting from billions of connections, disconnections, disparate delaminations, whose creativity can only be verified in a second while and then, only hypothetically. Where should we still situate a 'natural law'?

Still, Homo is so thirsty for ultimate justification that, even in a biochemical evolutionist environment, he seeks for absolute duties. He then no longer speaks of 'ends' but of 'values' that he would have to transmit. And, as he needs an ultimate, intangible, and particularly biochemical value, it is very often 'Life' capitalized. Life as something sacred or the Sacred itself. In the name of a Hippocrates pledge that never existed, the living prolong the 'comfort' agonies of the dying to justify the continuation of life. Or, more naively, so that the sacred Life can continue to serve them as a unconditional sufficient Justification. For many, euthanasia has assumed the role of original sinn.

The saint of WORLD 3 is then Etty Hillesum, who forbids herself any judgment, knowing that there is no consolation. Concretely, she does her best for her Jewish brothers in Westerbork, but never condemns nor only judges the Nazis who deport them as she waits to be deported herself. This time, there is no moral apart from an Opening that goes so far that it would destabilize God, in the kinship of Jobian judaism : "Dass man soviel Liebe in sich hat, dass man Gott verziehen kann". Knowing that the morals of the Universe infinitely overlap ours. That appeal only exists in the Amen of an X-being who accepts that he shall never be I, but sometimes inter-cerebrally We. Seeing that there can only be cybernetic and semiotic degrees of freedom that are only sufficiently compatible sometimes to appear as being intentions. In a Universe where Justification no longer lies in the *embracing contemplation* of WORLD 2 but in the *admiring surprise* of the once-never-again events of an evolutionary Universe, or even of a Universe as Evolution.
Chapter 6 - Western unconditional ontological freedom

In all logic, this chapter should be attached to the former. The postulation of an unconditional ontological freedom was Homo's supreme effort to obtain an absolute justification. Yet, its range encouraged us to deal with this subject separately.

6A. The anthropogenic triggers of unconditional ontological freedom

Extreme forms of freedom are a western specificity. Indeed, the western world was alone in daring such a violent break with nature. These liberties were implemented through great detours. First came political freedom, that of the civilly free (eleFtHeroï) of Greek cities, from Solon to Pericles. Then came speculative freedom, that of Pythagoras and Anaxagoras 'bios théôrètikos', where each one, apart from any influence, decides what is true and what is false, as in Descartes' Règles pour la direction de l'esprit. Then came moral freedom, let us say from Euripides onwards. These three liberties were perceived as increasingly autarkic until, in – 250, Archimedes introduced a determinist vision of physical phenomenon. In contrast, political, speculative, and moral decisions only seemed more and more autonomous.

Most importantly, circa Year 1, the Mediterranean favoured religions of salvation and damnation that supposed a radical, ontological freedom. Indeed, we cannot be damned or saved for eternity through actions that would largely depend of exterior conditions. It is essential that, as a last resort, the responsibility of the damned or the chosen should escape every conditioning. Adam and Eve's original sin – which had until then been considered as a ritual fault, a mere disobedience to an all-powerful, arbitrary order – was reinterpreted as ontological, proceeding from a fully deliberated choice.

All of this caught the attention of Homo, since the Stoics, onto a fourth freedom, the freedom of choice. In the first while, the latter is mainly moral but becomes secular with the development of money, the universal neutral exchanger. It was particularly the case when the bank of the prime Renaissance designed credit letters that were exchangeable, which gave a limitless opening to desire. From then on, everything was accessible to all, according to the Fortuna, first a capricious goddess, and now the business of everybody's spirit of enterprise. The freedom of choice had first focused on the salute and moral excellence before invading everyday life. This was perfectly suitable to Homo at the end of the middle ages. Indeed, since Year + 1000, he felt himself to be a co-creator of the Creator, responsible for a world that he was to manage for a long time, as Christ had not returned. With German illumism, the Germanic Wille spread its metaphysical perfume, opening the possibility of all possibles, even that of the possible as such. With Fichte, the conditions of possibilities of free will ended up dictating that of the being. The only thing to do was to design legal freedoms, which would realize this freedom common to all men in the State, according to a natural law and these
'declarations of human rights' that the Napoleonic armies brandished left, right and centre. Hegel is responsible for the metaphysics and logic of this Right and of this State.

However, after 1900, Homo, not content with choosing between values that were already established by a God or a Reason, wanted to create these values himself by means of an institutes freedom. This was the Sartrian freedom that is so good at ignoring every conditioning that its author dared write an Esquisse d'une théorie des émotions where mesencephalic emotive reactions were dismissed through the distinction between the passive 'je suis ému' and the active 'je m'émeus' of the French language. Hence, in the work of Sartre, the unconditional ontological freedom experienced its climax when the autarchy of presence-apparitionality first reared its head. We have already stressed the acquaintances between these phenomenons.

6B. The two antinomies of western freedom

Unconditional freedom, where we recognise a requirement of Christianity as salvation-damnation, was in conflict with another request of the same Christianity, of a transcendent god that was all-powerful and omniscient – hence prescient – creator ex nihilo, and consequently radically responsible of his creation and his creatures. How is it possible to be prescient and all-powerful if your creatures are truly free? How can you not be responsible for the sin of a creature that you created ex nihilo? This was a first aporia. On the other hand, since the triumph of Archimedean science in the seventeenth century, how is it possible to conciliate an unconditional freedom with the strictly determinist sequence of the causes and effects supposed by Galilean physics? This was a second, secular aporia.

Pascal, great physicist but Christian before all, was only sensitive to the first aporia. Crystal clear as he always was, he then made the distinction between: 1) The Calvinist solution, in which God damns or saves without retort ; 2) The Molinist solution, after Jesuit Molina, for whom man is the sole responsible for his damnation; 3) The Augustinian solution, as understood by the Jansenists – that counted Pascal amongst them – for whom God first creates a Saved Adam, who then disobeys and damns his descent through his 'original sin', then God comes into Jesus Christ to save a certain amount of damned, those to whom he grants his 'efficient grace' that operates the salute, and tough luck for the others, who are nonetheless advised to continue doing good deeds. No-one knows if one is saved, like in Lutheranism. Was the original sin an irrational allegation? To the contrary, with Pascal, an exacerbated rationalist, reason is supposedly so naturally reasonable that its patent irrationalities in the present world indicate that there had to be an initial ontological and epistemological catastrophe, the sin of the first couple. Those reversals filled the hundred or so pages of the three Ecrits sur la grâce, an exercise of logic that is even more equilibristic than the Provinciales. As for the second aporia, the incompatibility between unconditional freedom and determinist Galilean physic, it particularly grabs the attention of Spinoza's generation, which was monosubstantialist, and of Liebniz, which was monadologist.

Kant inherited of all aporias at once, not without worry as he felt that they made his entire system 'scabrous'. The anguish increased as he was progressing in his Critique of practical reason, where, from chapter to chapter, he convinced himself increasingly that there
was – whatever he might do – an unconditional freedom that was guaranteed to him through the "voice of conscience" and the resilience of some "categorical imperatives". This intimate conviction shook up the conclusions of his *Critique of pure reason*. In the latter, he thought that he had sufficiently demonstrated that every event in the world – hence in our actions too – requires – to be an "object" of theoretical knowledge – thus to be causally conditioned as a cause or an effect (following *a priori categories* of the understanding), in both space and time (following *a priori forms* of sensitivity). On the other hand, his pietism would protect Kant from forgetting the difficulties that the unconditional freedom caused to the all-powerfulness and prescience of God.

Then happened the illumination. And if, to conclude, pure reason would lay in the "*phänomenal*" of exterior actions, while practical reason, that concerning unconditional freedom, would operate in the "*noumenal*" of the interior action? In that case, everything became clear, he thought. Indeed, this should suffice to appease the determinism of Newton, the physicist. In the same while, it would preserve the unconditional causality of a free Homo and of God creation as an act (vs. the creation as a product). The act of creation could only be "noumenal" (in the order of "noumena", defined supra) as it was divine. No, indeed, the two Kantian critics not only did not contradict each other, but were reinforced mutually. Consequently, the only thing to do was to write a third Kantian critic, *The Critique of the Faculty of Judgment* (*Urteilskraft*) that would take into consideration these unparalleled experiences in the aesthetic experiences, consisting precisely in the feeling of concordances between theoretically knowable phenomena and practically postulated noumena. Dazzling opportunity to verify that Nature and Homo correspond in some way one another because they proceed from one same source, often too roughly called God. The aesthetic joy, a disinterested and cosmological pleasure, sometimes occurs before Nature, particularly before the show of a starry sky (Kant first had the idea of Galaxies), or before works of Art, whose function it is to thematize and condense these correspondences (rhythmically ?) between things and spirit. This is what the Gracious obtains through the comforts of balance, and the Sublime through the intervals of transcendence. The usually reserved Kant son intensely confides that he exulted.

After the enthusiasm of Fichte, Schelling and Hegel, and also of the young Beethoven, in Heidelberg, let us not forget Schopenhauer, Nietzsche >and Wagner, the Kantian confidence was shaken up by the progresses of experimental science and the technical inventions of electricity, radio waves, steam engines, and photography. Kant's questions and answers then appeared to be inaccessible or gratuitous, except to a few, including Lachelier, and they were all too quickly forgotten. However, metaphysical questions systematically come up and, since 1950, with the rapid development of biochemistry, the aporias of freedom reappeared, albeit displaced as to their formulations and answers.

6C. The questions of contemporary biology to the Western ontological freedom

6C1. The indefinite multiplication of cybernetic freedoms

Since 1950, cyberneticists have spoken of the 'degrees of freedom' of a machine or a process. Geometers have always spoken of 'dimensions' and (particularly since 1900) of dimensions as degrees of freedom of a system. Poincare exemplifies this very well when he
insists, around 1905, on the six or seven dimensions that should be invoked to describe what occurs in the movements between the tip of the fingers and the shoulder of a human being. The fact that Homo's body is transversalizing encouraged the concept that there are three dimensions: width, height, and depth. Assuredly, the 'liberties' of geometers and cyberneticists are not the same as the unconditional liberties of metaphysics. However, they could have the same connivances.

We have said this repeatedly, for the view of today, the living Universe does not so much depend of moulding – which have rather reduced degrees of freedom – than of sequences and (re)sequences, for instance, between amino acids and proteins, which are capable of triggering myriads of cybernetic degrees of freedom. So much so that, independently from any indeterminism, the renewal of cells, neurons, techniques and semiotics create hominoid specimen that have nothing in common with the Digesting Duck, an eighteenth century automaton, that had very indigent degrees of cybernetic freedom because they were technically constructed, moulded. Kant put this device forward to trigger the horror of a human being that was completely subject to motives and devoid of unconditional causality. That is no more the case with formations (Gestaltung) by (re)sequenciations.

6C2. The nimbus of decision

Without having to invoke "noumenal" sources, our decisions, from the most common to the most complex, in addition to some barely defined and rarely considered motives, seemingly originate in simple action images, which are visual, auditive, even tactile, gustative or olfactory, simple or composite mental images. This occurs without the motor image having to impose itself, but only renewing itself or taking some fleeting consistency amongst the endless connections, disconnections, cleavages, and re-conversions of our brains.

On this subject, let us recall a few banal experiments. (a) After lifting the little finger voluntarily twice or three times, one only need to evoke the mental image of this movement for the finger to lift up a certain number of times, without a new decision. (b) Less trivially, someone in wartime is asked to join the Resistance, hesitated for weeks, and then finds himself one fine day, without ultimate decision, walking down the stairs leading to the recruitment office. The image, pregnant or multiple, of the stairs decided 'for' him, remarks a resistant forty years later. (c) The person who, in the morning, hesitates to get up finds himself being up, without motivated decisions. He only needed an image of his morning actions, or of his stepping out of the bed, or still, the memory of the hands on the clock to cross his sleepy mind. (d) The suicide by drowning of Virginia Woolf follows, without further deliberation, her mental images of familiar fishes under the water lilies of a cesspool [VC]. In these four cases, it is enough to take into account the fact that these inducting images collaborate with a countless amount of other automatisms of an organism and its memorated environments, whithout invoking a millenary belief to a substantial soul autonomous from the body. The process encouraging criminality in which, year after year, increasingly focused images and verbalizations interweave, is subject to the same explanation of the final resolution.

Hence, nothing is less clear, thereby less unconditioned, than human decisions. This blur generally does not need the warped stories of our childhood or of an unconscious, nor does it need particular repressions, but simply connections, disconnections, endless divisions of our brains in their successful, failed, waiting compatibilisations. Freud probably foresaw this when
he looked at the first photographs of neurons and of neuronal connections (Golgi, 1902, Ramón y Cajal, Nobel in 1906), long before he even knew the immense decisional influence of neuron-mediators.

The Neurophysiology of the second half of the twentieth century, to which Kandel (Nobel in 2000) so brilliantly contributed by heading, for over twenty years, the fifty professors of Columbia who drafted the successive editions of *Principles of Neural Science*, observes not only one unconscious, but *billions of local and disparate unconscious* that, mutating in milliionth of seconds, trigger our actions and feelings, from the greatest to the subtest. Accounting for our endless *mood bifurcations*.

It also explains – as there are cleavages and connections – these *fixating, fixed, cumulative perceptions* whose anthropogenic role is to convey the paranoiacs supporting the great collective projects that are Nations and all types of Parties: "a *we-group supposes an out-group*" is perhaps the only law, but how essential, that sociology ever yet discovered. In everyday life, and with tempered subjects, the field effects attached to the utensils of Technique and the signs of Semiotics dissolve, relaxe, disperse sufficiently the paranoid maestrom. But by fixed fixators subjects (or brains) the maestrom is frequently unbeatable. So the "steel cold logic" that, in *Mein Kampf*, Hitler expected from any great politician. Or his vertigo before of the void of the East (Toynbee). Or still the Lacan's fascination before the Significant in the Sign. On the contrary, the confinements of Kafka's *Castle*. The irresistible conjunction of the knot of a lasso on the soil and the fragile throat of a little girl in Robbe-Grillet's *Voyeur*. Complaisantly linked by himself to what he called "critical paranoia", the Salvador Dali’s temptation of pushing a little girl balancing on a parapet.

6C3. Rational guilt

The predicator who, after appalling his audience with the pains of hell, concluded in the same breadth that *never a human being had been lucid enough to commit a mortal sin* – a fully deliberated action – was very judicious! Indeed, what infinitesimal mental click decided that, out of these two school friends, one should have gone, ever exquisite and thoughtful, to die on the Russian front under Hitler's orders, whilst the other, who had been taken to a fascist meeting, always remained hermetic to this type of vertigo although he was interested in the spectacle. Hannah Arendt, possibly because she shared this perplexity, was ill at ease during the trial of Eichman, an Unjust tried by the Just before him. Or that this friend, declared Just of Israel after the help he granted Jewish children during the War, would laugh out loud when he noted that, for our brains, there is just one small leap, and certainly no virtue, between contrary choices. Marguerite Duras repeated that she could not find a difference in France between the motivations of a communist in 1965 and a collaborator in 1940.

Yet, Homo is thirsty for *Last justification*, and human societies need to see and punish the Injusts to find the confirmation that they, the Just, conduct a Justice, even an ontological Justice. Kant went as far as to postulate an after-life that would carry-out an ontological Justice because it was not conducted on Earth. Our jurors still bravely decide whether a criminal is 'responsible' or 'irresponsible', reminding us of the Christ of the Last Judgments in the tympanum of cathedrals. Seeing the archives of judiciary writers, it is easy to understand that, for the viewers that they must reassure, the crime is not this exception, whose 'glory' Genet sung. To the contrary, crime is an essence, almost premeditation. It has been the singularity of
Roman Law that the *culpa* and the *peccatum* were in it a mere social stumbling, which received (entailed, involve) the whip or the cross, but not 'deserved' ; Pontius Pilatus washed his hands. This detachedness supposed the most efficient political pragmatism that ever was. That of Rome, solely preoccupied not by tHemis, but by glory, beyond good and evil.

6C4. The ontology of evil

In all times, almost everywhere, sin has had whiffs of ontology, related to *pullulating demons* or a unique Shatan affronting a unique Yahweh, which was quite suitable for the Manichaeism of the Iranian empire. An unfathomable problem then arose with Christian Transcendent, whose attributes were the four transcendental: one, true, good, active (supra). How was it possible to insert a true principle of Evil in such a perfect tissue? Already, the Latin *culpa*, that yet was only a local and incidental failure, raised questions in a world where, according to neo-platonician Augustine, "each leaf of the trees would be a note of God's music". What could then be said of a refusal of Good because it is Good, and of choosing Evil because it is Evil, like the Christian Satan did, he of Hugo's *La fin de Satan*, which significantly can be found in the same volume of the Pléiade than the *Légendes des siècles* and *Dieu*? As always, Augustine took the response full front. What else could we conceive than evil as a sort of internal limitation of the Being (the Good), as a certain non-being that did not alter the Being? Somewhat following the model of mathematics according to Plato, where the Multiple was realized through restrictions of the One. The neoplatonism decided that the evil was like shadow vis-à-vis light, the sole substance, the sole "ontôs on" (beingly being) of Parmenides (Thomas Aquinas, Dante, Fra Angelico).

The problem reached Spinoza's *Zelstandigheit* (ndl. 'the quality of holding <staan> by oneself', wrongly translated into 'substantia'). With the latter, the couple : unlimited / limited being couple was then replaced by the couple : adequate idea / inadequate idea, giving the epistemological principle : 'omnis determinatio est negatio' its ontological strength. The *Zelfstandigheit* possesses *attributes*, whose two only we know with Descartes, Space and Thought, that are distributed in *modes*, which comprise determinations, hence internal negations. Having an *adequate idea* of something consisted in situating it duly in this ontological and epistemological set, geometrically demonstrable. So that pleasure and pain procure the same happiness.

Finally, since 1900, metaphysics found a new ontological recourse in the idea of decompression. In Valéry, every conscience is a *decompression* in the massiveness of the Being, through which it no only commits but is literally an original sin, following a whispered fissure in the terrestrial paradise by Satan's penetrating sneaking in the careless plenitude of the initially naked Eve : "Cette parfaite m'apparut", says the Snake. *Sartre* follows Valéry by defining his For-oneself (mobile consciousness) as a decompression of the Within-oneself (the massive Being), implying a kinf of nullification. In 2000, René Lavendhomme, mathematician and logician, but here poet who wrote *Alphes*, went as far as to give birth to the Being itself from the *decompression of nothingness* : « C'est en plein milieu de rien que, comme par décompression, surgit la nécessité / C'est dans la nécessité que surgit l'improbable / C'est de l'improbable que surgit le champ / C'est du champ que surgit l'extase / C'est de l'extase que surgit le tout / C'est du tout que, comme dans un soupir, surgit le rien ». 
Hence, we could be led to believe that, on this chapter, the lat. *indicia* of poetry are easier to understand that the lat. *indices* of metaphysics. Unless there is a Universe as Evolution, or an Evolution as a Universe, whose all the degrees of cybernetical biochemistry are easier to understand than poetry.

6C5. *A responsible 'I', as a microcosm in a Cosmos, or a Universe locally-temporally specified in a metastable 'I'*

We shall not lose sight that what appears in the contents of consciousness is in no way our cerebral functionings, but the Universe itself in one of its portions, a portion that is put into form through the perceptive-motor functionings of a singular nervous system in such or such a state-moment. For a Theory of Relativity and a Theory of the Quanta, a Universe is not an ensemble of portions, but indeed a continuous and discontinuous spatial-temporal globality where partial neguentropies (the singular beings and acts) may be defined as *samples* or *viewpoints of Universe or Multiverse*. About it, there is however a significant difference between Homo and the Animal. With the latter, the portion of universe in apparition is an *Umwelt* in the restricted sense of von Uexküll, i.e. without horizon, whilst in Homo, it is a *Welt* in the sense of Heidegger, where a transversally and holosomic organism grasps simultaneously its momenteneous objects and the Whole from (in, over) a *horizon*, a close-open limit.

Then, what we call a decision – whether spontaneous or reasoned – is no longer a causality intervening on the background of a Universe imagined as unconditioned. It is indeed the *evolutionary Universe itself in one of its portions*, one of its viewpoints, one of its state-moments, one of its phases, one of its sufficiently tight bundles. It is not by mere luck that the Topos Theory should be introduced by a *Theory of the Bundels* (Théorie des faisceaux) in René Lavendhomme's *Les lieux du sujet* (Le Seuil, 2000).

The current idea of particular existences as plural specifications of the Universe is not completely new. Already, the Leibniz of the *Monadologie* saw singular beings as original viewpoints *on, in, of* the entire Universe, sort of partial derivates from the integral of integrals: God. For his absolute rationalism, all in last resort could only be necessary (*necessarium*), meaning *not being able not to be*. God was the necessary Being per se, and any derivative creature was at its grade also necessary like one of the best 'com-possible' among the 'world of all compossibles'. Hence, from all eternity, "the victory of Issus has been analytically comprised in the grammatical and ontological subject 'Alexander'. All the derivative substances (Leigniz was as fond of multiplicity as Spinoza of unity) will be called *Monads*, whose *freedom* was "their discernability", thematical in highly presential beings as Homo, implicit in the most humble *Monads*, almost "asleep".

Nevertheless, the correspondance between necessity, discernability and liberty was disturbing, and Leibniz never dared to expose it totally and frankly while he was alive. Indeed, like for every human being before our Biochemistry and its Gestaltung (formations) by (re)sequenciations, all conceivable creature was the result for him of a modelling. Now, what could be the "liberty" of a creature deriving by a necessary modelling from a God defined as the Integral of all integrals.
6C6. Caracterology and factorial analysis

The notion of character (gr. ἱKaraktèr, engraved figure that is delimited and not alterable) dominated the entire WORLD 2. This since Hippocrates's four moods (iHumoi), Theophrastus' KHaraktères, Plutarch's Parallel lives, Tite-Live and Tacite's portraits, right up to the Caractères of La Bruyère and the characters of Molière's Comédies (l'Avare, le Misanthrope), or still, the portraits of Retz and Chateaubriand. A breath of ease submerged the audience as Retz said of Madame de Longueville: 'of the spirit she had the fine and the turn'. Under the effect of experimental psychology, this reading of human conducts led, during the first half of the twentieth century, to Caracterologies. There the differences play the game, for instance, between leptosomes and pycniques, psychotics and neurotics, hysterics and obsessives, sadists and masochists, and even sado-masochists. All this ensued from an Aristotelian ontology of the substance, which had very few faculties (memory, intelligence, will), which in turn produced actions of reduced types that were easily sortable and classifiable.

Yet, in 1950, Le Senne's Caratérologie, distinguishing actives / non-actives, emotives / non-emotives, primaries / secondaries (twirling / persevering) was the last production of the genre, which definitively gave way to factorial analysis. For the needs of a psychiatry that had become planetary, and where the manic-depressive to be treated could be an aboriginal Australian or a Viennese bourgeois, it was necessary to find traits that would be perfectly describable and rigorously communicable globally. We would then look to see whether there was some sort of 'factorial' correlation between the aforesaid traits. These correlations would ideally bear the name, for the sake of perfect neutrality, of a conventional number, even if this meant that sometimes more descriptive designations would be chosen, such as 'bipolar', more neutral and disponible than 'manic-depressive'. The formulas 'he is intelligent' or 'he is brave' no longer meant anything, as there are thousands of different intelligences according to the individuals, and that each individual alone comprises millions of comprehensions and blocks.

Then, the 'symptoms' being defined (none of which is deemed 'normal' or 'abnormal'), remedies had to be found when someone was suffering from them. In the event of truly grave sicknesses, drugs would be prescribed to the patient controlled by blood tests or other very sensitive evaluations. Any psychologism, whether romanced or mythological, is evacuated. What would have Retz said had he knows that Madame de Longueville's gestures depended of neurons and synases put together, playing with billions of connective, disconnective, cleaving, assembling and reassembling elements that are only somewhat channelled by the rigidities of the technical and semiotic systems that are the most frequent motives. Such was the ambition of the DSM, today DSM-IV, conceived and developed in the sixties.

Sometimes, there was a need to pinpoint major traumas, such as a bombing, a massacre, a jump of genetic switching, or the consequences of heavy microbial or viral infections. However, it was mostly a question of simple cerebral 'bugs', which were rather local and easy to pinpoint, sometimes failures of training, as phobias, or muddles of technical and semiotic compatibilities. Generally, four of five phases of paradoxical sleep that shake up the system a little and allow it to find new balance are enough to solve the problem in one night. However, the bug sometimes persists, for instance when it is the result of permanent circumstances. Hence, idiotypical incompatibilities, such as those formalized by Bourn and Lavendhomme (Guises et Schizes, 2003) according to the Local Logic of the Topos Theory, discribing Freud's
Lucy of the *Studies on Hysteria* torn apart between two irreconcilable *idiotypes* (loci, discursive universes) : 'I am the girl of the house / I am the house maid'. To Freud's great surprise, Lucy had been cured instantly under his very eyes, in a definitive and total manner, without any palpable intervention on his part. Indeed, in this case, the *idiotypes* were so obviously describable and blatantly incompatible that the mere presence of the therapist suffices to thematize and resolve the conflict.

Thereby, since the seventies, it was thought that therapy was frequently a matter of a *Semiotic treatment of the crisis*, or of *cognitive therapies*, or of another hundred therapies that are sororal, as all trigger the same partial shakings and same clairvoyances. Since the theses of Freudian psychoanalysis (the dream as an accomplishment of desire, the child as polymorphous pervert, distinctive libidinal stages, Oedipus complex, etc.) were ruled out by neurophysiology and the modular views of language, technique and behavior, as Freud himself had foreseen it, some distinguished psychoanalysts declare today bluntly (marking the passage from *WORD* 2, concluded by Freud, to *WORLD* 3) that they are content with using the "séance" as an opportunity to speak, while noting that speaking of a past is often redoubtable for an organism for which *memory* as a whole – that we shall distinguish from the *memorations* and *re-memorations* – is the biochemical status of a brain in a present (Kandel studies of Aplysia, 1970).

In any event, all this is a long way away from classic 'characters', supposing faculties and substances. And further still from Kant's 'noumenon' and Sartre's unconditional "pour-soi" (for-oneself) versus en-soi. For sure, *discarding unconditional freedom* as the ultimate justification of Homo. [Anthropogénies locales, Sémiotique, 6, Théorie sémiotique de la crise]

### 6C7. The non-me of contemporary novel

Contemporary novel by itself illustrates the fading away of characters. Proust readers around 1920, who moved in the same circles of society as he, could still image the characters of Monsieur de Charlus and Madame de Guermantes : 'Were they so aristocratic, or a little plebeian?' *Proust* is a contemporary of Freud's "Es, Ich, Uber-Ich" and the substantial continuities of Bergson's 'concrete duration'.

Already in 1940, in the *Virginia Woolf* of *Between the Acts*, there no longer is a 'character' of her own Lucy, but only openings or closing of water lilies, fishes that swim beneath, hence crossing volumes of shade and sun, where "now the jagged leaf at the corner suggested, by its contours, Europa", waiting until "There were other leaves. She fluttered her eye over the surface, naming leaves India, Africa, America, Islands of security, glossy and thick", until the game "between two fluidities" ensued in "the delight of the roaming eyes in the early morning". The effect was that not Lucy, but another organism amongst which her name floats, another water lily, be invited, bearing this time the name of Virginia Woolf, into a suicide by drowning, as her ultimate accomplishment.

Similarly, in 1951, the two first lines of Hemingway's *The old man and the sea* confirm this psychology devoid of psychologism in a more popular manner: "He was / an old man / fishing / alone / in a skiff / in the Gulf Stream, // and he had gone eighty-four days now / without taking a fish". What is there, what acts there, what creates the narration is : the planetary Gulf Stream, its great fishes, a boat, an old man's body, days going by, encouraging words of the
isolated fisherman in difficult moments, a giant fish that ends up harpooned, his *big game* body struggling and standing on the waters like Life and the whole of the Living, putting away the great corpse of the fish along the boat, the progressive feast of the sharks at night-time, the stream that takes the boat back to the harbour, the carcass and the fishing gear taken to the beach in one last effort, the return to the cabin, the bed where the sports newspaper is opened at a page relating Joe DiMaggio's efforts in the Big Leagues, an image which the old man had kept in his brain to best harpoon the monster with his bloodied hands and arms, finally, sleep with the recurring dream of a lion "the old man was dreaming about the lions". We will only learn of the species of the great fish in the reply to a tourist who was asking what the bones lying on the beach were, ten lines before the end of the book: 'Tiburon', 'Eshark'. A shark representing the entire Shark. Far away from the Kant'noumenal subject, this consciousness, apart from its presence-absence-apparitionality-autotranslucency, is nothing else than a chain of events, of local-temporal specifications of the Universe, which, following the thickness or neuronal connections, deconnections, cleavages, has become presential in a particular point or bundle (faisceau) of its space-time.

And we could confirm the death of psychologism by stopping on Claude Simon's *Route des Flandres* (1960) and Salman Rushdie's *Satanic Verses* (1988). But we shall go straight to Luc Eranvil's *Zelsa* (2000), where the disappearance of the character is definitive. What 'is there' is not even fishes or water lilies, with their vague "roaming eyes", but biochemical and neurophysiologic *interfaces* between organisms and their Universe. They are the bipolar cells of eyesight, Corti's hearing organ, the cenesthetic operations of digestion, the kinesthetic delights of the motor limbs, where the *characters*, these collections of interfaces are each, literally, pieces of *syntax*, of the great Syntax that generally links the fluxes and cuts of the Universe ("Il n'y a que des flux et des coupures", wrote Gilles Deleuze). A grammatical syntax that is still astonishing, where the Eranvil' propositions go forth in overlapping of the following by its predecessor in a sort of syntax and semiotic overlapping, where every separating punctuation is excluded. Homo is there as a collection (bundles, beams) of all the waves of the air, the oceans, the galaxies, the interstellar prostitutions, the images, the sounds, and the languages. Homo being almost as indifferently man and woman as Zelsa her/himself, a great sea captain not excluding the transsexuation. [Anthropogénies locales, Cosmogonies contemporaines, 5, Littérature, Zelsa, l'univers dans le dos, The Universe behind]

However, if the disappearance of the *character* is devoid of any pertinent sense, the phrase : 'He inherited his grandmother's intransigence' is non-sense, but the phrase *he inherited his grandmother's smile* still bears some meaning. In Borgès *Le Sourire l'Almutassim*, circa 1950, a pilgrim goes around the world searching for fragments of a smile that he hopes will allow him to reconstruct a lost smile. And it is true that the fragments of the fathers' smile can be found in the smiles of his sons, grandsons, and granddaughters and, for the eyes of the angels, to the thousandth generation. Indeed, even organs resulting of the (re)sequentions of RNA-DNA, must obey to the 'structural stabilities' (René Thom) of the seven elementary catastrophes, and today other imperatives of the proteomics (1997). Smiles, even when they are triggered by the millions of degrees of the cybernetic freedom of billions of neurons, keep the physiological and anatomical constraints, hence permanencies, that the 'characters' of traditional psychologism never had.
6C8. Individual or unending individuation

Instead of characters, we could have spoken more radically and generally of individuals. Symptomatically, the word 'individual', from Latin 'individuum', un-divided, was introduced with its everyday sense only in early seventeenth century in England and in late seventeenth century in France, declaring the bourgeois fate-choice of existence, at the same time as the 'character novel'. However, Gilbert Simondon's *L'individu et sa genèse physico-biologique* (1964) aimed to show that nothing in our Universe is ever individual, nor even frankly individualized, but is always only a process of individuation(s) requiring a new logic that he called 'allagmatic'. Simondon – a scholarly physicist – certainly knew these Markov chains and processes, where the future status of a system was determined like that of a stroll in a bush or that of a Brownian movement. He dies in 1922, and we shall remember that, among the articles Einstein wrote in the fatidic year of 1905, one related to the Brownian movement.

But we are still speaking of physics. Simondon's allagmatics, required by the process of endless individuation, will have to be infinitely more complicated than Markov had anticipated. Indeed, (re)-sequentiation, which concerns the technique and the semiotics of Homo as much as his organism, combines the extreme unpredictability in the future and the very long-term necessities in the past. On the other hand, it moves forth by evolutionary steps that are assured, although too multiple to be decisively enumerable. All things that – if we untangle something – bring us the promise of new, sumptuous logics. In 1960, this biochemical allagmatic was still blinded by the physicist problematic that had supplied the paradigms of the first half-century. Simondon did not see this in 1964, neither did I in 1962's *Nouvel Age*. [Anthropogénies locales, Ontologie, 4, De l'individu aux individuations (Gilbert Simondon). Et [Local Anthropogenies, Phylogensis, 1. Priority of Technique : The New Age, 1962]]

6D. The avatars of the event (chance, occurrence, happening)

A good way of concluding this first part, over the metaphysical questions set up by Homo, the angular primate, is to survey the ideas conceived by him over the event as such. Indeed, for a human population, the event (venire, ex) is his fundamental experience, determining essentially its ontology, epistemology, the couple life/death, and finally the justification of its conducts. Our survey will not exceed the limits of WORLD 2, and consequently of the indo-european languages. It is obvious that other views could be found in the ascriptural WORLD 1A, in Africa and Polynesia, and for sure in the scriptural WORLD 1B, that of the primary empires, China, India, Amerindia. We will proceed abruptly, because in this case abruptness stresses illuminating contrasts.

GREECE

1. The event as necessary being, in other words as an absolutely stable reality, now immobile, then mobile but consisting in necessary and understandable happenings. That's the being according to Parmenides (*to on*), even the "beingly" being (*to ontós on*), whose the only
opposite is the not-being (*to mè on*). Expressed by the indo-european root *Es* (sanskrit *asmi*). This fate-choice subsist somehow still in Spinoza and Leibniz.

2. The event as **fall and shock, collision**, the pros-pipitein (to fall against) of the powerful mathematician Democrites (young when Anaxagoras was old). Such an event takes place between massive, indivisible elements, atoms (*a-toma, temnein, to cut, negative "a-"), moved by the action of a neutral force (*kenô bia<*>). The cosmical results are angulous, and even the sphere is describable as an angle (*spHaïra ôs gônia tis*), and a cylinder is a modality of the pyramid. The being/not-being of Parmenide gives place to the couple full/empty. The fullness is determined as (a) form, (b) size, (c) orientation, (d) sequence (*skemasin, megetHesi, tHesei, taxei*).

3. The event as an **encounter of substances**, sustaining **faculties**, that generate **operations**. Foreseeable operations when the series are homogenous, unforeseeable when the series are heterogeneous, like a tile rolling from a roof upon the head of a wanderer. Aristotle calls this case a **tukè** (gr. *tunkaneïn*, encounter), falsely translated by hazard (Monod, Freud).

4. The event as **stochastic** when a precise goal is intended, but with an unescapable fringe of error, like in a javelot throw.

**ROME**

5. The event as a mere **chance**, i.e. as a pure fall or cadence (lat. cadere, to fall), but a chance more or less unprevious, even if its causes are physically determined. Lucrecius, the poet of the De natura rerum, was a disciple of Democrites through Epicurus. But here, as it was convenient in Rome, and in contrast with Greece, the aim is more politically guessing than strictly ontological and epistemological.

6. The Roman event, being rather political, presupposes a of "may be" and "perhaps". Thus a good or bad "fortune" (forte, mays be). This fortune is often a goddess, **Fortune**.

7. The Roman event as being a chance and a fortune, intervenes sometimes among a predetermined number of possibilities, like in a game of die-dice (alea). In french, it will be called "aleatoire", a framed chance.

**ISLAM**

8. The event as **hazard**, since under the fate of Allah strictly transcendent, all-knowing and all-determining in advance (every happening is already "written"), all kinds of the Roman chance intervene henceforth among a predetermined number of eventualities. Any occurrence is a **hazard (dice) sensu stricto**, the predetermined result of a throw of dice (al-hzrd). So that today "hazard, hasard" will usually and erroneously designates all the nuances of the chance (Monod, Le hasard et la nécessité). Why? As an effect of its powerful phonosemy (H-A-Z-A + RD)? Of its sacred implications? O the size and lenght of the arab medieval conquests? In any case, the thriving morphology in english, **die-dice-dies**, suggest a thriving semantics.
GALILEAN PHYSICS

9. The event as an interrupted hazard game whose the gains have to be distributed following the bets and the throws, in the realm of a theory of numbers. That is, circa 1650, the Pascal's "calcul des probabilités".

10. The event as resulting from the errors adjuncted to any experimental process. Determined by Newton circa 1680.

11. The event as determined as to its occurrences when intervening among large numbers of other occurrences. The term statistics appears in english around 1779 (Webster's)

RELATIVITY AND QUANTUM MECHANICS

12. The event, like a stroll in a forest, thus a "Markov chain, in which the probability of future states depends only on the present state of the system, or of the immediately preceding state, and not on the path by which the present state was achieved" (Webster's).

13. The event, like a Brownian motion, "resembling a Markov chain, except that the states are continuous", and called Markov process (Webster's). (Let us not forget that the Brownian motion was studied by Einstein in one of his seminal articles of 1905).

14. The event as quantal, when it cannot be considered as a set of proprieties independ of the instruments and the acts measuring them. In the interpretation of this fact by Carlo Rovelli, la "mécénique quantique relationnelle", since 1990, the Universe is composed not by proprieties, but only by events consisting in relations comprising a measuring protocol and a measured. Thus, the locality is not univoque.

GOULDIAN MACROEVOLUTION

15. The event (change, occurrence, happening) as evolutionary chance, as defined by Gunther Eble in a seminal article (1999) : on the dual nature of chance in evolutionary biology and paleobiology, "Paleobiology 25". During the last hunderd years, he said, the Evolution of living species has been enlightened by statistical approaches, in the spirit of general statistics (1770), compatible with the gradual evolutionism conceived by Darwin. But, since 1980, the Evolution understood as a series of controlled equilibria, by Eldrege and Gould has inaugurated another kind of chance, whose Eble has collected significant examples in his abstract on "randomness and nonrandomness" (AGI/geoREF).

For an anthropogeny, the distinction of the two chance (statistical and evolutionary) is essential, but the example are not confined to paleobiology. Are of greater importance the formations (Gestaltungen) by sequences and resequenciations now added to the traditional formations by modelling and carving, and illustrated chiefly (a) by the fundamental case of proteins resulting by (re)sequenciations of amino acides, and (b) by the partial or radical reorganization of cerebral neurons by connexion, deconnexion, cleavages of neuronal sets. The (re)sequenciations as a principle of formation (Gestaltung) aside with the antique modelling-carving is anthropogenetically the most onological and epistemological revolution since the origin of Homo. Beginning one hundred years ago, but more and more sensible since the studies of Kandel on the Aplysia (1970) concerning memory and learning, and concerning formations and (re)formtions since 1953, and decisively today when the term proteomics.
appeared in english, in 1997. This seismic cultural event is a perfect conclusion to our first part, introducing the second, on metaphysics.

SECOND PART: METAPHYSICAL BEHAVIOURS

Chapter 7 - The metaphysical process

Metaphysics first appeared in texts, which supposed a certain status of writing, that, strangely enough, imposed itself roughly around the same time on the Planet (circa - 500) in what Karl Jaspers called the 'axial period'. The latter runs from the China of Lao-Tsu and Confucius to the Amerindia of the Olmec, through India, Persia, and Greece. We shall not mention Africa, as it was not scriptural. Still, metaphysical texts first surprise because they consist, for the most part, in general indexations and indexes. Indeed, we read and hear there: finite and infinite, closed and opened, close and faraway, interior and exterior, eternal and engendered, immanent (remaining in) and transcendent, etc. This immediately brings us to think of mathematics, i.e. the general theory of indexations and absolute practice of the indexes (lat. index, indicis, versus indicium, indicia). [ Anthropogénie générale, ch. 19 ] Many metaphysicians were mathematicians, particularly topologist mathematicians, and e converso.

Yet, there remains a decisive distinction. The indexations and lat. indexes of mathematics are pure, which means that they are devoid of any indiciality (lat. indicium, indicia) and of any conative charge. On the contrary, the indexes and indexations of metaphysics are generally strongly indicialized and conative (charged). Each metaphysics is then characterized by its balancing between indexation and indiciality, and by the direction of the slants that it establishes between the two. We shall see this in a Greek example, with Empedocles, and in a Chinese example, with Lao-Tsu.

7A. Western indicialized indexes: Empedocles

The metaphysic of Empedocles, like that of every other metaphysician, can be summarized in very few sentences. (1) The Being is complete. According to Parmenides, it is a whole, to which nothing can be added nor removed. (2) Consequently, there are none – in the Cosmos – of these births or dead mentioned by the nomoi – the laws of men. According to the Themis (which expressed the laws of the Being), there are only proximities and averting. (3) These proximities and averting are due to the Attraction and the Quarrel, or Aphrodite and Neikos. (4) The elements of the Being are in fact states of the Being according to its degrees of
density. Four elements dominate: solid, liquid, gas, ethereal, or what everyday language calls Earth, Water, Air, and Fire. Or, if we prefer, Hera, Nestis, Adeneus, Zeus.

Here the shifts between indices and indicia are obvious. (a) Our first phrase consists in pure indexations and indices, which will be the object of mathematics: the whole, the limit, the addition, the removal, the opened, the closed. (b) Our second phrase remains in the same area, as 'proximity' and 'averting' belong to topology. (c) Our third phrase begins with physics, even Newtonian physics, since the proximity and the averting can be explained by attraction and repulsion. But here too we have the intervention of indicialities and conative charges, since attraction and repulsion are divinized into Aphrodite (Love), and Neikos (Quarrel). (d) As for our fourth phrase, it is physics still, as it distributes matter according to four degrees of density that are Archimedianally indexable, purely, mathematically. Yet, this time, the degrees are no longer solely divinized, but they are psychologized. Ether is an enflamed, brilliant Zeus (argès). The invisible Air is Adonis, assimilated to Hades, the God of the Kingdom of the Dead. The Water flows in the tears of Nestos (Thrace River) through the sources. The Earth, who bears life (pHeres-bios), is Hera, wife of Zeus. We have not really left Hesiod's Theogony. And Aristotle notes that the language of Empedocles is still 'Homeric'.

7B. Oriental indicialized indexes: Lao-tsu

These shifts between indicia and indices do not only exist in the western world that privileges the convex. We also find them in China, which privileges the concave. The Chinese language is paratactic, devoid of articles, erasing grammatical classes; it is a sort of Go game of glossemes. It is conveyed by writings that are so intense, so conative, that the edits of the emperors Song are worthy of the Song paintings. Now that we have been duly warned, let us browse through Lao-Tsu's Tao-te-King, and let us begin with the verse [VI]: 'The genie of the valley does not die. /// There lives the obscure Female. /// In the slit of the obscure Female / resides the root of the heavens and of the earth'. And still: [VIII] 'The scorned position is close to the Tao'. [X] 'By opening and closing the doors of the heaven, / can you play the female role?'. [XI] 'We mould the clay to make vases, // but its use / depends on internal Emptiness'.

Here again, we shall be taken aback by an initial mathematical concept: the cut Geometrically of course, but arithmetically too the cut is a notion so fundamental that Conway offered to construct all the numbers from the cut intervening between two empty sets. Furthermore—and this probably explains that—the cut is one of the two basic neuronal actions: connections / cleavages (cuts). There is no Universe without (quantum) cuts, said Schrödinger. [ Local Anthropogenies, Semiotics, Mathematics and sexuality ]

Yet, this key-indexation of Lao-Tsu also indicializes itself. Its cut is the slit, a slit that, like a door, is capable of opening and closing, which means that we are still in physics. However, it is more precisely the door (slit) of the obscure Female or, according to the fecund ambiguity of Chinese, the door of the female Obscurity. It is a cut then; but a cut that is obtained by the re-entry of the vulvae lips rather than by a simple trait of writing, to an extent that this topology offers a moral, that where the moralist metaphysician now privileges the scorned, feminine position. This position is inferior politically, but superior ontologically and epistemologically, as the Heavens and the Earth— we are told— take their roots in it.
Where ithyphallic (itHus, erected, phallos) Greek sees a landscape as peaks standing between two valleys, the Chinese language, sensitive to reciprocal conversion of yin and yang, that is to the Yi of the Yi King, sees valleys, i.e. 'the feminine, place of affluences' between the peaks. To this extent, the obscure Female is so much the origin of the Being that it is she that, in Chinese characters, will mark the essence of the things. To say 'the horse as a horse', the Chinese scribe would stick to the character of the horse (ma) that of the female sex (ghē). China, empire of the Middle, is hydraulic and abdominal as opposed to Japan, which is insular, volcanic, and pectoral. Lao-Tsu says again: [12] 'The saint looks after the belly, // not the eye'.

7C. The prevalent gravitation of indicia and indices

Alongside the weight of its indexations and indicialities, a metaphysics is characterised by the direction of the journeys that it privileges between both, going from indices to indicia, or from indicia to indices. Plato represents the first movement well, going from the a priori to the a posteriori, and Aristotle the second, going from the a posteriori to the a priori. Raphael understood this perfectly when, in the middle of his Athens School, he shows Plato lifting his index finger towards the skies, hence proposing to grasp everything from ideas, and Aristotle turning a hand towards the ground, attentive to the engendering and to the parts of animals (De partibus animalium). It is hardly surprising that metaphysicians usually go by twos, one pointing towards the top whilst the other points downwards: Plato and Aristotle in Greece, Lao-Tsu and Confucius in China, Çankara and Ramanuya in India, Avicenna and Averroes in the Islam, and Descartes and Kant in the classic western world until, in 1930 the phenomenologists Husserl and Heidegger.

Chapter 8 - The metaphysical discourse

The metaphysical process evidently commands the rhetoric of metaphysicians. We shall recall their semantic, hence their use of words. Then, we shall recall the order of their argumentation, which is sensible right to their syntax.

8A. The equivocity of metaphysical semantics

As far as semantic is concerned, it is obvious that the shifts between indexations and indicialites favour the equivocal. Aiming at the absolute and the fundamental, the metaphysicians attempt to give an illusion of univocity, required by their indexations. Yet, their
indicialities cannot be deprived from the riches of the analogy. The crossing of the two multiplies equivocity.

8A1. A short anthology of the case

With Pascal, we calculated that the french word 'heart' had ten different meanings, although he knows what talk means. And what semantic gusts of wind do we find in the non-breadth of the Buddhist nirvana? What today, under the term of 'consciousness', sets apart the consciential contents from the consciential presence? Furthermore, let us recall that the Latin conscientia, which was moral, only started to come close to its current sense at the end of the seventeenth century with Malebranche and Locke, where it is still only a property of memory. Who also thinks that 'Deus', 'Gott', and 'God' are in no way the translation of each other, Deus designating the Principle as intelligible and intelligent light (*dies, day), Gott the Religious rite and in particular the libation (pouring) of the verb Giessen (Kluge), and God most often 'the supreme and ultimate reality' (Webster). So much so that the expression 'do you believe?' is a merely social, not a metaphysical, question. Temperament or politics are not the only reason why so many Frenchmen, when thinking about 'Dieu, Deus', flatter themselves to be non-believers, whilst many Anglo Saxons consider 'God' as evidence that you can hear right to the noise of the tires of a lorry on the road, as wrote Kerouac in the first lines of On the Road. What meanings have we not put in 'transcendence'? Particularly when we muddle up 'transcendent' and 'transcendental', the latter (as we have seen) having multiplied its implications in the course of the western history.

The equivocity of the metaphysician is not innocent, as for instance when Socrates calls 'ψυχή' this part of himself that will survive his death. In Greece, the psychè, like in Latin anima (that will give us the French âme – soul), designates the vital principle, a warm and sensitive principle that is unrelated with the cold transcendental ideals whose associating ensures its immortality here. Turned to the body, the psyche should indeed be perishable as the body it vivifies. Why did Socrates not choose 'pneuma', a principle that is purer still, or even the 'noûs' of Anaxagoras, as when Aristotle will distinguish a 'noûs poïetikos'. The task of the latter, in the phainomena (beings as appearing), is to abstract the species and the genres. But psychè means that Plato intended to win from every aspect, as anima will do later. In this manner, a hot and mobile principle (the vital principle) can be simultaneously living and immortal because it sheltered or associated with a cold and fixed principle (ideas). The marriage between hot and cold helping each other. An entire metaphysics.

Besides, the Anthropogénie has to note Homo's taste for equivoco in every area. In polemic and politics assuredly, but even in exact sciences, as soon as they step aside from their technical (instrumental) or mathematical formulation to abandon themselves to the daily language. When Lamarckian and Darwinian biologists opposed the adaptation in Evolution, how many wanted to remember Waddington's useful distinction in his preface to René Thom, between anterior adaptation to mutation (Lamarck) and posterior adaptation to mutation (Darwin)? Today, philosopher biologists enjoy characterizing the living by its plasticity, whereas, since 1950, we know the extent to which these plasticities (that of proteins or cerebral neurons) result from (re)-sequenciations (that of the chains of amino acids, or that of activated or inactivated neurons) that invite to a metaphysic that is not only plastician, but largely sequential. Homo enjoys the equivoco because it gives him the freedom to think what he
wishes. The pure indexables of Armimedian physics were put to the side for seventeen centuries, from – 250 unto + 1600, because of their unforgiving univocity.

8A2. The impossible metaphysical translation : 'I will be as I will be'

Obviously, in metaphysics, translations are even more equivocal than the originals. Aristotle's *noûs* (poëtikos et pathètikos), which is epistemological, has nothing in common with Anaxagoras', which is ontological. Yet, in French we translate both into 'esprit', which does not suit either more than their English translation into 'mind' that sends us back to memory and prevention (mind the step).

Let us look closely at the most famous case of impossible translation. In Exodus 3.14, Moses asks Yaweh the name that he will have to give him when he will claim to represent him before Pharaoh. And Yaweh, YAWA, responds in four consonants, at least in the square writing *Aleph + Hè-Yod-Hè*. Chouraki, eliding the initial Aleph (probably because it is a blocked consonant that does not exist in French and that has nothing to do with the French vowel 'a') transliterated: è-y-è, in a vocalic manner, whereas a consonantal transliteration such as h-yod-h would have been more faithful. In the Hebrew alphabet, there are no vowels, only consonants. In any event, it is indeed a theme that designates the being, and that is applicable – as is conjugated – as much to the current being as to the being in becoming: to be, to become (*Biblical Hebrew*). The God that Moses will put forward is not an essence – in the manner of a platonician idea – or a yin-yang, or a Great Axiom. Here, before every determination, the divine is an affair of *concrete being*, that prepares Aristotle's *being as a being*. A new theology is born.

Still, if we take into consideration the initial aleph, the 'h-y-h' theme takes the *imperfective* aspect at the first person of the singular. We know that Hebrew biblical verbs do not have our three tenses: present, past, future, but that they have two aspects, as the old indo-European and current Russian: the *perfective* (for what has been accomplished), and the *imperfective* (for what is not accomplished). According to today's mentalities – hence temporally – the perfective covers the future perfect and pluperfect, whilst the imperfective covers our ordinary future and our present. On the other hand – and this is perhaps not indifferent – the first person in biblical Hebrew is not determined by genre – in contrast with the second and third person that all have a masculine and a feminine. Let us summarize. Yawey, in his response to Moses, designates himself as a 'being-becoming in the first person with no explicated genre'. Not only he is, but he is historical, plunged into the events that sometimes he decides, and sometimes he endures, both with great moodiness; still nothing of the all-powerful prescience of the Christian God. It has often been said that the popular success of the Bible is linked to its eventful character.

Now we must note that YAWA enunciates his definition twice. The second time – which we have just read – is in one block: *aleph-h-y-h*. But it was first pronounced in a redoubled form that was virtually reduplicative: *aleph-h-y-h // asher // aleph-h-y-h*. The latter, which Chouraki transliterates by 'asher', marks an equivalence that the French language sometimes translated into 'as' and sometimes as 'what'. Whatever the case may be, it is not an Archimedean, analytical equality. Let us not forget, it intervenes in a milieu that is used to the word *TA'AT* that translates the 'for' in the 'an eye for an eye, a tooth for a tooth' of the Hammurabi Jurisprudence of – 1750. Yet, the 'for' marks a dynamic, innovative equivalence, in any case one that is interpretative in the Talmudic mind. YAWA is therefore aimed at by an all-divine
symmetry of two symmetries \( (\tilde{e}/\tilde{y}/\tilde{e} /// \tilde{e}-\tilde{y}-\tilde{e}) \) that befits the mnemonic echoes of Semitic texts, of which Jousses displayed the phono-Semitic fecundities, but that this time comprises a becoming, an opening: \textit{ashêr-ta'at}. The reader of the \textit{Genesis} has been initiated to these many effects from the first two words : \textit{B-R-aleph-'Sh-t /// B-R}, often transliterated \textit{beroshit bera}, "au commencement créa", which sufficiently marks the alliteration : \( b-r \) (adverb), \( b-r \) (verb), that covers : (a) the beginning of the world, (b) the action of creation, (c) the commencement of the text that will give the text its Hebraic title : \textit{Heading}.

We shall agree that all this is untranslatable into an Indo-European language. However, when the language of the Mediterranean became the common Greek (\textit{koinê}) (in around – 150) the Alexandrian biblists had little choice but aim to supply, if not translations, at least evocations of Hebrew. They specifically did this in this Greek language which, around - 700, following its 'integrated wholes made up of integral parts', had invented the present, the past, the future, these \textit{verb tenses} that will give us history according to Herodotus and Thucydides, then physics in the manner of Archimedes. This was the \textit{Septuagint}. We find its powerful echo, around + 110, in the \textit{Apocalypse} of John of Patmos, where we read :\textit{Egô eimi to \( \dot{\alpha} \) (first letter) kai to \( \dot{\omega} \) (last letter), legeï kurios o \( \dot{\hat{H}} \)os, ho \( \dot{\alpha} \)n, kai ho \( \dot{\omega} \)n, kai ho erkHomenos, ho pantokrator. \textit{I am the alpha and the omega, the being (ho \( \dot{\alpha} \)n), the who was (ho \( \dot{\omega} \)n), and the who will come (ho erkHomenos, masculine), the all-powerful}'.

The performance of the \textit{Septuagint} is remarkable. (a) We meet again the \textit{substantial being (\( \dot{\alpha}n, \dot{\omega}n \))} of the Hebrew. (b) The addition of the \textit{erkHomenos} (coming going) saves the touch of becoming that the initial \textit{aleph} of the imperfective added to \textit{h-y-h, ë-y-ë}. (c) The omnipresence of the Divinity is suggested by the present, the past, the futur, but also by the addition of a participle, an indicative, a median voice. (d) The masculine article prefigures a masculine personalization of the Divinity. The final 'pantokrator' continues the Jewish YAWA something humoral, yet preparing the snag of a creator ex nihilo, thus radically responsible for everything, in a creation not avoiding the illness.

Finally, around +400, the Latin of the Latin Vulgate of Jerome, a contemporary of Augustine, will definitely move to the western theology. \textit{Ego sum \( \dot{\alpha} \) et \( \dot{\omega} \), principium et finis, qui est, et qui erat, et qui venturus est, omnipotens}. The \textit{finis}', which is almost Aristotelian and Thomist, goes hand in hand with the \textit{est-erat-venturus est} succession that definitively evacuates the 'aspects' of the archaic Hebrew verb to the profit of the Greek 'tenses'. The Greek's article \textit{'o'} has frankly become a very relative 'who'. \textit{Omnipotens} continues the 'pantokrator' less despotically. Yet, the famous \textit{King James version of the Bible} will be reduced to saying: \textit{I am what I am}'. Its French equivalent, after a very long time lapse of \textit{je suis celui qui suis – I am who I am}, is now \textit{Je serai comme je serai – I will be as I will be}. This last sentence could be that of a drunkard when he assures that he will not change his mind. How to escape the fact that every metaphysics, vertiginous at the start, is condemned to a \textit{Trivializierung} said Heidegger.

The Semitic metaphysical resources of Hebrew are found in the Arab of the + 640 \textit{Qur'an}, where the snares of consonants without written vowels clinch the reader-singer. \textit{'ALL-A-H'} is as despotic as \textit{'Y-A-W-A'}. However, the moods of Allah are no longer historic, horizontal, and thereby somewhat mediatizable in the spirit of the \textit{Israël half-desert}. It occurs in the heart of the \textit{Arabia full desert}. It is vertical, of a thundering singularity, devoid of historicity and without any projected mediation. We borrowed the names of constellations to the Greek-Romans (Perseus, Cassiopeia) ; to the Arabs, we borrowed the names of isolated
stars (Altair, Aldebaran), notes Eva de Vitray-Meyrovitch. Jonas cheated Yawa, but no-one conned Allah. The complete omniscient Truth is written is advance ("that was written!")", it is virtually punctual, only indefinitely repeatable as it is, and tautological like most of Muhammad's abjurations on the 'Awakened' and the 'Erasers'.

For having recognized this Arabic truth not only in the Starry skies but in his own Intimacy, ' ана al-haqq' (I - the Creative Truth), the Sufi Al Halladj will be executed in + 922. We shall note the kinship of his formula with Augustine's 'Deus interior intimo meo' of + 400. We shall also note the passage of the eastern heat (intimo meo), invented by the Mediterranean luxuriance during the four first centuries AD, to the barren thundering of al-haqq.

8B. The slippery metaphysical syntax (Plato)

However, the syntax rhetoric of metaphysicians is no less sly than their semantic rhetoric. We shall focus on one case in the two lines of Plato's Timaeus that are well worth their while as they dominated the western world.

Ei men dè kalos estin ode o kosmos / Ho te dèmiourgos agathos // dèlon ôs / pros to aidion eblepen /// ei de // Ho mèd'epēn tîn î Hemis // pros gehonos. Let us translate a little : "if on one part (ei men) surely (dè) this world is beautiful, / and its artisan is good, // it is obvious that (dèlon ôs) / the artisan looked to the gravitation of (pros) the eternal, /// otherwise (ei de), /// - but this is Justice for anyone not to express it, - /// towards the gravitation of the (pros) engendered". For more than two thousand years, neither Aristotle, nor Augustine of Hippo, nor Anselm of Canterbury, nor Thomas Aquinas, nor Descartes, nor Spinoza, nor Leibniz, nor Kant, nor Hegel could add anything to these two lines.

Under the condition that we note that there were three forms of justice in the antique Greece. (a) That of the no moi of every city, who would rule over the distribution (nemein, nomos, sharing) of the land and of powers according to the politeia (constitution) of each polis. (b) That of the Nomoi, related to the sharing of the humanity as such, claimed by Antigone when she wants to offer funerals to her brothers who betrayed the Polis, against the laws (nomoi) of the latter defended by Creon, and that we shall capitalize to signify their supra-spatial and supra-temporal character. (c) Finally, that of the Being as a Being, hence of the 'Ontological Justice', the THemis, a goddess daughter of Uranus (the sky) and Gaia (the mother earth) that Plato invokes to direct the choices of his Demiurge. The root *THe', that of the verb ti-thêmi, lying down, establishing – marks well that the Themis is the principle of every foundation and fundament, of every cosmological order as such.

To succeed in this fulguration, Plato assuredly enjoyed the virtues of the beginnings, just like it was the case for Lao-Tsu and Confucius. With him, for the first time, a human being was in charge (in around – 400) of deploying nakedly and completely the metaphysics of Greek WORLD2, a world where the Being is a Whole made up of wholes, which are themselves made up of integral parts. To succeed, he enjoyed the benefit of a language of the same mind. One that was indo-European, very explicitly syntaxic, that authorized compounds substantives and verbs, one that would thematize the distinction of verbal classes (substantive, adjectives, verbs, adverbs, etc.), and, contrary to Latin, that had indefinite and definite articles that could intervene
right up to the verbal forms (to on è on, the being as being). Finally, that particular Greek was written in a writing that was so complete (consonants and vowels), so identical in its heights and its widths, so neutral in its tracing, that it was — for the first time with Homo — like a mirror without accidents. It was transparent in its wordings, hence to their designated too — the being or the 'Being of the being' or the beingly being (to ontós on desired by Parmnides). Finally, the accepted logic was also in the same mind: that of the law of excluded middle in the disjunction (either...or), versus the Chinese 'wu' (an inclusive disjunction). How could wholes made up of integral parts admit a logic other than that of the excluded middle: or p... or non-p' (duoïn tHateron) ? Socrates, when roaming the streets, had spent most of his time locking away passers-by in the claws of the excluded middle: 'if on the one hand... or if on the other hand'?

Let us then begin: 'if on one hand'. Ei men, announces saying later Ei de: 'if on the other hand'. What shall our first hypothesis be? We need not hesitate: a world that is a whole made up of integral parts and that clearly distinguished its forms from their background can only be beautiful: 'that world is beautiful', kalos estin ode o kosmos. Let us not forget that, for a rational technician like the Greek artisan, if the world is beautiful, its artisan must be good. This time, our first hypothesis is complete. Here it is in one go: 'if on one hand this world is beautiful, and the artisan is good', Ei men kalos estin ode o kosmos, dèmiourgos te agathos, it is obvious that we have an evidence, and we can come to a conclusion that is equally evident; 'it is clear that', délön ós.

Indeed, if we now question how the artisan of this beautiful, good world managed to make it, it is obvious that he could not have relied on tactile, olfactory or gustative, or even auditory factors, which are all too fluent and thereby opened to all the confusions of the background and of the form. No, he could only be guided by visual factors, the only ones that were capable of strict, and even fixed, delimitations. Amongst our senses, vision is the only one capable of tHeôrêin (embracing with one embracing look), as the theòria wants. All this is so obvious in Athens around — 400 that it is even useless to repeat it, and we can thereby go to straight to our first conclusion: 'Evidently (délön ós) that < the Artisan (dèmiourgos) > looked towards the gravitation of (pros) the eternal', délön ós pros to aidion (eternal) eblepen.

In conclusion, all has been said. However, as Homo only really understands by contrasts, we still need to consider the second hypothesis of the excluded middle dichotomy: 'if on the other hand', ei de. But there, a catastrophe awaits us. Indeed, that hypothesis is monstrous, unconceivable, unnameable: 'this < this second hypothesis >', ho, 'for any one', tini, not saying anything of it', méd'eipein 'is ontological Justice', THemis. Or more simply: 'but this second hypothesis, for anyone, is for THemis to keep silent about'. Unfortunately, a Greek could not keep quiet. Greece invented in Homo the logical heroism, the same that forced Xenon of Elea to declare loud and clear that the arrow will never reach the wall, because, in any point it reaches, it will always have the half of the remaining space to cross. Thereby, too bad for the THemis, the unspeakable must be said, the inarticulate had to be articulated, albeit furtively of course... We will therefore not repeat the subject (o dèmiourgos), nor the verb (eblepen), not even an article before the infamous term (to). We shall abide by the two absolutely indispensable words, which we shall only whisper, in a mumble: 'toward the gravitation of (pros) the engendered', pros gegonos.

What tragedy, what comedy in these three lines! We are in the times of Sophocles and Aristophanes. What somersaults too! There are at least five. (a) The World is sufficiently beautiful that we may keep quiet about its defects. (b) The beauty of the world implies an
Artisan of the world. (c) Since this world is beautiful, its Artisan is good. (d) The goodness of the Artisan implies that his look was attracted towards (pros) the eternal (to aidon). (e) And, predominantly, the evidence of all this is such that the inverse hypothesis, that the Artisan looked towards the engendered (pro gegenos) is unspeakable without wounding Justice, and what justice! That of the Being, the THemis. Five undemonstrable propositions. Or, better said, five logico-semiotic field effects.

We have probably just experienced the most violent of logico-semiotic field effects, these supreme resources of metaphysic, because, at the start, we were told of a dichotomy, two hypothesis, each bound to bear a consequence. Already after the first, a general conclusion is imposed upon us. Better still, when we are about to speak out loud the second hypothesis, we are told that it is too ungodly to be expressed (eïpeïn). Plato himself felt the sophistic or simply cosmological character of his cosmology that he takes the precaution of qualifying it as a 'myth'. Yet, in one last retaliation, in an ultimate moment of bad faith – for such a theatre man very well knows what he plays – he puts his mutHos in the mouth of Timaeus, a recognized mathematician physicist, suggesting that his mythical intentions could very well be as solid as a mathematical demonstration.

Hence, in approximately thirty words, Plato answered the three metaphysical questions that Homo has always asked : (1) the why of the Universe; (2) the link between the perishable and the perpetual; (3) the postulation of an ultimate justification (THemis). He did this using such plain language that most just repeated his words without thinking. That is, most but mathematician Democritus, who saw the Cosmos as a result of knocking between the atoms falling into emptiness. But he was no more successful than later Archimedes, another mathematician, to the extent that their works only survived them through Lucretius's De natura rerum. Lucretius never had any influence equal to that of Virgil, 'father of the western world' (Schnürer). But who did not declare himself to be a metaphysician, a cosmologist, but simply a cosmogonist.

8C. Metaphysical intimidations and modesties (Descartes, and even Kant)

We see the extent to which some metaphysicians, at the service of their very general and indicializing indexations, exploited every semantic and syntactic resources of the language to such an extent that many were, in their own way, great writers. What laughter would have triggered Descartes' almost psychotic supposition : "Et voyant que je pouvais feindre que je n'avais aucun corps, et qu'il n'y avait aucun monde ni aucun lieu où je fusse", without the prestige of the subjunctive imperfect and the phonosemic rocket of the pointed 'u' of "je fusse"! And what intimidation was the first world of his Latin Meditationes metaphysicae : "Anim-adverti" (I turned my mind towards, and noted that...) so frontally exclusive of the protestations of an intervener that his French translator replaced it by sophisticated detours. And what about the impudence of introducing one's most hazardous hypothesis using the two most typically cartesian adverbs : "très évidement et très certainement"…

Even Kant, who was yet an honest philosopher, and who confesses the "scabrous" character of some of his analysis, speaks of "fundamentally incontestable propositions" when he expresses the most "scabrous" of them all and affirms that we enjoy unconditional freedom,
but that it is not exerted in the *phenomenal* space-time of physical phenomena, but in a *noumenal* space-time, that of the necessary Being. He ends this passage of his *Kritiek der Urteilskraft* by calling other metaphysicians "more clever than sincere", and concludes by recommending that they should get back to work "with a bit more probity".

Yet this solitary arrogance is specific to western metaphysicians who enjoy telling the absolute truth "alone in their hearth" (Descartes, Pascal). To the contrary, Indian metaphysicians were *disciples*, they made do with producing *Upanishads*, these "sitting" commentaries on the *Vedas*. They then operated with a secular inter-cerebrality where new explanations only articulates, sub-articulates, the explanation of hundreds or thousands of former commentators. Their attitude was favoured by the common trust in a so-called 'perfect' language, the *Sanskrit*. Metaphysics was then only an explanation of the language, whose grammars went as far as a linguistics. If Indian schools oppose between them, it is in the manner of their polytheist gods who represent the complementary facets of the same real.

China is not very arrogant either and went as far as practicing what Karl Jaspers called a "critical archaism", favoured by Chinese writing, these ideograms that are sufficiently anthropogenic to have been understood by people speaking different languages. Lao Tsu said: "it is precious to suck at the mother's breast", Confucius dared recommend the hesitation: "by speaking of these things, can we avoid to show ourselves to be hesitant?" Assuredly, every metaphysics is a rhythm, and that rhythm has often taken support from a *rite*, the socialized form of the rhythm. The ultimate recommendation of Confucianism was: "Going back to the ritual is practicing humanity".

In any event, metaphysics have thematized indexations and indicialities, and men have died for indexing rites and for indicial indexations, particularly when they are social and ritual as flags: "all is well, Sire, men are dying, but the eagles are still upright with their escorts", writes an intelligence officer to Napoleon during the Russian retreat. Metaphysics are languages flags. They are indexes pointing to the top, or palms pointed to the bottom, such as those painted by Raphael in the *Stanzas* of the Vatican. Index of a created Homo touching the index of a creator God, painted by Michelangelo in the Sistine Chapel.

### Chapter 9 - The relations between metaphysics and civilization

For the Anthropogeny, a civilisation is an important group of men characterized by a *topology* (for space), a *cybernetic* (for time), a *logico-semiotic* (for its practice of signs), and a *presentivity* (for the place granted to the presence-absence). To put it briefly, a civilization is a collective destiny-party of existence of great scale. It is determined by geographies, climates, techniques, and ethnic traits. And it penetrates the individuals and their institutions so intimately that they entirely belong to it, almost unconsciously, except in the course of conflicts with peripheral civilisations deemed 'barbarian'.
9A. The civilizational system

To grasp the role of metaphysics in a civilization, we must place it amongst the techniques, religions and arts that form a system in compensation and in complementarity. The **Techniques** of a group, with their panoplies and protocols, **actualize** the fate-party of existence of a civilization constantly but **without thematizing it**. **Religions** **thematize** this fate-party, but by **ritualizing** it, meaning by making considerable space for socialized invocations according to the two etymologies of the Latin word 'reliquio': *relegere*, re-reading and accomplishing with scruple, and *religare*, binding. The **Arts** also **thematize** the fate-party of existence, but this time, they do it by practicing the **full rhythm** that thwarts the ritual, and by somewhat forbidding themselves reflexivity to better ensure the freer exercise of all possible rhythmic.

**Metaphysics** thematizes the fate-party of existence of a civilisation by clarifying it through the resources of language, which is capable of talking of everything and of itself, particularly when added to the resources of writing. Thereby, it can be not only thoughtful but **reflexive**, language and meta-language. It brims over the unconscious of the Technique, the constraint of Religion, the break-free freedom of Art. It **deliberately** aims at the Principle, the Ultimate, the Encompassing (Jaspers). It tells of the sides of what may be expressed by pointing at the unspeakable. It thematizes what is not thematizable by grasping couples of opposites, such as the *phänomenal* and the *noumenal* in Kant, the *concrete duration* and the *abstract duration* in Bergson. Thereby, it is often after the beginning of a civilization that it takes form. The theses explicated by Plato and Aristotle between - 400 and - 300 were technically, religiously, artistically on their way in the Greek vases of - 750, contemporaries of Hesiod' *Theogony*.

Still, once built and divulged, a metaphysics slips into an entire civilization and gives it emphasis. The most powerful example is probably the **ternarity of the Western world** or WORLD 2, a world of wholes made up of integral parts. Because grasping all in such a way means going from the whole to the parts but to come back to the whole which is then more **totalized**, it also means going from the part tot the whole to get back to the parts, which are more **integrated**. This ternarity, brushing at the 'Greek' of arcaic vases, then explodes in the triangle of Pythagoras. In the triangles of the tympanon of the temples, from the Paestum to the White House. In the eternal triangle of the Father, the Son, and the Holy Spirit of Christian Trinity (+ 320). In the mobile triangle that supports the infinitesimal calculation (1680). In the ternarity itself of the 'sonata form', the essential form of classical music (1750) : for instance, in Mozart's "easy sonata", theme 1 in C, theme 2 in the fourth, transition, theme 1 in the fifth, theme 2 in C, in a perfect musical narcissism (mirror). To come to an end in the ontological and epistemological ternarity of Hegel's These-Antitheses-Syntheses. Unless it is in the 'I', 'you', 'we' of German metaphysical love, that of the Fichte married couple, or of Robert and Clara Schumann. Or still, in the Firstness, Secondness, Thirdness of logician Peirce. Right to the inverted triangle of 'Daddy, Mummy, and Me' of psychoanalysis. Diewonné's motto of mathematics going from WORLD 2 to WORLD 3 was pertinently : "Down with the triangle!" Instead of *ternarity* we could as easily have followed the idea of omnipresent *mediation*, which also characterises the West. Indeed, mediation and ternarity imply each other reciprocally.
9B. Metaphysics, politics and technique

At that rate, metaphysics are so pervasive that it got into trouble with politics, sometimes by preaching its contempt, sometimes by pretending to direct it. These were the Words of the Sages in Greece or China, Plato's Republic and Laws, Aristotle's Politēia tôn Athēnaiōn, Thomas Moore's Utopia, the Upanishads of the Vedas, the Tao-tō King addressing the princes or the Analects of Confucius addressing everyone, or still, the Popol Vuh, the Council Books of the Amerindians. Such ambitions usually failed. Illustrious failures are Plato and Thomas Moore, or still, Giordano Bruno's stake. One rare success could be Aristotle, the pedagogue of Alexander the Great. Exile was often suited to metaphysicians.

In any case, at the heart of civilizations, we can only stand back and look at what metaphysics owe to the techniques and sciences of their times. The four causes of Aristotle (final, formal, material, efficient) are conceived in front of the Athens potters wheels. The Monadology would never have crossed Leibniz' mind without his invention of the infinitesimal, integral and differential calculation; indeed, he said that he got the intuition by reading Pascal on the conic sections of the cycloid. Kant's philosophy of the machine is elaborated in the approach of the steam machine; his philosophy of sciences is Newton's; of mathematics is Euclid's.

The usual lack of knowledge of scientific and technical influences on metaphysics probably betrays Homo's desire of perceiving himself as autarkic in his primary and last knowledge. We had to wait until the twentieth century and Spengler, Mumford, Klemmt, Simondon, Van Lier, and Mc Luhan for a few to see that topology, cybernetics, logico-semiotics, presentivity of a civilization, and thereby its metaphysics too, are mainly what
triggers and maintains, unconsciously but so much more consciously, its sciences. And, at the foundation of sciences, its techniques.

9C. Metaphysics and morality

The relationship between metaphysics and morality are enlightened by the relation between moral and religion. The Latin *mores* were customs, and were neither good nor bad ontologically. The *morilitas*, a word that appeared much later in the language, was a mere characteristic (traits) of someone. However, Homo's thirst of justification often designed morals that were meant to 'justify' him, even saving him for Heaven or losing him venially to the Purgatory, mortally to Hell.

The **native religion** was always other. There is no moral in the Gospels, but beatitudes and parabolas, whose "freshness" has struck Wittgenstein. Buddhism seeks a non-action and a smile. Muhammad is more preoccupied with the awakening of the awakened and by the startling of divine Signs than with public order, even if he establishes several jurisprudences. The disciples, once the prophets have cooled down, invent imperatives, starting with Saint Paul – although he is evasive – but to whom Wittgenstein reproaches his doctrinal rhetoric. "Ama et fac quod vis", concludes Augustine. "Pecca fortiter, et crede fortius" is attributed to Luther. During the end of WORLD 2, Bergson makes a convenient distinction between a **static religion**, made up of apotropaic behaviours against unhappiness (death and illnesses), and a **dynamic religion**, which can be summarized in a sort of momentum, an ultimate expansion, a limitless opening. Moral is the mortal ailment of religions. A religion is dead when all that is left of it is a moral. Religious authorities have always mistrusted their saints. The unconditional exclusion of abortion contradicts the clear *succession* of the three forms that 'inform' the human foetus: vegetal, animal, rational according to saint Thomas of Aquinas. The absolute interdiction of divorce and suicide contradicts saint Thomas Moore's clearly expressed opinions.

Considering this, native **metaphysics** recalls religion. It is not in Plato or in Aristotle that we will find out how to act in our daily lives. The advices of the stoics, that were believed to be 'morals', do not commit to anything peculiar. Let us listen to : "do not try to find support on what you do not control ; you lose time by cursing the rain and the evilness of others ; only aim at soothing yours. Descartes slept well after he had got his maid pregnant. Kant concluded on the formula that we have already encountered : "Act in such a way that your conduct may be a law (Gesetz) that builds Homo". The troubling case could be Confucius, who was apparently a walking moralizer. Did he not go from court to court to direct the princes and their subjects to accomplish the rites? Montaigne felt he had to obey the nation : why should we disobey the king, and even mock him, as we do need a king? Just like will think Hobbes (and Shakespeare) at the same time.

No, **the sole moral of metaphysicians** is probably *respect*, this sort of self-restraint of the look (spicere, re), of non-chat before the "ultimate question", and perhaps before any question. For them, the only madmen are what the French call "les esprits forts" (strong spirits). The moralists, rigorists or libertarians are crooks, and the metaphysician, as the founder of religion, say it with a same voice : "Pharisaï hypocrités", hypocrite Pharisee – meaning etymologically 'histrionic', in the sense of the Cardinal Newman when he spoke of "my
histrionic power". *Beyond good and evil* is one of the Nietzsche's titles. Nietzsche kissed a horse in the street; Saint John of the Cross would not have been shocked. He would not even have been surprised. Georges Bataille, writer of extreme (sacred) erotism, wondered "whether he was a madman or a saint". Sartre, before becoming vulgar as a Stalinian moralist, entitled his hagiography on Jean Genet, the writer of the glory of crime: *Saint Genet, comédien et martyr*.

This being said, metaphysicians were usually tranquil humans. Every day, the inhabitants of Koenigsberg knew what time it was when they saw Kant, a great hygienist, walk past before their house. Descartes perhaps died of the fact that he, who found his best ideas lying lazily in his bed in the last morning, had to submit to a queen of Sweden who wanted her lesson in the early morning hours.

**Chapter 10 - From metaphysics to the anthropogeny**

Wittgenstein dies in 1951, and we can use this date to mark the death of Metaphysics. Since then, the a priori and synthetic views of metaphysicians have been shaken up by *cross-bracing* of our scientific views of an evolutionary Universe, on the Evolution of the Living, on the divagations of the species and the Homo genre in the past million years, and decidedly by the entry of biochemistry, especially proteomics, on the scene. The anthropogeny now only sees Metaphysics as one of its chapters. The chapter where it recalls the extent to which, and why, in words and then in writing, Homo, the angulous primate, angularizing, transversalizing, holosomatic, possibilizing, has congenitally been a metaphysician, everywhere in every time. To the extent that today's Homo is still metaphysician without metaphysics, through the sole fact that he is technician, semiotician, indicializing (lat. indicia) and indexating (lat. indices).

10A. The twilight of metaphysic

Twilights often display a particular fervor. In 1950, the writer of the present Anthropogeny wrote a scholarly thesis: *L'Interrogation sur le sens de l'Être à travers la philosophique occidentale*, in a milieu (Louvain University) that still had the ins and outs of the question with an almost feverish intensity.

Indeed, at the moment, everything was running towards radicalizations. Two world wars had made entertainment futile. Since 1900, Archimedean sciences had undergone a 'crisis of the foundations', meaning a revolutionary deepening of their principles. In 1917, Spengler's *Die Untergang des Abendlandes (The Decline of the West)* showed that civilizations are large organisms that are born, develop, and die, which is summarized by Valéry: "We civilisations, we know now that we are mortal". The 1930 Bourbaki offered to gather all 'the' mathematics into 'the' Mathematic (singular) from a 'set theory' comprehending, or at least situating all mathematics, and which prepared the way for the Theory of categories, c. 1955, which was
more fundamental still. Fascism, Nazism, Stalinism, Psychoanalysis, Hegelianism had shaken up the species Homo right down to its supposed elementary desires. In 1948, the theory of Information and Cybernetics questioned the two specificities of Man, intelligence and will. With Tarski, logic had axiomatized itself, and had become plural, preparing for its Topos theory c. 1960. Gödel had even exposed the limits, not of arithmetics as practice but of its formalizations. Biology (and biochemistry in particular), was on the eve of connecting the animated and the inanimate with the laboratory production of some amino acids by Stanley Miller (1953).

All this went hand in hand with the diffuse feeling that we were on the verge of breaking with two and a half millennium of the Greek WORLD 2, and that we were about to open a WORLD 3, a Nouvel âge (1962) that would have indirectly new considerations of WORLD 1. Hence, at the Louvre, the Amerindian sculptures that had been stocked in the basement, under the pretext that "people who practiced human sacrifices could not produce works of art", briskly went up to the most visited exhibition halls.

Homo then set up extreme questions that even its most intrepid metaphysicians had not envisaged. In 1927, Sein und Zeit of Martin Heidegger dared ask, not how the Being of the being was distributed, as envisaged by Aristotle and Augustine that he read extensively, but what was the beingness of the beings and the Being. And simultaneously, he had to – not just distinguish phänomenon and noumenon, as Kant had done, not even describe the perceptive manoeuvres that articulated phänomenality, as Husserl had just done – but question phänomenality as such, i.e; the apparitionality of appearances. Some went as far as to exploit the 'il y a' (it happens, es gibt) of the French language in an aim to ask why 'il y a' rather than 'il n'y a pas' ('there is something' instead of 'there is nothing').

This is when the concept of 'presence-apparitionality-autotranslucency' – and even of 'presence-absence' – started to designate an undescrivable part of the Hamilton's consciousness alongside of consciousness contents describable as techno-semiotical and simultaneously cerebral events. Anthropogénie has often put forward two dates, in preparation for its primary distinction 'functioning / presence' : 1938, year of publication of Lavelle's La presence totale, then 1943, when Sartre's L'Etre et le néant is published. Yet, we should not forget the prophecy of the poets. Already, in 1920, Valéry's Cimetière marin dares write : « La vie est vaste / Etant ivre d'absence // Et l'amertume est douce, et l'esprit clair ». L'Ebauche d'un serpent, of the same poet, was the favourite poem of Louis de Broglie, who initiated undulatory Mechanics, and could read there : « Que l'univers n'est qu'un défaut // Dans la pureté du non-être ». This 1921 intuition of the consciousness as comprising a part of "néantisation" was definitely thematized by Sartre in 1943. Where the Poet perceives and makes sensitive, the Metaphysician is thematizing.

10B. The hinges of WORLD 2 to WORLD 3

We could thereby close our journey with a brief formula : even if Homo is incurably metaphysician because of his anthropogenic faculties, Archimedean sciences definitely put metaphysics as a prestigious system offside. Yet, is its death definitive? Did what eliminated traditional metaphysics not comprise in its arguments the lineaments of another metaphysics,
one that is more modest but more pertinent? At least of a discipline that would have the functions reminding those or supplementing those of ancestral metaphysics?

Thus to conclude, it is perhaps useful to bring forth a selection of oppositions encountered in the preceding text between ancient and new mentalities. We have chosen some of them not with a will of covering everything, not even for their weight, but because of their simplicity, manageability, and their illustrative value of our new rampant metaphysic interrogations.

1. **From ontology to epistemology** – Ancient Homo had certitudes, even evidences. He believed that his thoughts had a contact with the Being because, in his eyes, the "things" and "events" were realizations of the Being, which he felt was stable, even eternal. Kant himself never questioned that. He always saw a *noumenon* (the term was his invention) behind the *phänomenon*. Yet, we now think that all knowledge is an evolutionary product, and that we must measure its powers by situating it like a moment (or an aspect) of Evolution. Not only does the *epistemology precede the ontology*, as Kant wanted, but it questions it. For instance, the intuition of Bergson's 'concrete duration', above or below 'abstract duration', is a last spiritualist delusion of WORLD 2, one that is as vain as its materialist deceptions.

2. **From the logic of comprehension to the logic of extension** – The Aristotelian syllogism: 'Every man is mortal, now Socrates is a man, hence Socrates is mortal', was initially understood as relations between contents of active ideas : the *idea* of Socrates is included in the *idea* of man, included in the *idea* of mortal. Thus the ancient Homo thought in *comprehension*. Yet, usually, a contemporary logician sees a Socrates *element* enter into a Mankind set, which enters in a Mortal set. He thinks in *extension*, like all other Archimedean sciences. For Leibniz, the 'necessary' was "what cannot not be" ontologically. For our topologists, even the most philosophers, it is "what is applicable to all the beings treated by a logic".

3. **From logics in acts to logics in writing. The ontological argument loosing its fundament** – When Descartes says that "The *Perfect* (God) is an essence that comprises its existence", in what he continues the famous 'ontological argument' of the entire second millennium since Anselmus, he does not start off from the *mere concept* of perfect, but from the *act* of thinking the full idea of perfect. Furthermore, for him, any fundamental idea is act ; in the same way that for the Greek a *theme* (in our current sense) was always a *these* (thesis, action of laying down) ; to the extent that *thema* made do with designating mere military signs.

In a word, the cognitive act was a *thematized exercise of the existing and existence*, that went straight to an ontological, and not only a phenomenological 'I am', or 'it is". And we then understand that, in Descartes, a 'limited perfect', as that of our thoughts, could be understood only as the restriction of a 'perfect infinite', also existent. The same applies when Spinoza affirms that the idea of Substance (actually *Zelfstandigheid*) implies the existence of the Substance-Zelfsantigheid, and when Leibniz maintains that the idea of *Necessary* Being (that cannot not be) comprises the existence of that being. Even Kant, who explicitly rejects the ontological argument, retains something of the Leibnizian necessary in his "synthetic a priori arguments" (cf. Supra).

Yet, fortunately or unfortunately, for a contemporary logician the *act* of logicising does not intervene in the logic as *system*. Going from an *abstract essence* as an object to an *existence* as an object is such a crude error that we can no longer understand how it persisted for so long, and in such great minds as Anselmus, Descartes, Spinoza, Leibniz. In truth, since saint Anselm, in the eleventh century, and even since Parmenides, thought were not only an affair of defined
objects, but of acts. Under the effect of Archimedean sciences, this view begun to quiver when, in the eighteenth century, the mathematician Euler represented the three syllogistic terms (small, medium, extreme) by his famous three circles that could be read both in comprehension and in extension.

4. From strong logic to weak, intuitionist, synthetic logics – Actually, the practical logics of the daily language are weak logics, comprising disjunction without excluded middle (third term), except in the eristic rhetoric ("Dear friend, it is that or its contradictory! You can not escape."). Hence, our daily languages must be described by Heyting's intuitionist algebras. However, the first systematic logic appearing in the West, that of Aristotle, could only be applied to wholes made up of integral parts, in the manner of Greek WORLD 2. It was fatally a logic of the excluded middle, or a strong logic describable by Boole's algebra. Furthermore, since language (logos) and (logikè tekHnè) etymologically belonged to the same area, the entire daily language was meant to be – at least among scholarly people – ruled by Boolean algebra. Yet, around 1970, we saw that, even in mathematics, some demonstrations supposed intuitionist logics. This was the case for the axiomatization of the right (René Lavendhomme). Only then did we realize that the daily language also practices weak logics, and was in fact responding to Heyting algebra (and Kripke's semantic). But then, for a metaphysician, there are no longer beings that have qualities, but qualities that regroup relatively stably in beings. Relations are before beings, which are to be grasped as bundles that are stable, unstable, metastable of relations. Indeed, the Topos theory is introduced by a Theory of bundles. In the same mood of thinking, cf "la lecture relationnelle des Quanta" of Carlo Rovelli (supra).

5. From a General logic to "universes of discourses" – The supposed knowledge of the Being in general would allow envisaging a logic that would be applicable for any event, at any time, in any place. Once this knowledge is evacuated with the Being, as it is the case by the implications of the (re)sequenciations of Biochemistry (between amino-acides and proteins), or by the "lecture ralitionnelle des quanta", the only thing left are universes of discourse, according to 'viewpoints', 'idiotypes' (Bourn and Lavendhomme), giving place to a Topos theory, hence of 'places, sites' (topoi) "from which we speak" and "of which we speak". (This explains the attachement of some mathematicians to the psychoanalyst Lacan, otherwise fantasist, but usefully adressing this "perspectivism".). Already, the most anthropogenically enlightening motto of Special Relativity (1905) had been : "No privileged point of view".

6. From object perception to field effects – Since Aristotle, the solidity of wholes made up of integral parts made the solidity of species and genres, which had entailed the solidity of the perception of the living, then, by analogy, of other objects. The "whole" and "part" concepts still form one of the twelve Kantian categories. Yet, Homo is a disparate being (physical, semiotical, technical, presential), whose heterogeneous stimuli provoke pools (basins) of attraction between them, with consequently perceptive-motor and logico-semiotic field effects, of which we are today beginning to recognize the fundaments by numbering the multiple nervous relays that structure or de-structure or cleave our perception-motricities. Once again, this escapes ancient logics that worked on 'objects' (jetés en travers, ob-jacere, g. Gegen-stand, ned. Voorwerp, rus. Priedmiet), that were, from the very start, grasped as 'integrating-integrated', and specimens commanded by substantial forms where stable ideal essences would individualise. Ordinarily, these logics were usually 'realist' in the Quarrel of Universals (supra). To the contrary, contemporary epistemologies, which addressed a Universe in Evolution or an Evolutionary Universe, only demanded 'terms', which were usually grasped less as topologically closed sets (that comprised their limit within themselves) than topologically
opened sets (that did not comprise them within). Without hoping species and genres, if not transitory, they are spontaneously 'nominalist'.

7. From the stable and the unstable to the metastable – The stable and the unstable allowed decided, strong logics. Gilbert Simondon had the merit, in 1957's *Du mode d'existence des objets techniques*, and particularly in 1964's *De l'individu et sa genèse physico-biologique*, to demonstrate that the *metastable* is everywhere in technique and in biology. He saw well that that comprised a new epistemology, a novel ontology, a 'new logic', an *allagmatic one*, he said, at the same time of our Topos theory. [Anthropogénies locales, L'individualisation selon Gilbert Simondon]

8. From plasticity to sequentiation – According to their ontologies, and with the rest of their daily experiences, the Ancients saw every form as the result of a *plastic* or *modelling* action (pladzeïn, shaping). Since the 1950's, biochemistry revealed that the passage of amino acids to proteins had us witness formations (Gestaltungen) no longer through plasticity, but by *sequentiation and resequentiation*. Nothing shakes up Homo's traditional conceptions more than that. To the extent that many biologist – who encounter and manipulate it every day – have not yet seen it as a new ontological and epistemological paradigm.

9. From traced images to granular images – Since its origins, Homo had never known anything (apart a few imprints, such as those of the innumerable *Hands* of the Cosquer Cave) other than *traced images*, that were more or less continuously and analogically *dragged* by a finger, a paintbrush, a sculptor's chisel or of wood or stone cutter, into shaping. Since 1840, photography has introduced *granular images* (those of photons on a sensitive plate), and was soon followed by the cinematographic and video images. Just like the living formations of (re)sequentiation, they are also more digital or *digitilisable* than analogical. This caused such as considerable epistemological and ontological revolution than Homo took a good century to notice it. The autor's *Philosophie de la photographie* is dated 1983.

10. From the idea and the concept to the indices (lat. indicia) and indices (lat. indices) – The ancients were familiar with their ontology and trusted their epistemology. They were used to first settle into *ideas* or *concepts*, from which they deducted, *de jure* (Leibniz) and even *de facto* (Hegel), the events of the world. Yet, the angularizing and transversalizing Homo never starts off from anything else than *indicia and indices*, among technical equipment and panoplies-protocols. The construction of the infants' idiolect shows this well, like the predominance of lat. *indices* over lat. *indicia* in metaphysics. Homo can very well purify and generalize his *indices* and *indicia*. Yet, does he ever go beyond them to access another order, one that is 'higher', eternal, transcendental, transcendent? Doubt is haunting.

11. From consciousness to the distinction 'functioning/presence-apparitionality' – The ancient ontology and epistemology were rather well adapted to a concept such as Anaxagoras *Noûs* or Hamilton's *Consciousness*, which merged the *contents* of the mind (functioning) and the *apparition-self-translucency* (presence-absence) that sometime accompanies them. Particularly as he knew nothing of the cerebral functioning, for Bergson still: "Cerebral activity is to mental activity what the conductor's stick is to the symphony". To the contrary, our neurophysiology, enlightened by the electronic of analogical and digital computers, or still, hybrid computers, suggests that all the cerebral functioning and contents are describable. The pure indexizing function of the pure indexables, the object of Archimedean Physics, can do so well without considering the absence-presentation that it forgets, or feigns to forget, its existence.
12. **From the being to the evolution** – In fact, as a most general concept, *the Being* has left its place to *Evolution*. In a first while, the Evolution was conceived in a *linear manner*, orthogenetic (as shows the famous orthogenesis of the Horse of the 1940's), but now, since 1970, every day confirms that the evolutionary process is *luxuriant, bushy*. Proceeding sometimes by global transformations, as in the great extinction of the Permian, but the most often through the pullulating of disparate elementary actions that are regulated by some *evolutionary gullets* as the anatomical necessity of placing tubes, pockets and valves that Thom's seven topological catastrophes mathematized. Supra, we have imperatively contemplated the seminal distinction by Gunther Eble of *evolutionary chance* versus *statistical chance*. We do not repeat.

13. **From contemplation to admiring astonishment** – The Being, the Tao, and the Dharma of the Ancients were well suited to *contemplation*, this manner and happiness of grasping things with one embracing glance as you would of a temple (templum, cum). For Augustine of Hippo and for the neo-plasticians of his era, each leaf of every tree was "a note of God's music", or of the Being, or of the One. Eternity was a source of ultimate value; it was, since Anaxagoras at least, the ending of every interior interrogation. The luxuriant Evolution of today forces us to replace contemplation by the *admiring astonishment* before the *once-never-again*, in a first while, that of the living that will never come back, neither as individuals nor as species, not even as instants of existence. Right to the 'once-never-again' of the stars and their constellations. Heraclitus' "aeï panta rei" (everything always flows) was inscribed in an always (*æi*), and consisted in harmonic complementary exchanges (*palintropos harmonia*), as those of the bow and the lyre (*okóesper toxou kai lurys*). Like Heraclitus, we too never go down the same river twice, but in a sense that is not the same as his, and infinitely more radical.

14. **From autarky to inter-cerebrality** – For the same reasons of stable ontology implying a clairvoyant epistemology, the ancients claimed autarky, Spinoza's *zeltstadingkeit*, Hegel's *Selbständigkeit*. To the contrary (and perhaps because of the evolutionary once-never-again), the *sense*, the *senses*, the *Sense*, do not begin for our contemporaries unless with states of inter-cerebrality, of shared empathy, of reciprocal empathy, and in particularly of mirror empathy 'in couple', of which we begin to recognise the fundaments in the *mirror-cells* that we share with the former animality, in particular in the Mammals and the Birds. There are at least three senses to the word *love*: (a) sexual *attractions* (short effect copulation hormones), (b) sexual *fidelity* (long-term endearment hormones), (c) *sharing* (consensual or conflictual, but multiplying) of *universe of discourse* (words and gestures), and more generally of *rhythms* and *rites*, particularly signalled since 1950, on the then-thematized "interpersonal sexuality", eventually an intercerebral one. [Anthropogénies locales, Sémiotique, 2, L'Intention sexuelle (1968)]

15. **From the rite to the rhythm** – In their stable ontology and epistemology, the ancients often made do with the *rite* - this stabilized and socialized *rhythm*. Hence, according to the Indian Mimansa, it was enough to repeat completely, every morning, the phonemes of the *Vedas* (not the syntaxemes or the glossemes, no, the phonemes) for the Sun to be re-born. We have seen Confucius define humanity by the rite. Our contemporaries are rathe almost driven at the brink of the *rhythm*, sole capable of embracing the once-never-again, and the mobile exchanges of inter-cerebrality, particularly that of the discourse universes.

16. **From the eternal transcendental to the transcendental in the making** – The ancient transcendental was so stable that it was even able, in the West, to gather in the Christian
Transcendent for a while. The contemporary transcendental in the making, like that of mathematics (supra) and further still of some experimental sciences (supra), is the figure of Evolution, in which it recuperates the aposteriority in apriority this time opened (supra). The most embracing realization of Justification for evolutionary, inter-cerebral state-moments.

17. From before to amongst – Even in the "anima est quodammodo omnia" of antique Stoics, the pre-biochemical, pre-relativist, and pre-quantum world comprised individuals that were sufficiently, specifically closed to sense before their world in sympathy or in hostility. In a relativist, quantum, biochemical Universe, the specimen is at once the entire Universe. And no longer as infinite modes of attributes (Spinoza) or differential viewpoints of its integrals (Leibniz), but as only one of its metastable beams (bundel). The presences-absences that accompany some of its motor-perceptions do not show it a brain where the Universe would appear, but the Universe-Evolution itself appearing according to the own functioning of a milieu, an organism, and a nervous system. Where the individual, or rather the permanent individualization process that it is (Simondon) is not an interior between an "milieu intérieur" and an "milieu extérieur" (Claude Bernard). Its disappearance is as rhythmic and ritualizable than its apparition. All two are astonishing and bewildering by their singularity, sometimes inter-cerebrality, where it finds sense, even Sense, in the measure where this individualization is perceived as individualizing a species in the Living, in the Universe, which is perhaps a particular solution of a Multiverse (Weinberg). As we have often noted, the theories of Quanta and Relativity are not relativising but absolutising. They literately loop the universe-multiverse by two constants: h and c.

18. What is left of hazard and necessity, as we find in the famous title by Jacques Monod? Not much. See at the last lines of the first Part some fifteen various interpretations of "chance".

We can conclude this anthology of today's human thought by noting that the passage from metaphysics to anthropogeny is an inversion of indexations (lat. indices). The first proceeded from top to bottom, whilst the second proceeds from bottom to top. We can say that English empirics had already chosen this last party. Yet, even they could only lean on very little initial departures as 'sense data'. How could they have done any other way, at a time when we had no idea of a paleoanthropology or a neurophysiology? Our present inversion is devoid of merit. Kant could still feel proud of having done a 'Copernican revolution' by asking to put the epistemology before the ontology. We shall require more humility. A lot of thought was required to encounter our RNA-DNA, and to verify that our amino acids may be produced by the only physical situations of our Planet, without identifiable intention, by the sole happiness of Variety and Selection. But afterwards, we probably need less thought than we do simple attention and true naivety to see the metaphysical, cultural, moral revolutions hence implicated.

Metaphysicians, in the West at least, had Plato's polyhedrons on the walls of their imagination. Hanging on the wall of ours, we find a sequence of amino acids with its daughter, a protein. They saw, just like Leonardo de Vinci, Homo starting with a standing, transversalising male, and a standing cross with a geometrised penis that already announced an erection, ready to grasp everything from top-to-bottom, mechanically, geometrically, imperiously. We first see Homo, as in Micheline Lo's Nativité en croix, starting well beneath that, at the core of a lying Saint Andrew's cross, amongst the fermentation of an irradiating
vulva, that is not centring, but rather, that is encouraged to grasp everything from bottom to top, biochemically, topologically, and ecstatically.

De Vinci and Micheline Lo

Henri Van Lier

From metaphysics to anthropogeny, 2006