

LOCAL ANTHROPOGENIES – CONTEMPORARY COSMOGONIES

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INTRODUCTION: COSMOGONY VS COSMOLOGY

The distinction between cosmology and cosmogony may appear slightly hard-pushed, however it is useful in Anthropogeny. Cosmologies generally refer to the scientific study of the structures of the Universe, the Mineral world and the Living. Cosmogonies, on the other hand, refer to the artistic productions that re-echo, by the means and ends of art, the cosmologic cognitions at one particular moment in time.

1. BEFORE ARCHIMEDIAN SCIENCE

Initially, the two are mixed up. In 1750 BC, between the Tigris and the Euphrates, the Sumerian *Supersage*, a contemporary epic of Hammurabi's jurisprudence, is a cosmogony passing for a cosmology, already referring to such myths as the Deluge and the life-saving ark. In the same way, the Hebrew *Genesis* is created in reply to a request by a victorious Persian king, Atrahasis I (450 BC) or Atrahasis II (400 BC), to the Jews to explain their concept of the world, in exchange for which they were allowed to continue living by their own customs. In China, neither Lao Tseu's *Yi King* nor Confucius' *Analects* make the distinction between science and myth. The same applies to the *Upanishad* in India, and the *Popol Vuh* with the American Indians. All these examples demonstrate fairly well the millenary continuance of cosmologies-cosmogonies. The hundred thousand stanzas of the Indian *Mahabaratha* to this day continue to fuel the Indian cinema of Bombay.

Greece, on the other hand, discovers quite early that both methods diverge. Homer, and his readers also, already read the *Iliad* and *Odyssey* as fiction rather than science, even if it does at the same time present us with a sort anthology of the mediterranean world. Yet, Hesiod's Muses in the *Theogony*, who, a trifle later, tell us about the formations (gonia) of the Gods, (tHeôn) unhesitatingly declare : « we tell many lies that are similar to fair words ; but we also know, when we intend to, how to proclaim things in truth (alètHea gerusastHai) ». Plato, after 400 BC, also uses this distinction to his advantage, but inverting it : Plato's *Timaeus* is clearly written in scientific prose, and enunciated by a renowned mathematician physicist, Timaeus,

who nevertheless by way of precaution presents his ideas as myths, in other words a story that reaches out to the bedrocks of the real, nevertheless lacking in mathematical or physical demonstrability.

Finally, from 250 BC on, the exact science as introduced by Archimedes, thwarts this ambiguity of cosmogony-cosmology. Analyzing oneself in a bath, floating, owing to the relationship between volumes, masses, water densities and a human body, is irreversibly beyond poetry. Virgil and his readers alike, knew very well that the Aeneidian « *Infernos* » are narrative, ethical, edifying, and not in the least scientific.

There remained however one possibility to create a *cosmology* without applying the measuring instruments of Archimedian science, instead starting from the pure Logic, supposedly transcendent, or at the very least transcendental, as had already been suggested in Plato's last *Dialogues* ; and by virtue of which Plotinus, around approximately 150 BC, created a true philosophical cosmology ; which is then, around 1300 AD, transformed into a sumptuous cosmogony by Dante in the ten spheres of his *Paradiso*. Each of these required a mathematically solid logic, based on numbers, a construction of numbers derived from One, even the One. Thus, for the span of a century, from Plotinus to Dante, the cosmos will consist of a « procession » from the One to the Multiple, concurrent with a « recession » from the Multiple to the One, resulting in a medieval cosmology and cosmogony that reinforce and corroborate each other.

2. FOLLOWING THE TRIUMPH OF ARCHIMEDISM IN THE 17^{THE} CENTURY

But could such views outlive Copernicus, Kepler, Galileo, Leibniz, Newton? The word « cosmogony » referred to a title by Parmenides, undoubtedly moulded according to Hesiod's « *Theogony* ». In 1656, the word « cosmology », unknown to the Greek, appears, to designate a purely archimedian approach to the structure of the Universe. Unsurprisingly, cosmogonies were bound to disappear during the two centuries of Rationalism, in the 17th and the 18th. Worse, the virtues of art as a means of knowledge were entirely neglected during that period. Charm tricks to make the truths of reason more appetizing, according to Descartes ; imitative virtuosity, says Pascal ; « merry ornaments » unfit for the « terrible mysteries » of religion, as Boileau puts it. Not until Kant's *Kritiek der Urteilskraft* (1790), in the Rousseauistic dawn of Romanticism, will artistic experience gain an epistemological and ontological significance. Yet not by contents, the object of intellect and reason ; but because its rhythms presented, in its accomplishments, a harmony between the universe and the faculties of Homo, no doubt due to the fact that they all result from a same Creator. And this in the Sublime as well as perhaps the Graceful.

Thus, spurred by this Kantian idea, Beethoven will venture the statement that « music is a revelation far more elevated than all of wisdom and all of philosophy ». The celestial vault, the « tent » as proclaimed in Schiller's verse, and the polyphony in the final chorus of the 9th symphony, affect something far « beyond » or far more « profound than » the astronomers' sky.

All at once, in this renewed artistic confidence, in itself a cosmogony almost cosmological, one philosophy will make an attempt at a final non scientific cosmology. To this purpose, Hegel, just like Plato and Plotinus, appeals to the Logic, conceived as a primal ontology and epistemology. Only, in this case, it is no longer a logic of an eternal Truth, as in the irrefutable affirmation of the One, but, to the contrary, an Evolutionary Logic, motored by a constructive Negativity, that of all inadequacy between Conscience and Substance. Not unlike Lamarck, Hegel's contemporary, who claims no animal can find peace unless it has adapted to its environment.

3. COSMOLOGY AS PHYSICS (RELATIVITY AND QUANTA) SINCE 1905

But, with a « crisis of foundations » at the beginning of the twentieth century, and in particular the introduction of the Multiple replacing One at the core of Dedekind mathematics, the Hegelian Logic wears off. Besides, the Special Relativity theory, introduced in 1905, and above all the General Relativity theory, introduced in 1915, exclude any approach other than the archimedean from the theories concerning the structures of the Universe. Cosmologists will become the archetypal physicists. By the middle of the century, the notion of a Universe expanding from a Big Bang, further popularizes these ideas. As for Quantum Theory, if its dizzying mathematical formalism discourages vulgarization, its affirmation of the existence of causalities that proceed by leaps and bounds without any describable intermediate link, and that are computable only by probability rates, will eventually have an impact on Homo and his ethics, as well as his daily life.

Thus Quanta rather than Relativity will, in art, produce eloquent cosmogonies. Marcel Duchamp will prove to us in numerous ways that a *quantum* more or less is sufficient to change an object, without detectable intermediary, and not only its purpose but also its order, its nature. Removing an « n » from its title, a painted « window » becomes a « widow » and « a fresh widow » even - in the case of a recently renovated frame - a recent widow. A urinal, quite the technical object, is transformed into a baroque fountain, an art object, by rotating it (a trebuchement) at 90°, a quarter of a turn, (a spin flip, as the physicist would say). Also on display at the great Marcel Duchamp retrospective in the Centre Pompidou in Paris, was a book, presented to us in a glass case. Singularly detached from the rest, as if on a pedestal, bearing the title : The Quanta. Duchamp's correspondance has since confirmed the quantic nature of his daily impressions, as have his drawings, whose genuine pictural subject triggers the « trebuchet » effect.

It goes without saying that Duchamp, contrary to what people claimed about him, never supported the idea that any object could be « art », solely by designating it as such; an acute art dealer himself, he was perfectly capable of singling out a good or mediocre Picasso or Matisse from the rest. On the other hand, he did prove that any object, even ready made, lends itself to quantic expressions, for instance when a coat-rack is toppled to produce a minimalist trebuchet effect, especially if it's called exactly that : *Trébuchet*.

4. COSMOLOGY AS BIOLOGY SINCE 1950-1970. THE PUNCTUATED EQUILIBRUM.

Moreover, the twentieth century, in its second half, went through a second cosmological revolution. From 1953, the discovery of DNA structure, and in particular the cascade DNA>>RNA>>amino acids>>proteins (anatomical as well as physiological) in the presently living beings, which can also be written conversely amino acids>>proteins>>RNA>>DNA when in referral to the course of Evolution, is most certainly a matter of modelling, but just as much, and initially even more importantly so, a matter of *seriation*, of sequences and *(re)sequenciation*.

To the mind of Homo, the angularising and transversalizing primate, this transition from modelling to sequenciation was such a radical revolution, that it took many many years for him to perceive it, then recognize them, before finally acknowledging its epistemological and ethical consequences. Hence, the *Nouvel Age* of the same author (same website), dating from 1962 is still entirely dominated by the paradigms of relativist and quantic physics. And even yesterday, Stephen Jay Gould's brilliant *The Structure of Evolutionary Theory*, 2002, omits its notion in his presentation which is nevertheless so powerfully amplified by the biochemics in Darwinian Evolution.

It will take until 1970 for the implications of the biological revolution to fully reveal themselves, not necessarily to the cosmologists, nor the scientists, but notably to the cosmogonists, the artists. Firstly, in Steve Reich's music, as well as in a dance without a preliminary choreography. Next, in its sculptural pursuits, and mainly pictural, highly declarative. Or yet in photography, architecture being rather tardy due to the heaviness of its materials, and to the psychological and sociological archaisms of Homo as a dweller. Because of its multidimensional nature, the revolution in literature is less explicit, less immediate, yet nevertheless pervasive. Finally, Mc Cay's comic strips would have been prophetic of all the cosmological revolutions of the 20th century, if we had only taken the Little Nemo of 1905, same year as Relativity and Quanta, more seriously. All these remarks serve to justify the order in which we will present the contemporary Cosmogonies.

5. RECIPROCATED INFLUENCES BETWEEN COSMOLOGIES AND COSMOGONIES

Let's conclude by indicating in which way a cosmogony could answer to a cosmology. Surely not by translating it, nor dressing it up in its words and its fantasmatics. Nor by a previously profounded knowledge either, but rather in the osmosis of a common intellect, in

accordance with this *Zeitgeist* (spirit of the time/intellectual climate) as the German philosophy of Culture puts it. But what does this *Zeitgeist* actually consist of ? The following four topicals would appear to be sufficiently elementary, radical, fundamental, to lend themselves to such a compenetration.

(1) A **TOPOLOGY**, namely a way of *accentuating* terms in pairs : nearby / remote ; continuous / discontinuous ; contiguous / not contiguous ; open / closed ; embracing / embraced ; way / no-way, in *general topology* ; or even the seven elementary catastrophes : fold, crease, dovetail, butterfly, hyperbolic umbilic, elliptic umbilic, parabolic umbilic, as in *differential topology*. (2) A **CYBERNETIC**, that is to say, a way of accentuating one of either terms in the following pairs: feedforward / feedback ; positive feedback (snowball) / negative feedback (reverse tuning) ; modelling / (re)sequenciations ; preliminary study / trial and error, etc. (3) A **LOGICO-SEMIOTIC**, or a way of accentuating one of either terms in the following pairs: image / speech ; substantivation / adjectivation ; verbalisation / adverbialisation ; syntactic construction / paratectic construction ; analogy / digitality ; coherence / verifiability ; whole / detail, etc. (4) A **PRESENTIVITY**, a way of favouring, in common-day practice, one of the terms in the epistemologically and ontologically primordial twin : functioning / presence-apparitionality.

The above options are all the result of varying determining factors. A natural catastrophe. Technical discoveries. Scientific discoveries. Social or political changes. No wonder that, in our times, the *Zeitgeist* has attributed a lot of space to the exact sciences, to globalising technology, to the brain conceived as plural and intercerebral, to the new paradigms of living structures, to the metastable states rather than stable and unstable states, to the wonderment and the admiration of the singular rather than an acquiescence in the eternal.

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