

## BIOCOSMOLOGY AND EPISTEMIC PRINCIPLE: TEILHARD DE CHARDIN NATURALIZED

Reflections upon reading Georges Chapouthier and Konstantin S. Khroutski

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**ABSTRACT.** *The epistemic principle postulates that cosmic evolution is a progressing process in which increasing energy dissipation is directed toward attaining maximum knowledge, and thus god-like omniscience and almightiness. Creations as pictured by traditional religions, but in reverse: In the beginning, no knowledge, no Unmoved Mover of Aristotle, no Absolute Spirit of George Friedrich Hegel and neither Teilhard de Chardin's God-Creator. Adopting the metaphors of philosophers, from the primordial Chaos, from the Cosmic Emptiness, God slowly and successively arising, enriching matter with form, consciousness and mind. This principle is not complementary to Teilhard de Chardin's cosmology, but may be viewed as "Teilhard de Chardin naturalized". On the other hand, Fjodor Dostoyevsky's superposition of the two points of views on humans in his parable on Grand Inquisitor reminds us of the principle of complementarity, by which the physicist Niels Bohr attempted to account for the particle-wave duality of quantum physics. Possibly, the polarity between the concepts of Plato and Aristotle, as presented by Konstantin Khroutski, and, implicitly, between the Slavophiles and Zapadniki in the Russian cultural tradition, may also be approached by seeing it in the optics of the Bohr principle.*

**KEYWORDS:** *Biocosmology, Bohr's Principle of Complementarity, Epistemic principle, Teilhard de Chardin's cosmology*

In the Winter 2016 issue of the journal *Biocosmology: Neo-Aristotelism* (vol. 6, No. 1) two contributions inspired me to write this Short Note.

(1) In a review of my book "Closing Human Evolution: Life in the Ultimate Age" Georges Chapouthier [2016] pointed out that my analysis of the evolution of the universe, moving in a clear direction, is in line with his own reasoning, published already in 1995, that "the *causa finalis* of the universe is basically its own construction". In his review he expressed the view that "such a hypothesis does not preclude religious beliefs and can also accept non-religious stances". I prefer the formulation that I have named "The epistemic principle" in my book. The principle states that cosmic evolution is a progressing process in which increasing energy dissipation is directed toward attaining maximum knowledge, and thus god-like omniscience and almightiness. As I put it, "creations as pictured by traditional

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religions, but in reverse”. In the beginning, no knowledge. No Unmoved Mover of Aristotle, no Absolute Spirit of George Friedrich Hegel and neither Teilhard de Chardin’s God-Creator. Great silence of the universe. Matter dull, fumbling by trial and error. Successively, life was emerging, with continuous generation of knowledge by subjects advancing in an epistemic maze; matter ever farther from equilibrium becoming creative. Knowledge, a model of the world, becoming ever less simple, ever more comprehensive, ever more adequate and faithful. Adopting the metaphors of philosophers, from the primordial Chaos, from the Cosmic Emptiness, God slowly and continuously arising, enriching matter with form, consciousness and mind. At the apex – the Epistemic Singularity – the word being equal to its model; Cosmos, facing the complete knowledge faithfully mirrored by the Subject, will recognize oneself. Teilhard de Chardin – naturalized? Perhaps, if you wish. Yet, as I argued in my book on thermodynamic grounds, this self-recognition of the Cosmos will occur for an infinitesimally short instance and then vanish.

Human species, even though it has advanced in the epistemic maze faster than any other species, may have now reached its limits and will end in a deadlock. In his review, Chapouthier rightly perceived that this conclusion is not a brand of doom saying but a plausible extrapolation from the evolutionary path of our species. Just as many other biological species, we have been progressing in the maze of universal epistemogenesis and may have now exhausted our biological evolutionary potential. At the same time, cultural evolution, which involves the evolution of artifacts, has placed us into an unprecedented complex artificial environment. I wish to stress that this is not a pessimistic statement. It implies a need of a novel optimistic humanism that would allow us to make the ultimate phase of our evolution, which precedes the extinction of our species, sublime and passable with minimum political and social tensions. This optimism should be based on the idea of temporariness: it is the finiteness of life span of a human individual, and also of a human species as a whole, that bestows on life meaning and value. Humans, as unique organisms endowed with self-consciousness and hedonotaxis (*i.e.* an impetus to escape suffering and to seek pleasure), can enjoy every day of their lives as a miracle in the making. To achieve this, we have to reconsider some fundamental tenets of the Western thought. Specifically, we should abandoned faith in unlimited power of human reason, teleological reasoning and illusion about eternity and immortality as conditions and determinants of meaning, so that we can accept the inevitability of individual death and of imminent extinction of our species with serenity and wisdom.

(2) We can ask: Admitting the limited power of human reason, what is the value of knowledge attained so far by humankind? Is all knowledge in living organisms always species-specific, so that the knowledge of the world by the species *Homo sapiens* is just as specific as is that of bacterium *Escherichia coli* or of dung-beetle *Sisyphus schaefferi*, and just as relative and as fleeting? How about the knowledge acquired by humans in cultural evolution, and specifically knowledge provided by science? Is this knowledge culture-specific? The paper of Konstantin S. Khroutski [2016] is relevant to the question. Khroutski seems to favor culture-specificity of knowledge. In continuity with his previous publications, he maintained that two

prominent ancient Western thinkers, Plato and Aristotle “created effective (foundational for the world culture) rational cosmologies (supersystems of comprehensive knowledge) but which are essentially polar (opposite) to each other. Essentially, in their mutual polarity, both two supersystems-cosmologies (Types of rationality) – naturally provide the foundation(s) of the really all-encompassing (scholarly) knowledge.” In Khroutski’s view, in order to resolve “the topical issues of current sociocultural development /.../ special and primary importance is laid to the development of Integralist (system, complex, holistic, etc.) methodologies – which are intermediate and posed in-between two poles, and which, although cosmologically autonomic – equally use the means from both poles: Aristotle’s and Plato’s.”

Concerning the Western thought, mentioned above, I have referred in my book to a remark of Alfred North Whitehead (as quoted by [Gardner, 1985]), “The safest general characterization of the European philosophical tradition is that it consists in a series of footnotes to Plato”. After having read the latest paper of Khroutski I addressed the author the following question: “Am I right in supposing that your ambition is to modify this remark and to create a new tradition of the European philosophical thought that would represent a series of footnotes to Aristotle?” The answer of Khroutski has been most revealing to me. In his opinion, “Russian (Orthodox) civilization is the separate Cultural Type (and this is the scholarly conclusion of Danilevsky, or Toynbee, etc.). In my thinking, this Russian Cultural Type (Civilization) precisely has the character of true “footnotes to Aristotle” (*i.e.* of the Aristotelian Hylomorphism and Functionalist naturalism – in the forms of “Russian” cosmism, organicism, functionalism, cyclism, pulsationism, etc.) – this Type of culture (and Organicist science) is currently (urgently) more needed to the world, than to Russia itself. However, rightly stated by Huntington (under external and internal factors) – Russian (Slavic) civilization is still torn, lone, and indecisive.”

My feeling is that this attitude of Khroutski reflects the two-century old controversy in Russian philosophical camps between the *Slavophiles* and *Zapadniki*. The debate started early in the 19<sup>th</sup> century, developed over the course of the 19<sup>th</sup> and even 20<sup>th</sup> centuries and seems to continue today, embracing also the Russian scientific intelligentsia. I admit that my judgment may be one-sided, considering the international character of the membership of the Biocosmological association and of the authors of its journal, of which Konstantin Khroutski is its Editor-in-Chief.

It has been stated that humans have been moulded by biological evolution to live in the world of medium dimension and low complexity, the macroworld [Kováč, 2007]. The worlds of very small dimensions, microworld, subjected to the laws of quantum physics, of very great dimensions, megaworld, and of great complexity, multiworlds (psycho- and socioworlds and possibly others) are not directly accessible to us. Indeed, in human perception and conception, they are separated from the macroworld by boundaries that have been named Kant’s barriers. Before the onset of cultural evolution, as the species thriving in the macroworld, we did not have a slightest idea about the existence of the other worlds. Yet, our biological nature has pushed us to have a complete explanation of the world, even when our knowledge

was minimal or non-existing, by creating myths – humans are mythophilic animals. The megaworld of the cosmos and the world of great complexity, which is becoming the focus of studies of science, may require – similarly as it is the case of quantum physics – descriptions based on the principle of complementarity. Just as the interpretations of the electron as a particle and as a wave are complementary, things and events, revealed by contemporary science, may require descriptions based on the principle of complementarity. This has been substantiated in a paper entitled “Darwin and Dostoyevsky: twins” [Kováč, 2010]. Late in the 19th century, two contemporaries, Charles Darwin (1809–1882) and Fyodor Dostoyevsky (1821–1881) published accounts of their investigation of humankind. Darwin did so in 1871 in his book *The Descent of Man*, Dostoyevsky in 1880 in the parable of *The Grand Inquisitor* in his book *The Brothers Karamazov*. This short text of the parable has often been denoted as the most magnificent piece of literature ever written. Incidentally, Dostoyevsky, a complex and contradictory thinker, has been usually classed with the pole of *Slavophiles*, who developed a peculiar conservative version of Slavophilism called *pochvennichestvo* (from the Russian word for soil) within the Russian cultural split [Wikipedia, 2015]. Dostoyevsky was familiar with Darwin’s doctrine and he was willing to admit “man’s descent from the ape”. An orthodox Christian, he put this sentiment in religious terms: “It does not really matter what man’s origins are, the Bible does not explain how God moulded him out of clay or carved him out of stone.”

*The Grand Inquisitor* can be read as Dostoyevsky’s treatise on human nature. In the tale, Jesus Christ revisits Earth during the period of the Inquisition and is arrested by the Church and sentenced to death. The Grand Inquisitor comes to visit Jesus in his prison cell to argue with Jesus about their concepts of human nature. From contrasting the views of the two protagonists it is evident that Dostoyevsky conceived of humans as complex creatures, contradictory and inconsistent, endowed with a tremendous potential for good and evil. Humans perceive personal liberty as a burden and are willing to barter it – as the Grand Inquisitor explained to Christ – for “miracle, mystery, and authority”. In addition, “the mystery of human being does not only rest in the desire to live, but in the problem – for what should one live at all?”

There is this Dostoyevsky’s superposition of the two points of views on humans that reminds us of the principle of complementarity, by which the physicist Niels Bohr attempted to account for the particle-wave duality of quantum physics. Christ, in the parable of the Grand Inquisitor, may be understood as a symbol of the truth that lies outside the human world. Possibly, the polarity between the concepts of Plato and Aristotle, as presented by Khroutski, and between the *Slavophiles* and *Zapadniki*, as I have brought out above, may be approached by seeing it in the optics of the Bohr principle.

(3) In the parable on Grand Inquisitor, Christ was listening to the assertions and questions of his interlocutor, but was silent and did not say a single word. His silence is essential to the parable. Similarly, the cosmos, to which humanity has been addressing its questions and predications, remains silent. By science, we have been increasing our knowledge only by tiny increments. As mythophils, unsatisfied and

impatient, we have hastily created the full “Truth”, deposited in the Holy Scripture. There are at least three books pretending to contain the revealed and hence unquestionable Truth: Judaic Torah, Christian Bible and Moslem Qur’an. The religion of genocentrism in biology offers to its devotees a novel Holy Scripture: the sequence of DNA in the genomes.

Dostoyevsky’s legacy may suggest an amendment to the UN Charta. “We, united humankind, solemnly declare: No truth has ever been revealed to us; we respect and tolerate each other in our independent searching and erring.”

Will our progressing through the epistemic maze removed the cultural divides and eventually shape a common, universal culture for humankind? This was a dream of the biologist Julian Huxley, who presented it in a concept of United Nations Educational, Scientific and Cultural Organization (UNESCO) [Huxley, 1947]. This dream has not been materialized and is not likely to be brought about in a short time that separates us from our imminent extinction as a species. Would other forms of life in the universe have a chance to advance father toward the Epistemic Singularity? We do not know; we are just actors in the middle of the drama. Performing in an act that is soon to be closed.

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