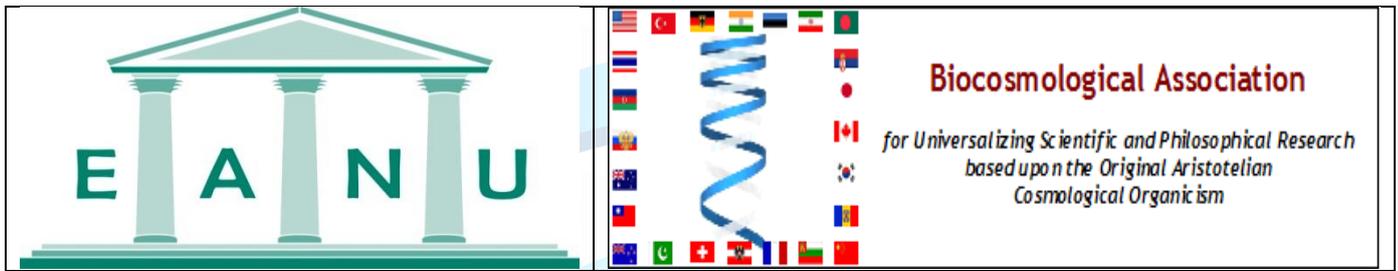


BOOK OF ABSTRACTS**World Congress: *Biocosmology and Cancer***
*concurrently with the***14th International Symposium on Biocosmology (14ISBC), on*****recognizing Teleological and Integralist approaches in contemporary biology, medicine and health sciences;
and reinstating Aristotle's scientific Organicism (Entelechial naturalism, teleological physics)*****14-15 of July, 2017,
Sheraton Grand Hotel,
Cracow, POLAND**



CALL FOR PAPERS

14th International Symposium on Biocosmology (14ISBC), in collaboration with the Europäischen Akademie für Naturheilverfahren und Umweltmedizin (Berlin), Cracow universities and the Polish Society of Hyperthermia
July 14-15, 2017, Sheraton Grand Hotel, Cracow, Poland

***Biocosmology and Cancer:
 recognizing Teleological and Integralist approaches in contemporary biology, medicine
 and health sciences: and reinstating the Aristotelian scientific Organicism
 (Entelechial naturalism, teleological physics)***

Objective scientific knowledge (naturalist evidence) in biological, medical and health sciences is full of facts that point out (to) and prove the reality – the life activity of living things (subjects) universally is reduced to inherency, and basically is *telic* (i.e. the needed results of life activity essentially oriented – *teleological*). All thus fully corresponds to Aristotle’s (super)system of knowledge – all-encompassing (Bio)cosmology (or *Organon*Kosmology), wherein *Organon*, from the Greek – means “the instrument”. i.e., the Function, and wherein *hyle* (matter), *morphofunctional* potency and activity (energy), and *entelechial* organization (information) – all are aimed at the continued stability and success in development, and eventual goal (the perfect result of activity) attainment. Therefore, Aristotle’s (Father of science) Biocosmology is Entelechial naturalism (the universalizing teleological physics and metaphysics), in this stressing that as much the philosophy of Stagirate, as his natural and social sciences – all are the cognate comprehensive Bio-sciences.

The Biocosmological Association (BCA) has introduced and develops the Triadologic approach to scholarly endeavors (referring to the biological evidence; and Pitirim A. Sorokin’s triadologic sociocultural findings, see his four-volume *magnum opus*, “Social and cultural dynamics”; 1937–1941). Therefore, BCA associates the scholars who recognize the existence and the essential equal significance of the Three synchronous autonomic Types of knowledges (Types of cosmologies): Two polar (opposite to each other); and the Third (or the First, in significance) that is intermediate and Integralist (and which unites the totally opposite means, for achieving homeostatic harmony). As for the polar Types, the first of them always is characterized by the (aetiologically) main causes and forces that act *from within* (this is Aristotle’s – Organicist and Naturalist Type); while the second pole always is reduced ultimately to the type of causes and forces that act *from without* (and which is

essentially the Platonic – Dualist and Idealist/Materialist Type). The intermediate Type – of Integralist knowledge (usually, now, referring to complex systems theories and contemporary holistic approaches) – is *in-between* poles, but cosmologically is self-sufficient (and, wherein, contemporary theories of information and Eastern cosmologies are increasingly important).

Each Integralist Type takes knowledge (and its rational means) equally from both poles, and synthesizes from them ‘a golden mean’ – the Integralist (autonomic substantive) system of knowledge that is built on its own cosmological foundation. Prof. Rudolf Klimek’s concept of the “informational diseases” and his modification of A.Einstein’s famous formula into $E=i mc^2$ – can serve as a sample of the Integralist approach. Notably, it is significant that Integralism is the main scope of the BCA activities.

The crux is, however, up to now (from the XVII-th century, in our conventional milieu of scholarly endeavors) – we have established and still use exclusively the unipolar and monolinear realm of rational knowledge (the so-called Western science and philosophy, and its “scientific method” that continues to ban Aristotle’s teleological physics), and that is based on (ultimately is reduced to) the Platonic Dualism (Idealism/Materialism) – mathematical physicalism and anthropocentrism, thus having really the un-natural essence. Indeed, the time is ripe to reinstate the true (Aristotle’s *entelechia*) naturalism and the natural state of things – to reintroduce the Biocosmological Triadologic approach and actualize all the Three Types of scholarly endeavors. First and foremost, we look forward to the full rehabilitation of the natural laws that are based (in their comprehension) on Aristotle’s foundational principles of *entelechia* and *hylemorphism*, a cornerstone for the natural laws of Bipolarity, Dynamicity and Cyclicity – Triadicity, which universally are reduced and point to the inherency (the primary substances that *from within* generate the *telic* activities) of all real (tangible) things (subjects) and processes in our world (Cosmos). Likewise, the inherent Changeability (that is ontogenetic and telic) is the omnipresent natural Organicist principle. Thereby, in respect to all the subjects of our real Cosmos – they all (at all levels) have the internally determined and disposed (*from within*) potencies (*energies*) and *hylemorphist* structures (*matter*), which are *entelechially* organized (*information*) – for the self-realization of their entelechial ontogeneses that are (as Aristotle’s *Kosmos* on the whole) essentially Hierarchical, Heterogeneous, and Finite.

All these basic principles (laws) have the same (indispensable) significance for contemporary science and philosophy, as (for instance) the laws of Gravity and Electromagnetism have for modern physics. As a result, consequently, not applying the natural (Organicist) laws – we inevitably have arrived today at a troublesome situation, which we call as the ‘cosmological insufficiency’. Indeed, the evident result (of this ‘insufficiency’), for instance, is that modern (conventional) medicine is unable to deal with the aetiological causes of chronic non-infectious and non-traumatic diseases (the so-called “civilizational diseases”), including cancer. However, in the present, Aristotle’s *Organon* Kosmology, i.e. his theoretical foundations and conceptual constructions, based on the Organicist principles of internal telic aetiology, gnoseology, methodology, anthropology, as well as relating sociocultural and evolutionary studies and practices, and which ought to be taken as the whole Type of rationality (of Organicist cosmology) – still are factually prohibited (under taboo), and not allowed to be used in the contemporary scholarly milieu.

Francis Bacon (1561–1626), while struggling against Aristotle and approaching to the “the new scientific method” – but he concluded then, in the 1620, in his famous “*Novum Organum*”, that “truth is rightly called the daughter of time and not of authority”; and that scientific gentlemen (of his time) were under “the spell of antiquity, of authors and of consent”, which had “so shackled men’s courage that (as if bewitched) they have been unable to get close to things themselves.” Precisely in the same way, however, we (four centuries later) – and facing our challenges of the XXI-st century – still continue to stubbornly use exclusively the foundations (of) and approaches in science that were established yet in the XVII-th century. Hopefully, our Symposium will be able to address this highly dangerous situation, otherwise the number of challenges in health and favorable sociocultural development will continue to grow, while our scientific capabilities inevitably decline (in respect to human health and social wellbeing). All the more we hope that our scholarly community (the colleagues that could come together around the aims and scope of Cracow’s meeting, starting with tackling the issues of cancer) – will strongly contribute to promoting the contemporary Organicist and Integralist endeavors, their genuine foundations and effective methods.

Abstract

Deadline for Abstract Submission (to the addresses below) is before **May 31, 2017**.

Preferably, the abstracts do not exceed 2 pages, and must include:

1. Title of the contribution;
2. Names, academic titles, affiliation (departments, institutes/universities, and cities of authors), email address of corresponding author;
3. Key words (3-5);
4. Text (Font – Times New Roman, single spaced, size – 14, margins – 2 cm).
5. Language (of the whole Symposium) is English.

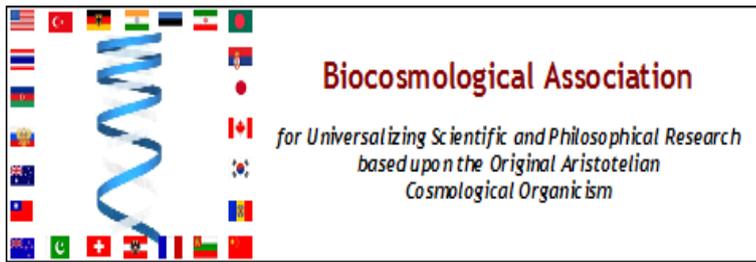
Full papers of presentations (in the form of scientific articles and scholarly essays) are kindly invited to be prepared and sent to Dr. Konstantin Khroutski, editor of the journal “*Biocosmology – neo-Aristotelism*” (due to the Journal’s guidelines – <http://en.biocosmology.ru/electronic-journal-biocosmology---neo-aristotelism/guidelines-for-authors>)

With kindest regards,

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Biocosmological Association, Europäische Akademie für Naturheilverfahren und Umweltmedizin, Polish Hyperthermal Society, Cracow Universities

World Congress: *Biocosmology and Cancer*

concurrently with the 14th International Symposium on Biocosmology (14ISBC), on recognizing Teleological and Integralist approaches in contemporary biology, medicine and health sciences; and reinstating the Aristotelian scientific Organicism (Entelechial naturalism, teleological physics)

**14-15 of July, 2017
Sheraton Grand Hotel,
Cracow, Poland**

Friday, July 14, 2017

8:30–9:00 : Registration

9:00–9:20 Opening Ceremony: Welcome addresses

Rudolf KLIMEK, Poland	Chairman of the Congress
Xiaoting LIU, China	President of the Biocosmological Association
Josef G. SCHENKER, Israel	President of the International Academy of Human Reproduction
<i>photo session</i>	
9:30–11:30 Introductory session : Triadological Essence of the Contemporary Science: Autonomy and Unity of the Naturalist, Dualist, and Integralist Foundations of Science; and Rehabilitating Aristotle's Scientific Naturalism <i>Chairman : Ana Bazac</i>	
Konstantin KHROUTSKI, Russia	Triadological essence of the contemporary science: And why we do actually need the rehabilitation of the Aristotelian archetype of rational <i>OrganonKosmology</i>
Karl W. KRATKY, Austria	Ayurvedic doshas (regulatory types) compared to human enterotypes
Dariusz SZKUTNIK, Poland	To the theoretical substantiation of a dynamic developmental factor that integrates life processes: Biocosmological aspects
Xiaoting LIU, China	Chinese Earth-Mother Philosophy in the Biocosmological perspective
11:30–13:30 Debate on the : Integrative Medicine: General Issues (part 1, introductory presentations) <i>Chairmen : Josef Bremer, Josef G. Schenker</i>	
Josef BREMER and Rudolf KLIMEK, Poland	The informational turn and the philosophy of information
Peter HEUSSER, Germany	Do colours and sounds exist in the world or are they products of sensory and neurophysiological mechanisms? A new and integrative approach to sensory physiology
Li TONG, China	Recognizing Integralist approaches in Meridians and Collaterals : Experience of Traditional Chinese Medicine and Future
Walter KOFLER, Austria	The need of and a proposal for a paradigm shift for health and sustainability

<i>13:30–14:30 LUNCH</i>	
<i>14:30–16:00 Debate on the : Integrative Medicine: General Issues (part 2)</i> <i>Chairmen : Josef Bremer, Josef G. Schenker, Walter Kofler</i>	
a free-flowing, interactive participation in the discussion of all participants, moderated by the chairmen and aimed at debating the key topical issues	
<i>16:00–18:30 Session 2 : Biocosmological Aspects of the Contemporary Studies on Integralist and Naturalist Issues (part 1)</i> <i>Chairman : Konstantin Khroutski</i>	
Xiuhua ZHANG, China	Whitehead's Inheritance and Transcendence on Leibniz's Organic Cosmology
Leonardo CHIATTI, Italy	Spacetime and beyond. some considerations about information and <i>potentia</i>
Milan TASIĆ, Serbia	Anthropoidity as an Overall Cause in the Interpretation of the World
Chunyu DONG, China	The strategies for several issues to understand the complexity of the time direction
Piotr KAROCKI, Poland	Christian body and soul
Sijia WANG, China	The Constitutive Way of Biocosmology in Chinese Primitive Mythology
Saturday, July 15, 2017	
<i>10:00–13:00 Hermes symposium: Prevention and therapy of cancers</i> <i>Chairmen : Rudolf Klimek, Ryszard Tadeusiewicz, Andreas Wasylewski</i>	
Joseph G. SCHENKER, Israel	Medical Science and Jewish Law (Halakha)
Rudolf KLIMEK, Andrzej WASYLEWSKI, Poland	German-Polish roots of the thermodynamic carcinogenesis and its fever therapy
Ana BAZAC, Romania	What is natural and what is non-natural in cancer?
Dariusz JASICZEK, Rudolf KLIMEK, Poland	Lactobacillus vaccine (Lactobim) in prevention and therapy of cancers
a free-flowing, interactive participation in the discussion of all participants, moderated by the chairmen and aimed at debating the key topical issues	
<i>13:00–14:00 LUNCH</i>	
<i>14:00–17:00 Session 3 : Biocosmological Aspects of the Contemporary Studies on Integralist and Naturalist Issues (part 2)</i> <i>Chairman : Xiuhua Zhang</i>	
Włodzimierz ŁUGOWSKI, Poland	Philosophical foundations of the theories of life's origin
Tianmin WANG, China	The Organic Beauty of the Thought of Confucianism about the Virtue of Benevolence and Its Formation
Aijun ZHANG, Zequan ZHAO, Shuhong LIU and Xiaoqi QIN, China	On Marx's Organic Whole Theory
Sergey N. GRINCHENKO, Russia; <i>online presentation</i>	About Teleological and Integralist Approaches in Theoretical Evolutionary Biology
Jing GUO, China	The Existential Meaning of Zhuangzi's Philosophy of Language from the Naturalism Perspective
Liyuan LIU, China	On Xunzi's View of Heaven and Man in Ancient
Milana TASIĆ, France	On the classification of animals according to biological functions, after Aristotle
<i>17:00 –18:00 : Closing session and BCA organizational issues</i> <i>Chairman : Xiaoting Liu</i>	

WELCOME ADDRESS
of Prof. Rudolf KLIMEK,
the “Biocosmology and Cancer” Congress Chairman

The book “Psychoneurocybernetic conquest of carcinogenesis and cancers”, published by Nova Science Publishers, Inc. New York 2015 - is a complementary updated volume of the following editions: “Explained cause of cancer” (Klimek R, Jasiczek, Stencl J. 2013), “Cancer and infertility. Truth and myth of medicine” (Hodorowicz S, Jasiczek D, Klimek R, Tadeusiewicz R. 2011), “Cancer – neoplasms and neoplastic diseases” (Klimek R, Madej JM, Sieroń A. 2006), “Monitoring of pregnancy and prediction of birth date” (Klimek R. 1994), “Conquering cancer ourselves” (Klimek R. 1990), “Cancer – cause, determinants and host-defense” (Klimek R. 1985), being a continuation of an uninterrupted scientific cooperation since international symposium “Oxytocin and its analogs”, which occurred in Cracow in 1963. Medicine is the undivided human knowledge dealing with theoretical principles how to protect or restore health and simultaneously putting them into practice. This monograph should be of special interest to physicians, health-care givers and laymen, who want to know about the latest knowledge concerning the true cause of cancer and infertility, their prevention, diagnosis and modern therapy, because its content was main subject of World Congress “Biocosmology and Cancer” in Cracow (July 2017).

It will also surely inform and entertaining anyone who cares about ethics in medicine or the funding of medical research, including through referencing to the original scientific and popular literature closely linked to certain human behaviors and procreation. For example, now current cesarean section rate is of over 30% despite evidence that a rate of 5% to 10% would be optimal, but numerous caesarean deliveries are performed simply due to maternal request, what may incur several risks none only for the baby, but also are related to appearance of cervical cancer of mother. Cancer cell grows in multicellular organism increasing dissipation of matter, information and energy in its environment, by which it kills normal cells and healthy tissues. According to general, not only medical knowledge, the book based upon multi years own experiences of the authors in conservative, surgical, thermo- and radiotherapy of neoplasms. They have presented the dissipative nature of cancers so that everyone could understand the neoplastic diseases, the modern rules of psycho-oncology and the primary significance of own life style in the formation and progress of cancer along with importance of caring about the environment inhabited by people.

They have summarized the public reactions to cancer and infertility in relation to historic discovery of natural psychoneurocybernetic cause of cancer, mathematical interpretation of its cause, obstetrical prevention of human cancers and psychoneuroendocrine therapy of diseases, especially caused by baneful information.

As chairman of the congress it is my great pleasure to welcome you in Cracow to the world congress of “Biocosmology and Cancer” concurrently with the 14th International Symposium on Biocosmology and Hermes Management Symposium: Prevention and therapy of cancers, a truly international meeting of scientists and clinicians who are working in their respective countries. The congress will focus on the activities of biocosmologists promoting excellence and goal to bridge gaps between the expansion of information and its implantation in medical practice. Today Cracow is a modern city and central place in the history of Poland, a significant place of Vitelano, Nicolas Copernicus and John Paul II.

Our grand worthy aim is the rehabilitation of the natural Aristotle’s approach into the scientific world using for the first time his entelecheia as virtual information which integrates cosmic matter and energy of always triune beings for achieving homeostatic harmony. Each word is the informational part of world and, as it is rightly mentioned in the note to the Book of Abstract about each person and her/his mirror pattern form. Mathematicians have used advanced mathematical methods to study unusual phases or states of matter, such as superconductors, super fluids and thin magnetic films not only in thin layers and threads, but also in ordinary three-dimensional materials. Gases, liquids and solids are the usual phases of matter, in which quantum effects are often hidden by random atomic movements. In extreme cold (close to absolute zero) quantum physics suddenly becomes visible when all moving particles cease. Information waves fill all space, known e.g. as Higgs’s field that allowed them to pass thought it and interact with matter and energy. Universe seems to be composed of 4.9% atomic matter, 26.6% dark matter and 69.5% dark energy.

Rudolf KLIMEK, Ph. D., Professor, Chairman of the “Biocosmology and Cancer” Congress,
with the 14ISBC, Cracow, Poland, 14-15 July, 2017;
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TRIADOLOGICAL ESSENCE OF THE CONTEMPORARY SCIENCE: AND WHY WE DO ACTUALLY NEED THE REHABILITATION OF THE ARISTOTELIAN ARCHETYPE OF RATIONAL *ORGANON*KOSMOLOGY

Konstantin S. KHROUTSKI¹

Keywords: *Aristotle's Dynamic naturalism, based on the foundational principles of Entelechism and Hylemorphism; the all-encompassing OrganonKosmology of Stagirite, laws of Intrinsic Changeability, Dynamicity, Bipolarity and Cyclicity – Triadicity, the three main autonomic Types of rationality (Aristotelian, Platonic, Integralist)*

Francis Bacon's gave rise (in his "*Novum Organum*", 1620) to the intolerance of teleological physics (scientific Naturalism) of Aristotle – Father of science, and who marked the history of contemporary scientific evolution. This intolerance further greatly increased, especially during the late period of Modern era – up to the modern full prohibition (*taboo* in the modern globalized scientific community) of the use of Aristotle's cosmological principles of *entelechism* and *hylemorphism* in scholarly endeavors. Modern experts in the philosophy and history of science identify numerous reasons on which final causation or teleological explanation has been held to be unacceptable to scientific pursuits. However, all this is worthy for attention solely from the angle of Modern dominating (or, rather dictating) Platonic Dualism (Idealism/Materialism basis) in realizing the current scientific activities. On the contrary, the modern taboo of Aristotle's Dynamic (Entelechial) naturalism totally fails in respect to Aristotle's own archetype (supersystem) of rational knowledge – his foundational naturalist framework (overall rational cosmological construction) of coherent aetiological, gnoseological, methodological, anthropological, etc. principles and laws.

We (in BCA) call this (super)system and the archetype of rational knowledge (generated to the world culture by the Greek genius of Aristotle) as *OrganonKosmology*, wherein "kosmology" (from the Greek κόσμος – world; and λόγος – reason) is the all-encompassing realm of intelligence; and "organon" (ὄργανο) means in Greek the instrument (organ, function) – thus, the rational study of naturally telic (functionalist) things in the one whole Organicist world. In turn, Biocosmology chiefly refers to the study of βίος (life), which main property is the purposefulness (determination to have things done) of all living beings, and which relates to the higher levels of Stagirite's Kosmic hierarchy. In fact, still the so-called (in the modern state of arts) "natural laws" chiefly refer to the inanimate (inorganic, abiotic) level of actual being, or, at best, to nutritive (vegetative) and sensitive (animalist) hierarchical levels of existence (if to follow the Kosmist hierarchy of Stagirite). In all cases, in the view of a modern naturalist – "rational soul" (as a higher level) always is beyond the natural(ist) cognition.

All this is certainly the paradoxical and inadmissible state of art in modern science that must have been overcome. Especially that the scientific evidence is (and, in particular, which is abundantly clear within the contemporary data of objective

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biological and medical knowledge) – of the evidently universal natural(ist) laws of Dynamicity, Bipolarity and Cyclicity – Triadicity, as well as of the Evolutionary (Ontogenetically) Spontaneous and Ascending self-genesis and self-evolvement, and the resulting (organically) Heterogeneous and Hierarchical order of the cosmos (or Kosmos, but not space). Contemporarily, all this is a matter of fact, but not an issue for discussion. But the pressing issue is why (so far, for at least the last four centuries) these evident scientific facts still are beyond the due attention of our modern scholarly community. Moreover, during the modern era – Aristotle and his *Organon* Kosmology (Organicist Type of rationality) have been entirely “forgotten”, or “hidden” behind the modern tremendous (technological) successes of the use of the Platonic Type of rationality, i.e. the application of unipolar and uniform (of mathematical physicalism) – Dualist (Idealist/Materialist, i.e. non-Naturalist) approaches. In this, the whole cosmological archetype of Aristotle’s (super)system of rational knowledge was disassembled entirely – disunited into separate parts or fragmented, and the parts (as “bricks”) were resubordinated and anew used under the principles (instead of its own) of the polar Platonic Dualist cosmology.

Thus, the genuine language of Aristotle’s *Organon* Kosmology has been lost (for instance, “entelecheia” – the cornerstone Dynamic notion of Stagirite – was replaced into “actuality” that basically has the opposite – Static – meaning). We disclose this situation in our work (Bremer, Khroutski, Klimek, and Tadeusiewicz, 2017), and, therein – require its immediate redress, as well as the full rehabilitation of Aristotle’s Dynamic (Entelechial, Hylemorphist) naturalism, taken as the autonomic (one of the Three) Type of (Organicist) rationality. Otherwise, acting separately from the Triadological approach – the essential contemporary Information concepts (in the paper, we consider the conceptions of Rudolf Klimek and Ryszard Tadeusiewicz, and their formulas: Klimek’s – $E = i mc^2$; and, Tadeusiewicz’s – $T = I C$) might lose their sustainability, thereby exposing themselves to the risks of becoming vulnerable to various influences, including the impact of incomplete, contradictory information (i.e. misinformation – dissemination and impact of false information).

On this account, primarily, to become a basic rational (foundational – scholarly) notion, to my mind – Information (as the truly Integralist notion) ought to be imbedded into the contemporary Triadological reality (i.e., in respect to rational knowledge – of the equal applying not only and solely the Platonian Dualist mathematical-physicalism, but, equally – the Aristotelian Dynamic Entelechial naturalism as well). Therefore, first of all, not focusing on Aristotle’s historical system of knowledge (i.e. in its historical and hermeneutical concreteness) – but we claim the full rehabilitation of precisely the Aristotelian genuine archetype of scientific Naturalism. Why is it so topical? The point is that this is the sole self-sufficient (super)system of rational cosmological (all-encompassing) knowledge, i.e. that is substantially based on its own foundational principles and conceptual frameworks. All other (that deal with Organicist and Holistic issues) just partially serve the intended purpose of realizing all-encompassing Organicist cosmology of the real world. Especially (at present), in sober fact – nobody (single-handed) is able to reinvent a new cosmological (all-encompassing) system, of Aristotle's

caliber, for the modern science is enormous and boundless, and hugely specialized, consisting of the innumerable amount of disciplines and their vast objective data.

Therefore, just the Aristotelian archetype of the all-encompassing *Organon*Kosmology could serve best of all as the matrix for generating the contemporary (and, essential for our time) – needed and effective – systems of Organicist and Integralist knowledge (thus serving as the *matrix* – framework of reference – of contemporary Organicist Type of rationality). Still, however, Aristotle’s *Organon*Kosmology and his foundational notion of Intellect (*Nous*), hence – the evolutionary “law of cephalization”, and the natural emergence and significance of mankind’s rational activities; and, in general, of the Noospheric level of life activity, in cognizing and implementing the wholesome realities, under the cosmist (natural Organicist) laws – still all this is beyond the scrutiny of modern scholars, and, basically, beyond the agenda of the modern established educational and scientific institutions. Such a situation is apparently both inadmissible and dangerous. In fact, no one can neglect the natural laws (without compromising her/his well-being), including our current cultural development. We (in BCA) call this situation as the contemporary “cosmological insufficiency”, i.e., basically – the ‘intellectual insufficiency’, in effective comprehending the realities of the human ontogenesis and the whole world cultural evolution.

From the very beginning (since the launching of BCA in July 2010) – we endeavor to introduce the Triadological approach, i.e. of the existence of Three ahistorical (atemporal) Types of rationality; and, accordingly – the Three Types of cosmology: two polar types (our proposal is to call them the Aristotelian and Platonic); and the intermediate – Integralist (that unites the polar means, but each time on its own cosmological bases). In this, in BCA, we categorically distinguish between the Aristotelian naturalism and modern materialism (strenuously arguing that the latter is based on Platonic Dualism, and which essentially demands the elimination of Aristotle’s *hylomorphism* and its inherent Telic causes; i.e., in essence, which rejects the teleological physics of Stagirite) In other words, we substantially draw a very clear distinction between modern materialism and the Aristotelian Dynamic naturalism that is based on the foundational principles of Entelechism and Hylemorphism.

In general, however, this task has proven to be enormously complex, for modern scholars (who are normally the product of the established modern system of education and science) – they are entirely embedded into the One cosmology (One science, One method) – One Type of mentality (Type of rationality) – which, of course, ultimately is reduced to Platonic Dualism and Idealist/Materialist relation to the real world. Our experience has shown that the continued inertia of modern scholars’ (unipolar and uniform) mentality factually represents a huge force and the great challenge.

A matter of fact is, however, that although we always have foundationally the Three basic Types of real world (cosmos), but, among them – only the Two polar Types of the whole world (but the third is Integralist realm that unites both poles; and which generates its own cosmological structures and functionalist effects, mainly using the polar means); thus, accordingly – only the Two poles of the rational knowledge (that can

be reduced and are reduced to their own fundamental – universal and indivisible – basic elements of the rational scholarly knowledge, of the polar Aristotelian and Platonic essence; while, naturally, Integralist rationality does not have its own “elements”). These two polar Types (which we call the Aristotelian and Platonic poles) – for all times they are the Types of all-encompassing knowledge that (each) has its own foundational rational (scholarly) elements: fundamental principles and laws; notions and conceptions; and the essential conceptual frameworks in aetiology, gnoseology, methodology, anthropology, etc. As for *Organon*Kosmology (Aristotle’s RealKosmism, or Biocosmism) and scientific Organicist knowledge, this Type is based on the *Four-causal telic* aetiology (which causes are intrinsic and *telos*-driven), *Integral* gnoseology, *Functionalist telic* methodology; *bio-socio-Cosmist* anthropology; and universalizing *Bio*-metaphysics and *Bio*-physics (*Bio*-sciences of all classes: natural, human and social, formal, applied).

Therefore, we (in BCA) strongly propose to distinguish three main autonomic Types of rationality, which are:

A-Type – that is the Aristotelian Dynamic Organicist (Entelechial) naturalism (and naturalist – teleological – physics), wherein the ultimate causes and forces are essentially internal and operate *from within*;

antiA-Type – is the opposing (polar) Type of Platonic Dualist (Idealist/Materialist) approach – essentially the mathematical-physicalist Type of scientific activity (that is now dominating, or, rather dictating the norms for scientific work), and wherein the main aetiological causes and forces are driven *from without*;

A-and-antiA-Type – is the third autonomic (basic, axial) universal Type of knowledge, that is based on its own (equally to the polar Types) cosmological foundations; but which does not possess its own basic rational elements, and, instead – for the sake of Homeostatic stableness (the ‘Golden mean harmony’) –actively uses (equally from both poles of rational knowledge) and synthesizes the needed – Integralist – rational means.

Thus, in one the same time – we always have the Three actual Types of knowledge – the Two polar Types, and the Third (basal, axial) intermediate Type. Aristotle substantiates in the *Physics* that “...it is clear that something must underlie the contraries and the contraries must be two” (191 a 4-5); so, “it was said first that only the contraries were starting points, but later that something must also underlie them and that they must be three;” (191 a 17-18). Of course, the Triadological approach is essentially complex, as it demands the bearing in mind of all the Three Types of reality, and, accordingly – the Three Types of rational knowledge. However, Stagirite provides the clue to this complexity, stressing that “the underlying nature is knowable through analogy:” (191 a 9). Thereby, the contemporary physiology of human organism and the modern objective data of biology and medicine can provide us (“by analogy”) with all the needed (qualitative) answers to the substantial issues of the Triadological approach.

It is likewise important to point out that since the Classic ancient era – i.e. since the genesis of rational scholarly knowledge (that is reduced to its own foundational elements and conceptual frameworks) – we naturally have all the Three main Types of rationality.

For instance, since the Classic era, we (scholars of the world) had equally as the polar supersystems (Aristotle's vs Plato's); as the Integral cosmologies (that synthesize the polar means on their own cosmological foundations), like Democritus' materialism; or the Integral materialistic doctrine of Epicurus, or the philosophy of Plotinus – at that era all the Three Types of rational knowledge lived alongside each other in peace, and fruitfully interacted with each other.

However, since the Age of Enlightenment (the so-called Age of Reason) and the Modern era ascent – the situation has changed cardinally. Astronomers such as Copernicus and Galileo began to share and build upon their experiments, and religious reformers began to publicize new – and increasingly radical (that rejected naturalist approaches) – protestant ideas. For instance, in respect to education, Martin Luther categorically substantiated and demanded “to completely remove Aristotle's books: *Physicorum, Metaphysica, De Anima, Ethicorum*, which until now were considered the best, along with all others, glorifying natural things, although on the basis of them one cannot study either natural or spiritual objects...”, and concluded that his “heart mourns that the accursed, arrogant, crafty pagan (i.e. Aristotle. – K.K.) with his false words seduced and fooled so many true Christians.” [citing Piama Gaidenko, 2000]. Thus, in a mutually beneficial relationship, the Protestant Reformation and the Scientific Revolution encouraged philosophers to discover all they could about nature as a way to learn more about God, an undertaking that promoted a break with past authorities, and, accordingly – the rejection of the foundational principles of the Aristotelian Organicism (his teleological physics – Entelechial naturalism).

Francis Bacon (and his fellow-fighters) had finalized this overturn (in the type of rational knowledge), from Naturalist/Entelechial (of teleological physics) – to Idealist/Materialist (of mathematical physicalism) foundations of scholarly endeavors. Simultaneously, Modern European thinkers had reduced the types of rationality (that are allowed for education and scientific activities) from natural Three Types (that can be denoted as the polar Aristotelian and Platonic Types, and the intermediate – Integralist Type) – to the One (and the only authorized) Type that is referred to the modern “scientific” and is radically Anthropocentric – Transcendent(al), i.e. ultimately is based on the Platonic Dualism. In the result, Aristotle's (the Farther of science) Dynamic naturalism (teleological physics) is categorically forbidden (under taboo) in the contemporary scholarly milieu. We treat this as “cosmological insufficiency” (or ‘intellectual insufficiency’) that poses a serious threat to the existence of entire humankind.

Indeed, and what is indisputable – the modern Scientific Revolution had given birth to an Industrial Revolution that dramatically transformed (bringing about the decent living conditions for) the daily lives of people around the world. In this, in fact, Western (and modern global) society has been moving forward on Bacon's model for the past four hundred years. At the same time, the Dualist Type of rationality is evidently unable to face all the present pressing challenges and effectively resolve the problems of the future of the human being and the mankind as a whole. On the contrary, it becomes increasingly apparent, if basing on the solely Dualist foundations of rationality – that we

are moving into the future of world wars and the reduction of world population, and cyborgization (dehumanization) of the remaining amount of people, thus categorically withstanding the natural(ist) (cosmist) laws of the real Universe (Kosmos). Our inability to understand the causes of the chronic non-infectious (and non-traumatic) diseases, first of all – the aetiogenesis of cancer – is related to the same fundamental reason, of our (still) existing “cosmological insufficiency”.

Our grand worthy aim, therefore, could be the rehabilitation of the natural Triadological approach into the world scholarly endeavors, and, thus – the full (legal) recognition and return (into the agenda of the contemporary world scientific community) of the Aristotelian Entelechial naturalism (teleological physics). In very deed, while in the 17th century Bacon and his fellow-fighters had combatted against Aristotle (and won), and further succeeded to reduce the Three to One – having transformed the Three natural Types of rational scholarly knowledge into the One “scientific method” (of Dualist and Positivist – non-Naturalist – of Idealist/Materialist, mathematical-physicalist essence); but the world is factually dynamic, bipolar and cyclic – thus spirally ascending; and now the time really is ripe to unfold back One into Three (firstly, realizing and implementing the Integralist tasks, with a special focus on Information concepts). Thereby, the natural position should be reinstated – all the Three Types of rationality are always autonomic and actual, and equal (to each other).

In this perspective, we must remember that Francis Bacon himself (although in the opposite direction) – he substantially claimed (in the 1620, in his famous “Novum Organum”) that “truth is rightly called the daughter of time and not of authority”; and further sharply criticized those scientific gentlemen (of his time) who were under “the spell of antiquity, of authors and of consent”, and which had “so shackled men’s courage that (as if bewitched) they have been unable to get close to things themselves.” [Bacon, 2000, p. 69]. In sober fact, already in our 21st century – the time really has come to revive all the Three natural Types of rationality, starting from the Dynamic (Entelechial) naturalism of Aristotle (the Father of science) that is the essential second pillar for the genuine Integralist (intermediate) Type of rationality.

Herein, another essential moment is that the scholarly endeavors of contemporary Asian researchers who often base their activities on (or include the constituents of) the Eastern truly naturalist cosmologies – they, in principle, will not realize (rationalize into the contemporary scientific language that is intelligible to each scholar) their great investigative and constructive potencies and endeavors – without the rehabilitation of the genuine (neo)Aristotelism and construction of the effective Triadological approach within the contemporary world scientific and philosophical activities.

AYURVEDIC DOSHAS (REGULATORY TYPES) COMPARED TO HUMAN ENTEROTYPES

Karl W. KRATKY¹

Keywords: *Principles, doshas, enterotypes, statistical techniques*

In Ayurveda and *Tibetan medicine*, three basic principles are considered (doshas, *nyes pas*). These principles are regulatory types and can be found generally in nature and specifically in humans. Two of them are complementary to each other: kapha (*beken*) cold – pitta (*tripa*) hot. The third one, vata (*lung*), is cool. It is kind of integration of the other two and is of prime importance. Altogether, a triad emerges. In the following, we confine ourselves to the Indian expressions.

Each individual is characterized by a specific combination of these three principles. According to the dominating dosha, there are kapha, pitta and vata human types. As such, they define each individual for the whole life, but there are modifications according to daytime, season, age of life and a potential disease. For Ayurveda and Tibetan medicine, the digestion is of paramount importance for health and disease in humans. In general, kapha has a slow digestion with a tendency to overweight, pitta has a fast digestion with a tendency to “overheating”, and vata has an intermittent digestion. In a more detailed classification, mixed types are taken into account: the 6 combinations of 2 doshas each and a balanced 3-dosha type; ending up in 7 types.

In Kratky (2008, Chs.8-9), geometric representations of the mentioned types are developed, the focus being on 2 dimensions (health disc). This is only adequate when the 3 doshas are correlated. If they are independent, however, a 3-dimensional model is indicated. In this case, the health disc can be interpreted as a projection of the 3-dimensional model to 2 dimensions. Then, some information is lost, which may result in inconsistencies, cf. Kratky (2017a, Fig.11). From a scientific viewpoint (complex systems theory), one would not expect that a low-dimensional model can be helpful when interpreting the health status of a person. If one models physiological processes with differential equations, a high number of variables has to be taken into account. This results in a high number N of equations defining an N -dimensional abstract space (Kratky 2017b). Even if there are correlations and one can reduce N to an effective lower N via statistical techniques like the principal component analysis, it seems improbable that a 2- or 3-dimensional geometrical representation is helpful.

In this context we turn to the gut human microbiome which is dominated by bacteria. There are up to 1000 different species of gut bacteria. One may think that modeling the activity and co-operation of them results in a high dimensional space. However, this is not the case; see Arumugam et al (2011). A principal component

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analysis showed that the bacteria clustered, resulting in 3 groups (bacteroides, prevotella, ruminococcus), i.e. 3 human enterotypes.

Since digestion is very important in Ayurveda, one may collate the 3 (western) enterotypes with the 3 (eastern) doshas – each dosha corresponding to a specific enterotype. If this proves to be true, this has an interesting consequence: If a person has not his/her “corresponding” gut bacteria distribution, ill health may follow from that. Another point is that intake of antibiotics reduces the number and the changes the distribution of gut bacteria significantly. Thus it is necessary to restore the previous state, e.g. via prebiotics and probiotics. However, one should take into account that different enterotypes need different nurture.

The enterotypes primarily refer to healthy persons. In case of enteropathy, the distribution of gut bacteria may deviate considerably from the usual enterotypes. Then, fecal transplantation (using feces of a healthy person) may help. In fact, this works mostly in the case of *Clostridium difficile* infection. For ulcerative colitis, however, the success rate is much smaller. This may have two reasons: i) The feces do not change the sick bacteria distribution to a large extent, ii) donor and recipient represent unlike enterotypes. Then the transplantation is a mismatch, which may be compared to different blood groups of a blood donor and recipient.

It should be mentioned that the number of enterotypes depends on the statistical techniques applied, the number of enterotypes varying from 2 to 5 in recent papers; cf. Enders (2016, Ch.3). This is reminiscent of the differing number of further principles or types across complementary medicine, the so-called elements; cf. Kratky (2017a). It is not the question which number is really true, but which system of principles works well in connection with pathophysiology.

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TO THE THEORETICAL SUBSTANTIATION OF A DYNAMIC DEVELOPMENTAL FACTOR THAT INTEGRATES LIFE PROCESSES: BIOCOSMOLOGICAL ASPECTS

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The history of bio-philosophical considerations shows the methodological development of scientific research on the specificity of processes in living organisms. Such researches often are focused not only on the recognition of related life phenomena but, primarily, on searching for the cause that explains their comprehensive and intentional course.

It is essential to use the language of holistic Teleology to describe these phenomena which I will be consciously using, and which is permanently eliminated by the modern scientific physicalism within the broadly understood life sciences.

The history of scientific research also shows the paths of considerations and investigation of different researchers who gave the empirical facts an incorrect cognitive interpretation. It is enough e.g. to mention the misunderstanding of the Aristotelian bio-philosophy or the mechanical interpretation of organic phenomena by Wilhelm Roux or the inclusion of metaphysical elements to the interpretation of the scientific facts by Hans Driesch.

Well-established experimental studies should continually focus on the casual relationship between totipotent processes in living organisms², Totipotentiality is still a key concept in biology of development and experimental facts derived from it should lead scholars to new conclusions and philosophical generalizations bringing them nearer to fuller understanding of these phenomena.

Precise cognition of the relationship and potential abilities of individual cells in the living system, especially the clear definition of their targeted developmental integration, could lead to many practical solutions in regenerative medicine, e.g. it could clearly determine how to redirect pathological cancer cells to normal development.

In this context, the question arises about a dynamic developmental factor that integrates life processes, e.g. during organic regeneration, which in the history of science was variously named (entelecheia-substance – Aristotle, Entelecheia – Hans Driesch, organizer – Hans Spemann, dynamic genome – Piotr Lenartowicz) and differently defined its way of acting.

Presently, in science, it is going to assign the cybernetic information a leading informative role in the course of organic phenomena. However, the scientific question that arises in this context is: What ultimately substantiates the individual cells to be ultimately targeted and established under holistic development? Getting to know the programming mechanism of particular functions and cellular tasks would lead the scientists to be successful not only in regenerative medicine, but also in the area of plant regeneration and transplantation.

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² This phenomenon is most noticeable among plants.

WHY IS THE EARTH? CHINESE EARTH-MOTHER PHILOSOPHY IN THE IOCOSMOLOGICAL PERSPECTIVE

Xiaoting LIU¹

At present, we stand on the doorstep of historic change in setting priorities for our contemporary scholarly endeavors and developing relevant scientific pursuits. Among them, the development of Integralist (Holistic) conceptions has a special place, including the studies on the Earth topic. The latter, of course, has a long history. In Modern time, yet in the beginning of the 20th century, the theory of biosphere was developed by the Russian scholar Vladimir Ivanovich Vernadsky (in the 1920s). Notably, Vernadsky defined ecology as the science of the biosphere. The latter (biosphere) is described by Vladimir I. Vernadsky as the region on Earth for the transformation of cosmic energy. In his *Biosphere* (1998 [1926]) Vernadsky studies “the Biosphere in the Cosmic Medium” and “The Biosphere as a Region of Transformation of Cosmic Energy”; and that “Cosmic energy determines the pressure of life that can be regarded as the transmission of solar energy to the Earth’s surface.” [p.76]; and, in the Foreword, the authors stress that “Life, as he (Vernadsky. – X.L.) viewed it, was a cosmic phenomenon which was to be understood by the same universal laws...” [p. 15].

Another valuable achievement of the 20th century is the theory of Noosphere. The word “noosphere” derives from the Greek νοῦς (nous – “mind”) and σφαῖρα (sphaira – “sphere”), in lexical analogy to “biosphere”. This term was coined by Édouard Le Roy (1870–1954), who together with Teilhard de Chardin was listening to lectures of V. I. Vernadsky at the Sorbonne. In theoretical aspect, “noosphere” was introduced by Pierre Teilhard de Chardin, in 1922, in his *Cosmogenesis*. In 1930s, Vernadsky developed the theory of noosphere, within his own approach. His ideas of *noosphere* were an important contribution to Russian cosmism. In general, V. Vernadsky’s concept of the Biosphere and Noosphere as a planetary and cosmic phenomenon could become a cornerstone for contemporary Biocosmological developments. Still, however, Vernadsky’s great discovery that the “Biosphere is the domain of life on Earth, – a *biogeochemical* evolving system with a cosmic significance,” [Vernadsky, 1998, p.25-26] – still remains to be a scientific novelty unwelcomed by mainstream science, and which (largely) remains neglected (already a century long!)

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Further, the American philosopher Aldo Leopold has put forward the thought of Land Ethics in 1933, his thoughts were soon drowned in the smoke of the Second World War. After the war, the thought of land or earth began to attract attention because of the deterioration of environmental problems. Especially since 1960s, a number of ideas and writings about the earth sprang up like bamboo shoots after a spring rain, such as the famous *Silent Spring*, written by Rachel Carson, the *Gaia Hypothesis*, put forward by James Lovelock, *Philosophy Gone Wild*, written by Holmes Rolston III and many other works of natural literature. These explorations have restored the power and authority of the earth in the western context, and established organic holistic life view of the earth. Such efforts are reaction and effective warning to industrial society and industrial civilization.

In fact, the philosophy of agricultural society is mostly based on the wisdom of the earth. From the immemorial past, the earth has been regarded as a kind of God or an object to worship, namely God of the Earth. The God of the Earth is often seen as the Mother God because of its full production and breeding ability. Myths about God of the Earth can be found everywhere in ancient myths. The philosophy of Mother Earth is the oldest and most systematic in Chinese philosophy of the earth due to the coherence of Chinese civilization and the possibility of close observation.

The idea of mother earth has long existed in ancient China. For example, in Zhou Yi the first two hexagrams of the 64 hexagrams is *Qian* and *Kun*, which means heaven and earth. And there is an interpretation about the two hexagrams in Zhou Yi Xici: “As heaven maintains vigor through movements, a gentleman should constantly strive for self-perfection. As earth's condition is receptive devotion, a gentleman should hold the outer world with broad mind”. This thought can be regarded as the general principle of Chinese civilization since tenth Century B.C. The second example is Taoism established by Laozi, which directly regards the earth as a mother, human as babies, and treats mountains, rivers and vegetation as the limbs and the skin of the earth. Man and nature have primitive high layer identity.

However, the most essential manifestation of the thought of Earth-Mother in China is the so-called Almanac of Earth-Mother, which is a kind of Chinese traditional calendar based on lunar calendar. There are 365 pages in the almanac, with each page corresponding one day of a year. Compared with today's calendar, more information like seasons, weather, farming time, farming works, as well as the historical events are recorded in this almanac in order to guide the agriculture, animal husbandry, fishery, sericulture, aquaculture and pest prevention. It is a must read and a practical encyclopedia in the agricultural age of china. Almanac of Mother Earth is lunar calendar, the dominant type of experience is Chinese earth experience, because it is based on the farming works. One thing need to be emphasized is that the earth

and the heaven in Almanac of Mother Earth are all concrete and sensible, which means both of them are accessible personified existent.

Almanac of Earth-Mother and Zhou Yi have fundamental structure and parallel connections of history. From the perspective of Neo-Aristotelian, the mere emphasis on status and value of the earth and regarding the earth as a living organism, is just a kind of theoretical description. Earth, as a concrete and sensible existence, is not only the object of experience and the basis of life, but is also co-existence with man, which means the life of man is connected with the life of earth. Man have to be accustomed to earth and experience earth so as to maintain a relationship with the world and to have a poetic dwelling. It's hard to imagine whether it make any sense to talk about different kinds of problems without the earth. It is in this view that Heidegger revisited the concepts of land and earth, and deepened the meaning of construction and dwelling, and put forward the thought of poetic dwelling in his later years. He believes that “dwelling is a way of human existence on the earth”, “dwelling itself must always be a stay with all things on earth”, and only then “on the earth and in the earth, historical people laid the foundation of his dwelling in the world. (Poetry, Language, Thought, p.147-148, 148–151, 45–45).

All these efforts show that nowadays we should draw on the contemporary theory of land and re-examine the traditional earth thoughts and reconstruct the new earth philosophy through the Biocosmological perspectives, after all the twists and turns.

THE INFORMATIONAL TURN AND THE PHILOSOPHY OF INFORMATION

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Virtual information. For some time now, contemporary philosophers have been engaged in investigating the new intellectual issues emerging from the world of information and the information society, and in this respect the philosophy of information, as a sub-discipline, actively seeks to broaden the existing boundaries of philosophical research. At the same time, it does so not by comparing or merging previously discussed topics – such as the principle of being (*arche*), the interdependency of being and consciousness, or existential questions – but rather by reorganizing the program of philosophical inquiry itself, opening up and initiating new areas of philosophical research and seeking out new research methodologies.³

Hence, the following question arises: can the philosophy of information as it stands today be considered a mature field of properly conceived research? One can only hope so. In this regard, on the one hand, we are driven mainly by our contemporary, globalized culture, and the increasing dependence of society on information technology, while on the other, this shift impacts upon our understanding of the history of philosophy itself, and of the dynamic forces that regulate the development of philosophical systems. So what kind of philosophy of information is to be expected? To answer this question, we must on the one hand strive for a clearer view of the philosophy of information as it relates to the history of human thought, and on the other keep track of developments in modern science. Here we can only offer an outline sketch of the sort of path of inquiry that can be foreseen in this regard.

Philosophy continues to grow because it limits the areas of its own research, handing some of them over to particular branches of science.⁴ The more complex the world and the task of its scientific description become, the more important must seem the level of philosophical discourse understood as *prima philosophia* – i.e. that which distances itself from all unwarranted assumptions and misleading forms of inquiry, such as may wrongly be thought to belong within the normative heuristic activity of conceptual modelling. This discourse must be cognizant of research in the history of philosophy, in order to accomplish a transcendental move as far as the research associated with the philosophy of information is concerned: that of moving into the

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³ Cf. L. Floridi, What is the Philosophy of Information? *Metaphilosophy*, 33, 2002, 123–145.

⁴ Cf. Kun Wu, The Interaction and Convergence of the Philosophy and Science of Information, IS4IS Summit, Vienna, 2015.

more and more abstract and optimized conditions pertaining to new possible areas of study, while keeping in mind not only scientific forms of explanation but also modifications to them, and innovations, stemming from philosophy.

The scientific revolution, brought about by the scientists and philosophers of the 17th century (Galileo, Descartes), drew attention to both the mathematization of the laws of nature and the perceptual laws distinctive of the subject. The Cartesian “philosophical turn” of that time involved a transition away from the nature of the object of Aristotelian knowledge and towards a focus on the epistemic relationship between the object and the knowing subject: i.e. a shift from metaphysics to epistemology. The growth of the information society that can be observed today is connected with the emergence of the info sphere: a contemporary informational space defined by two concepts, cyberspace and the biosphere.⁵ To put it in the most general terms, it is about the syntactico-semantic-pragmatic environment in which many billions of people are living today. This development has led contemporary philosophy to privilege forms of critical reflection focused on the area of internally structured cognition, as represented through event memory and language broadly construed. The infosphere is modelled and managed using both of these two instruments – and along with this a transition is accomplished from epistemology to linguistic philosophy and modern logic, and subsequently to a concern with the nature of that which underlies them, which is information itself.

Information has become another basic concept, just like “being,” “knowledge,” “life,” “meaning,” “consciousness,” or “good and evil.” All of these are central concepts standing in relations of interdependency with the notion of “information,” which therefore in its own right demands to be independently studied and investigated. It is, moreover, a still more basic concept – one in terms of which the other aforementioned concepts can themselves be expressed, combined or even defined. We are referring here, *inter alia*, to such familiar expressions as “Being and truth are interchangeable”, “I think, therefore I am”, and so on.

We should thus accept that there is in fact a more basic concept than that of “knowledge”, which is what philosophers have focused on up to now, and that it is “information”. Much of this information is socially acquired, mediated through perception, retained in the memory of individuals, and typically transmitted through language – be it natural or artificial. Information may, for example, also be obtained without requiring that someone be there to apprehend it in the sense of entertaining judgements and assertions that embody it.

⁵ The term infosphere appears in scientific publications concerned with human functioning in the world of information and with the notion of the developing information society. In Poland, the concept was first put forward by J. L. Kulikowski, as including “the totality of information available to man through his consciousness that he can potentially use to accomplish his life goals”. See J. L. Kulikowski, *Man and infosphere*. *Problems*, 3 (384), 1978, pp. 2–6 (especially p. 2).

The exchange of information in artificial or biological systems is subject to other criteria. That is why it is necessary to focus on this concept first, before one addresses the philosophical notions of being and knowledge. The information stream operates on a more basic level than the acquisition or transmission of knowledge. This type of approach requires more far-reaching research of an interdisciplinary kind, and differs significantly from the methods of traditional ontology and epistemology.

Hence the philosophy of information can be viewed as the foundational and “first” philosophy (*prima philosophia*) of the future – both in Aristotle’s sense of the primacy of its object (information), considered by philosophy (in this case the philosophy of information) to be a fundamental component in every environment, and in the Cartesian sense of the primordial of its methodological stance and problems, as well as in the sense of a social philosophy that affirms social being as what determines consciousness itself. The philosophy of information aims, then, at defining what will count as both the most valuable and the most condensed approach to philosophical inquiry. The philosophy of “integrated information,”⁶ construed as foundational philosophy, can illuminate and lead to a radical reconstruction of our natural and social environment, furnishing a systematic treatment of new conceptual foundations. It allows humanism to find meaning in the world and create a deeper sense of responsibility, reaching a new level in the systematization of being.

If what has been said here is correct, while the contemporary development of the philosophy of information may here and there encounter setbacks of one kind or another, it will remain of essential importance as something not to be passed over. Its presence will affect both our behaviour and, in equal measure, the general way in which we go about dealing with both new and existing scientific and philosophical problems, leading to deep-level changes in our understanding of philosophy and its practice. This will come to be known as the “informational turn”, much as we now speak in philosophy of the “linguistic turn.” In any case, the philosophy of information certainly promises to be one of the more fruitful areas of contemporary philosophic-scientific research of reality.

The philosophy of being. Every discrete part of reality (the universe) considered to constitute a system is a being (the quantum of the threefold, indivisible material-informational-energetical reality, or its multiple), whose mass is informationally balanced with its current and potential energy, and with its simultaneous coupling with its surroundings. The law of equivalence of the mass, information and energy of the universe expresses the raising of the equation $E = mc^2$ to the power of information, in which matter and energy are understood to constitute two aspects of that information, construed as something causally efficacious^{5,6}. The equation settles

⁶ Cf. G. Brüntrup, Emergent Panpsychism, in: G. Brüntrup, L. Jaskolla (eds.) Panpsychism. Contemporary Perspectives, Oxford: Oxford University Press, 2017, pp. 48–74 (especially pp. 57, 67).

the centuries-long dispute over the essential and existential essence of each being: the understanding of which has been invested in its constantly varying names, limiting it to some merely informational conception – as, simply, an immaterial word deprived of energy. First of all it is necessary to understand what this word ‘being’ really refers to: a word which, according to encyclopaedias and dictionaries, denotes the entirety of everything that in any way, or in some specified way, exists in a narrow sense – i.e. the essential (most essential, most important, just that constituting the essence) or the existential (that which exists, the very fact of its existence), both as the whole of reality (the universe) and in the form of any part of it (a system). A fundamental difference obtains between any sort of real being and its merely abstractly conceived existence (in human thought), where the latter is increasingly often misleadingly referred to as a ‘virtual’ one, the problem being that this term is itself derived from the Latin expression used to denote virtues or powers^{7,8}. Metaphysical abstraction is something already described by Aristotle when, starting out from some particular particle of reality, he would abstractly subtract all its individual qualities from it in order to arrive at either a physical abstraction (e.g. describing some species) or a mathematical one (capturing its quantitative aspect). Modern mathematicians hold that there is nothing in the material world that cannot be captured mathematically, while mathematical models may show up sometimes quite simply regardless of the intentions of researchers. According to them, the causal relationships that exist in the world are cognizable precisely through mathematical connections, while matter and form are different names for the same thing.

Proceeding on a cybernetic basis, it is possible to identify beings as the smallest parts of reality without needing to take into account their constantly varying nomenclature. Such a part of reality as this metaphysical abstraction of Aristotle, thus denuded of all of its particular specificities, corresponds to the term ‘being’ when construed as that which defines the smallest part of the universe or its multiple. Each being is, therefore, tantamount to a material-informational-energetical concept. For example, every word is a being in the human verbal world, and its power can be expressed, say, by the response to it of crowds – in whom, in accordance with the principle of information waves, it may resonate with motivations for action, or discouraging factors, relevant to each and any of the persons there. Unfortunately, this is also the basis for what happens in cases of informational pathology, where the affected person reacts uncritically to the information transmitted, a classic example being the treating of false medical information as veridical^{9,10,11}.

Reality (the universe) is a self-realizing of information (ideas) in accordance with the principle of equivalence of mass, energy and information mathematically expressed as an informational resonance feedback wave by the formula $E = mc^2$. Matter and energy are just two aspects of the threefold informational essence of the universe, and because of this fact information, as the realization of the perfect idea, counts as more important than either of them^{12,13}. Images and sounds act on the

human senses directly, but when already in the form of written or spoken words we are required to understand their content: namely, the informational resonance of the person who, as with every being, exists and acts in accordance with the unbreachable law of equivalence of mass, information and energy. The display of letters, numerals or musical notation is a conventionally agreed informational human construct serving to convey some content or other to suitably initiated persons, reflecting the fact that letters composed in some order form words that are only properly understandable in a specific language. Numerals relate to many languages, yet very few people can distinguish notes, and not many of these, in turn, are able either to read and convert them into sounds or to simply feel the beauty exhibited by the relations obtaining between parts of a whole, and between these and the whole itself, where this marks the transition from a concrete to an increasingly abstract being. Each such display is, however, regardless of the degree of understanding involved, no less part of the field of information available to every consciously responsive human being, subject to the state of his or her health, upbringing and education.

As far back as Socrates, we encounter the claim that if he is entirely focused on intense love, man can attain eternal truth, dignity and beauty (Plato, “Phaedrus”). Eternal truth has no limits, whereas people set out to define the truth for themselves within the terms of their own limited language. That is exactly the reason why mathematics has become the main tool employed by the natural sciences, and in the end by medicine too, to disseminate ideas without taking the trouble to ensure their broad-based, substantive justification. This is where ideology, as a set of human views meant to be of use in our overall interpretation and transformation of the world, differs from religion, conceived as a system of beliefs and practices operative in the space between the divine sphere and society (understood as the culmination of the development of culture). Man lives and acts according to natural laws, but he himself decides on their selection, following the guidance of philosophical thought, in which words play the most essential justificatory role, in respect of what purpose they are meant to serve, and in what manner and to what effect they are employed.

Language creates the informational basis for our individual and social life, and so it is difficult to tear it away from these in order to describe it separately. With language you can do something, convince someone, change situations, alter moods, create social institutions, etc., in order to bring someone into some permanent state, to exert a decisive influence on him or her, or create a world that exists by virtue of being spoken. For example, according B. Lown, *Words are the most powerful tools a doctor has, but words, like a two-edged sword, can maim as well as heal*¹⁴. Already, in Plato’s dialogue “Gorgias”, two ways of using and understanding language are distinguished: descriptive language, informing us about something, and the language of the rhetoric of Socrates, understood as “the inventor of persuasion”.¹⁵

DO COLORS AND SOUNDS EXIST IN THE WORLD OR ARE THEY PRODUCTS OF SENSORY AND NEUROPHYSIOLOGICAL MECHANISMS? A NEW AND INTEGRATIVE APPROACH TO SENSORY PHYSIOLOGY

Peter HEUSSER¹

The present common understanding of sensory physiology is based on a reductionist interpretation of psycho-physiological processes. In this interpretation colors, sounds and other sensory experiences are believed to be the ultimate effect of the cascades of physical and physiological processes which propagate from the respective objects to the sensory organs and from there via the sensory nerves into the brain. The brain then processes the incoming physical “signals” and thereby supposedly produces colors, sounds or other perceptions. Thus, colors and sounds are considered to be illusions, with no reality in the world out there. Furthermore, the nature of sensory processes is believed to be a machine-like mechanism of physical and physiological actions, without an experiencing mind as such.

In contrast to this widely held belief this contribution intends to demonstrate and defend – on empirical and logical grounds – the following theses:

1. The reductionist view of sensory physiology is a theoretical stance which does not correspond to the empirical facts.
2. Colors and sounds do exist out there in the external world.
3. Despite their qualitative nature, colors and sounds are just as real as the cascade of physical waves and physiological processes.
4. These cascades do not cause, but only mediate the sensory experiences.
5. The process of experiencing is not physical, but mental in nature.
6. The process of sensory perception is an integrative psycho-physiological process in which the human mind reaches existing sensory qualities in the external world through the mediation of the physical and physiological cascades.

This integrative approach to sensory physiology leads to a more humanistic understanding of ourselves and our relation to nature.

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RECOGNIZING INTEGRALIST APPROACHES IN MERIDIANS AND COLLATERALS: EXPERIENCE OF TRADITIONAL CHINESE MEDICINE AND FUTURE WAY OF LIFE

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Keywords: Meridians and Collaterals; Integral Theory; Chinese medical experience; future life

The paper explores the integral and organic view of traditional Chinese medicine (TCM) from the integralist understanding of Chinese Meridians and Collaterals (M&C). It expounds the traditional practice, the thinking features and the source meridian and collateral theory, and expounds the relationship between M&C and human body, the disease manifestation, the prevention and treatment. It puts forward that the understanding of the integral theory of M&C is of an empirical integralist perspective. From the “philosophical nature of Chinese medicine” and “philosophy of Chinese medicine”, this paper explores and sums up the experience of Chinese medicine by attributing it to the traditional Chinese philosophy. With the help of traditional Chinese philosophy, combined with organic cosmology, it discusses the philosophical meaning of TCM experience and the prospect of TCM in the future. It advocates achieving the integrity of TCM practice under the guidance of organic integral perspective and spreading the integralist view of TCM and proposes the future way of life and the ecological nature of the global future in accordance with Chinese medical experience.

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THE NEED OF AND A PROPOSAL FOR A PARADIGM SHIFT FOR HEALTH AND SUSTAINABILITY

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Keywords: *comprehensive model for health, evolution, paradigm shift, theory of principles*

The urgent need of a paradigm shift is latest since the classic paper of Engels in science 1977 without contradiction². Engels deduced conclusively the incompatibility of the given paradigm to justify medicine as a whole as scientifically based on the examples of information and meaning related (psychiatric) diseases. Engels expected a solution on the basis of a hierarchical evolution understanding and the General System Theory (Bertalanffy). But his proposal to win such a “biopsychosocial model” could not be realized in an epistemologically sufficient way: One reason was the incompatibility of identical terms with different contents within the different evolutionary levels of a human person as a biopsychosocio... (eco-cultural... etc.) person³. Another reason is the lack on a proposal to link energetical and information related aspects in living and not living entities.⁴ Klimek proposed actually a powerful proposal to handle such a linkage.⁵

The key for the solution can be seen in a new paradigm which can cover all the health related scientific disciplines. Einstein handled a similar problem: Two parts of physics seemed to be incompatible: mechanics and electromagnetism. The incompatibility was based in a different paradigmatic position. Therefore the contents of the identical wording (“movement”) were incompatible. Einstein was able to invent a more basic physical movement without solid matters (mechanics) and electromagnetic fields (electromagnetism). This was a view on physics just based on

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² Engel GL: The need for a New Medical Model: A Challenge for Biomedicine, *Science*, 196, 4286, 129–196, 1977.

³ Tress W., B. Junker: Psychosomatische Medizin zwischen Naturwissenschaft und Geisteswissenschaft – Tertium non datur?, *Psychother Psychosom Med Psychol* 42:400-407, 1992.

⁴ Kofler W. The relevance of Sechenov for the development of the theory of an “Extended view” of a human person as a social being, Russian Acad. Science et al (eds.) Sechenov Honor Lectures 2004, Moscow, 3–68, 2005.

⁵ Klimek R.: Threefold material-informational energetic reality, *Biocosmology-Neo-Aristotelism*, 4(4):403–415, 2014.

energetical field. The former paradigmatic positions are not falsified. Their applicability is further on used for all “classic cases”.⁶ Einstein’s procedure gives a hope to unify medicine. (The next step of Einstein is never so relevant for medicine: To invent the formulas of Relativity Theory which covers electromagnetism and mechanics.)

The “Extended View” is such a Theory of Principles. It offers two aspects:

1. A comprehensive paradigm which allows to offer a joint frame to the distinct distributed ontologies of medicine: comparable with an emigration of different powerful companies from small houses in a one palace. All companies can use the traditional offers as before but have the chance to adapt them: As mechanics and electromagnetism within Relativity Theories.
2. The new paradigm offers in principle new applications, e.g. because of the conclusions which are implicit integrated within the old paradigms.

An identical wording with not identical but “familiar” contents is the starting point for a Theory of Principles. We use the term “evolution”. Therefore we had to find a one characterization for the different processes which can be communicated with the term “evolution”.⁷ So Darwin’s position is now a special case. But remember: His understanding of evolution was much wider as this of many of his followers. Darwin accepted as well the evolution of emotion e.g. of the earthworm as all four Aristotelian causes inclusive *causa finalis*. The proposal of Einstein can be understood also as based on an evolutionary process: Then “beyond” of an universe with electromagnetic fields and solid matter can be seen an universe “evolutionary before” without solid matter but electromagnetic field as such. And “before” that an universe without electromagnetic fields but just energetical fields. “Quanta” can be understood as the name for the situation, in which two energetical fields (one playing the role of electric and one of magnetic field) are crossing as close as possible. Einstein’s formula $E=mc^2$ expresses just the energetical aspect of the self-guiding electric fields. There is a need to integrate the additional qualification of energetical fields and their descendants. Klimek made such a conclusive proposal.

Medicine deals usually just with so called „light matter” according to the standard model of cosmology. But the standard model integrates inflation and Big Bang. We made “*free inventions of the human mind*” even for these periods. They seem not in contradiction to the actual stay of knowledge. They allow to deduce the paradigmatic shift for the self-organization of atoms, from them the autopoiesis of

⁶ Schilpp PA (ed.): ALBERT EINSTEIN philosopher-scientist, Library of the living philosophers, 7, Evanston, Ill., 1949.

⁷ Kofler W: Epistemological and ontological tools for an Extended View of a human person as a social being and its environments, part 1: Considerations about ontological and epistemological options and restrictions, *Biocosmology – Neo-Aristotelism*, 2(4), 273–292, 2012.

single cellular and from to more and more complex living beings thanks to their guidance on realizations. Outside observers can characterize these processes with “purpose orientation”. The next step enabled the occurrence of individuals thanks to the focus on meaning oriented relationalities. From them the human person as a social and final oriented being can be deduced. This evolutionary process (from “*Big Bang to Big Mac*”) focus on the needs and must. It is integrated within the so called “General Extended View”. The Special Extended View is focused on the evolutionary processes of meaning and information (From “*exchange particle to the WWW*”) for the understanding of the person with a focus on the wishes, options and hopes. These two views allow an extended paradigmatic view on physiology as the joint fundament for so many specialist disciplines. (Health oriented applied Extended View). Einstein demonstrated successfully the application of his “extended” paradigm for physics for the Relativity theories. This is an invitation for the application on sectoral disciplines. I worked on the field of Comprehensive understood Social Medicine (CES), Extended View of Public Health and Extended View on Comprehensive Sustainability. All these aspects are part of the Research and teaching activities in First Moscow State Medical University and the International Academy of Sciences. Just a short introduction can be given.

WHITEHEAD'S INHERITANCE AND TRANSCENDENCE ON LEIBNIZ'S ORGANIC COSMOLOGY

Xiuhua ZHANG¹

Keywords: *Whitehead; Leibniz; theory of process; monadology; organic cosmology; civilization*

Although Leibniz and Whitehead lived in different ages and different states, they shared common aspects in many academic fields. They are both mathematicians, and researched philosophy of science and philosophy of nature, moreover, they constructed their own distinctive organic universal views based on metaphysics of realism according to the principle of subjectivity. However, Whitehead as a founder of the constructive postmodernism affirmed Leibniz as modern thinker, meanwhile, he also tried to transcend Leibniz's understanding of the universe, namely, the "windowless monads" are replaced by the "actual occasions" as empirical subjects; the "substantive thinking" is replaced by the "process thinking"; the pure spiritual "appetitions, perceptions, representations" are replaced by the activities of "dipolar prehensions"; the "properties" and "changes" of substances are replaced by the "becoming" and "relationships" of actual entities; the omnipotent Creator is replaced by the poetic God; the predetermined harmony is replaced by actualizing universal civilization through the creative "concrecence" and "evolution". Therefore, several issues will be discussed as follows: (1) the critiques of space-time view and natural view of mechanism: a shift on the paradigm of ontology; (2) the emphasis for spiritual dimension: a return on the internal teleology; (3) the reviving for the organism, holism and dialectics: a reform of methodology; (4) the dependence of approaches of the ultimate existence and its value: an inquiry of cosmic theory of civilization, in the comparative perspective.

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SPACETIME AND BEYOND. SOME CONSIDERATIONS ABOUT INFORMATION AND *POTENTIA*

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With the advent of relativity and quantum mechanics in the early decades of the twentieth century, ideas of space and time became more and more problematic. In particular, the developments of relativity have led to the formulation of the unified concept of “space-time”, which has received considerable attention in the philosophical field. Several scholars (especially Putnam and Rietdijk) have proposed an “eternalist” interpretation of this concept, giving rise to a dispute that has not yet been resolved. The “super-causality” implicated by the eternalist view has been welcomed by some scholars (e.g. Fantappiè, Hoyle, de Beauregard) as the re-affirmation of the final cause in physics. Others see in it an unrealistic denial of freedom and creativity.

However, quantum mechanics clearly introduces, with the concept of “collapse of the wave function,” the idea that elementary physical events are *manifested*, that is, emergent from a “potential” state or condition. It is therefore natural to interpret the events that populate the relativistic space-time as those actually actualized and this reduces the space-time to nothing more than a map of the results of the actualizations.

Of course, this map is “lifeless” because the real life of the physical world is in the process of actualization that, as the quantum mechanics teaches us, is random and therefore free although conditioned. Consequently, the “potential” state from which events emerge as well as the process of their actualization *cannot be represented* in space-time. This fact reduces the efficient causality that connects the actualized events on the space-time to a particular aspect of the formal causation associated with their actualization. Creativity is thus reintroduced into the physical world.

In addition, when it comes to information, it is necessary to distinguish between information related to the patterns of actualized events and information associated with their actualization. The first is the “dead” information denoted, for example, by thermodynamics as “(neg)entropy”. The second is the “active information” discussed by scholars such as Bohm, Hiley, Pylkkänen. The latter is nothing but a special case of the Aristotelian *causa formalis*.

Although this reasoning relates to physics and the physical world, it is immediately transportable to any other level of the manifestation (emotional, mental, etc.) as argued, for example, by Pylkkänen. In our view, this export is a necessary step for understanding psycho-somatic unity (in the imprecise Anglo-Saxon terms: the mind-body problem) and therefore for an aware refoundation of medical practice, as underlined in the title of this meeting.

In fact, the “potential” substrate is not only not represented in the space-time of physics, but it represents the world to itself through a self-reflexive actualization process. Therefore, the subjective, inner and living dimensions of the world coexist with the external and objective dimension.

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ANTHROPOIDITY AS A OVERALL CAUSE IN THE INTERPRETATION OF THE WORLD

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Keywords: *anthropic, anthropoid, inorganic, organic, machine, society, concept, fuzzy sets*

Our idea of anthropoidity, both in the ontological, and in epistemological sphere, has a character of principle, regulatory in nature, but possessing a particular heuristic and cognitive potential. We express it by the words: “In everything that occurs, nature (and the man himself) is trying to create entities with anthropoid characteristics” (*The anthropoid principle*). It comes after the so-called. “anthropic principle” [Carter, 1965], which in its "strong form" reads: “The Universe (and then the fundamental parameters on which it depends) must be such as to admit the creation of observers within it at some stage”. Such a statement expresses the belief that not only the emergence of organic life on Earth is legal, but also the emergence of man – of ratio, of consciousness – in the role of an “observer”, or the being who is capable what is outside him to do as a part of himself. Namely, when the values of basic constants in nature were calculated: the speed of light, the gravitational force, the elementary charge, etc., upon which repose all relatively stable laws (changes) in the macro and micro world, it was seen that just minor deviations from these values would made impossible the emergence of carbon and heavy elements, and then of life itself on earth. For example, if gravity was (slightly) higher, and the electromagnetic force (slightly) smaller, the star would formerly burn and become a red giant or red dwarf, as follows.

Our anthropoid principle seeks to show that the vector of evolution has only one direction, which is in it to create an organism, mind, consciousness, what in the case of human being has been really confirmed. The course of evolution, therefore, could not be either other, or different, but this single and only one, so that the highest form of organization of matter achieved (so far) in man, might indirectly serve to distinguish its laws, the laws of evolution. They have “done” out of inert matter, over several transitional forms, gradually to develop forms of life we know today. What equally helps us (at least) schematically to describe the phenomenon of life and living

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being in general, and then, having in mind the reason and consciousness as a finality in nature to determine more purposefully our overall activity.

In the following sense, for example, in the products of human hands one can recognize the contours of the same traits, which characterize himself as a being endowed with intellect, a social being, devoted to beauty, justice, etc., and what we see really has place in the case of machines, institutions, cities, community groups and others. This could possibly fit by analogy Haeckel's law about "ontogenesis as a brief recapitulation of phylogeny". Namely, that the objects of our knowledge "follow" moments of man's origins, no matter to what extent and which way, as well as the genesis of world's being, in doing it equally when it comes to knowledge. For, in the latter case, we are asking about an object we learn rather "from ourselves", than on the basis of itself, so that in this way the knowing of the objective reality would be rather subjective, than objective one. What spoke about mostly philosophers from Parmenides to Hume, Kant, Schelling ...

Or that machines "resemble" the people it can be seen of it that their functions are as in humans, as will many philosophers will stand on the position that "man is machine" (Descartes, Malebranche etc.). Namely, a predominant part of what a man does is mechanical in character, as it is especially indicated by hardware and software in information technology today, whose algorithmic – that is, mechanical – structure has succeed to reconstruct the movement, the color, the sound, or, say, methods of artificial intelligence. And in that way machines could learn, as well as to be curious, to adapt, to remember etc., all in the way of software which would be entered since the beginning in them, although, with the development of automation and auto regulation, they would gain a growing degree of autonomy in decision-making. Let's say also that we can attribute characteristics of moral to machines, that they can avoid to injury another, or to "recognize" its/his intentions, and even – no matter how rudimentary it would be – to "speak". And these are all their anthropoid features, thus those originally related to the human being.

Next, when it is matter, say, of human communities, we have that their organization, in various occasions, is compared to an organism. Aristotle would say, for example, in *The Politics* that the ratio of higher and lower classes, masters and slaves, is like the relationship of body and soul, of intellect and passion in humans, as the harmony in the community he compares with the harmony of body and soul. At the same time, Herbert Spencer will explicitly say: "Society is an organism", because what is the cell in a body is the family in a society, or as blood vessels food organs of the body, it is done by roads and railways in an ordered state, where the nervous system in man would correspond to the system of power in a country and so on. Or, as in the body there is a growing differentiation of organs and their functions during

evolution, it would be the same case with a society, and with the division of labor in it, etc.

In general, all these analogies, with many difficulties, between human body and social “organism” talk, rather, of a certain distant (common) model, as a border, towards which the overall living world tends in its development, in the evolutionary sense. That’s why our anthropoid principle “requires” that all human creations and nature itself, exhibit traces of a total human being.

We sketch in this sense a personalistic theory of knowledge by “completing” Socratic definition of a concept, as simply set of essential labels entering its composition, in the following way: we attribute – from some point of view – a certain degree (weight, ponder, value) , from its minimum 0 to its maximum value 1, in which it does so. In this way we build complex concepts also, starting from the simple ones: complement, union, intersection, and others in doing this equally with regard to the truth values of complex statements, or rules of inference: starting from lie 0, through this, or that probability between zero and one, until the truth 1. All of it would help us, by using different models of reality, to follow only the messages that are optimal for us and for the community to which we belong.

THE STRATEGIES FOR SEVERAL ISSUES TO UNDERSTAND THE COMPLEXITY OF THE TIME DIRECTION

Chunyu DONG¹

Keywords: *Direction of Time; Second Law of Thermodynamics; Complexity*

This thesis first analyses the different representations of the direction of time and the difficulties of theoretic description to explain the direction of time, then expatiates up on the specificity, hierarchy, reducibility and definitiveness of the direction of time, and the Layer-Layer progressive relationship between them. On this basis, we lead the discussion about the direction of time to the height of philosophy by the attractor, wholeness and purposiveness, enlighten people on understanding the essence of the direction of time, and size up the rationality and limitations of the theory to describe the direction of time.

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CHRISTIAN BODY AND SOUL

Piotr KAROCKI¹

How the physical equation $E = mc^2$ is related to the philosophical notion of entelecheia? And how about the philosophical and theological concept of soul? To answer this question one has to determine the meaning of the term “soul” as one of the basic concepts of anthropology (in its philosophical rather than natural manner). This Congress is attended by people brought up in different cultures throughout the world, and there is a completely different view of man, a completely different anthropology in each of them. This article will try to present a brief Christian anthropology, in the Catholic version.

First, I would make some methodology remarks, differentiate methods of natural sciences and humanities, as we shouldn't mismatch method and researched aspect of reality. Within some of them, we can prepare experiments, but subject of some of them are not measurable. Not all science domains' statements are even verifiable (in Popper sense).

Then I present how Christian's differentiation between body and soul was formed, and whether we can say that body and soul have independent existence. Starting with ancient Greece and Orphism beliefs, than Plato's three level of soul and four levels found in Aristotle's works, and adding Semitic anthropology, we get first Christian view. This view was “under evolution”, via (among others) saint Augustine of Hippo, then St. Thomas Aquinas. Last would be Pierre Teilhard de Chardin, with his all-evolution view of cosmos.

After this, I quickly recapitulate current dogmatic statements related to our Congress, basing on current Catechism of the Catholic Church and some Councils documents.

All these leads to undeniable conclusion about relation of soul and unmodified equation: $E = mc^2$, or modified version: $E = i mc^2$.

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THE CONSTITUTIVE WAY OF BIOCOSMOLOGY IN CHINESE PRIMITIVE MYTHOLOGY

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Keywords: biocosmology; primitive mythology; order; holism

As far as we know, mythology is a kind of knowledge which concerns the relationship between human beings and cosmos, including the constitutive way to biocosmology. For primitive people, every nation or tribe has their own myth. **1.** The most important topic in myth is creationism. In the early stages of primitive mythology in China, the universe was not described in great detail. The foundation of creation lies in the formation of order. In the Shanhaijing, “create” only means the separation of heaven and earth, until the Han Dynasty, heaven and earth was conceived as a network structure, while the formation of the universe mode of operation. For example, Nv Wa, who is considered as the creating god of human beings in Shanhaijing, in fact, “creates” human beings twice because she reforms the order of cosmos. Some people think that, according to “Huainanzi”, Nv Wa actually repairs the sky with stone needle. **2.** There are three main perspectives of cosmos of ancient Chinese: Huntian theory, Gaitian theory and Xuanye theory. These conjectures reflect a comprehensive understanding of the universe, including not only the earth, the sun and the moon, but also the whole universe system. Cosmology concerns the structure of the system and the relationships of everything, so it’s essential for human beings to verify its status in cosmos at the same time. In other words, human self-consciousness is determined by interaction and association with the natural environment. **3.** Another feature of myth is the coexistence of god and man, and the coexistence of everything. This coexistence is not anthropocentrism but holistic. In Shanhaijing, god and man can get together by some holy mountains or trees. In Guoyu, god and man can no longer communicate directly, but at the same time, human beings and the world have another form of spiritual communication. They are united by the real origin of the world, Tao, and get their own order or status, which indicates their virtues and responsibilities. In mythology, the universe is an orderly system in which everything forms an inner relationship with each other. **4.** It should be noted that this connection is not in a physical sense, but a more important sacred relationship.

Unlike philosophy and religion, the concept of “sacred” in myth is more arbitrary and broad. According to the logic of mythology, everything can be associated with their common divine origin. When we try to analyze the causal relationship in the mythology, we will find it difficult to understand with scientific thinking. For example, Shanjing, which is the main part of Shanhaijing, recorded a lot of special effects of peculiar animals or plants. The reason why these effects are convincible for primitive people maybe is the substantive united relationship from the holy correspondence. Unlike Aristotle, the understanding of the original mythology in China is not functionalism, but the common origin of all things at the metaphysical level. What’s more, the conceptive form is substituted by the correspondence and specificity in myth. In a word, the notion of order, connection and the switch from conceptive to substantive constitute an organic cosmology view of Chinese primitive myth.

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MEDICAL SCIENCE AND JEWISH LAW (HALAKHA)

Joseph G. SCHENKER¹

The Jewish law (Halakha). Halakha – the word is derived from the Hebrew root that means “to go or to walk” is the collective body of Jewish religious law, including the biblical law (the 613 *mitzvot*, or commandments) and the later Talmudic and rabbinic law as customs and traditions. The Jewish religion is characterized by a strict association between the faith and practical religious rulings. In order to understand the Jewish cultural developments, it is essential to have a deep insight into the various components of the halakhic literature – the Jewish law. In principle, the halakhic literature is composed of two divisions: 1. The Written Law and 2. The Oral Law.

The foundation of the Written Law is the Torah – the first five books of the Scripture which are the origin of authority. The Oral Law interprets and elucidates the written-Torah and regulates new rules and customs. Its authority is derived from the written –Torah. Likewise, the authority of the “*poskim*” – the rabbinical scholars that represent the Oral Law toward the public – is derived from the Torah (The oral Torah, including thousands of books, owes its name to the old prohibition to write its recollections (Babylonian Talmud.). This prohibition practice ended about 1700 years ago as a result of the difficulties caused by the suppressed by Jewish liberty in Israel (Maimonides. Introduction to the Code). The dominant parts of the Oral Law are: 1. the Mishnah, 2. the Talmud, 3. the Post-Talmudic codes and 4. the Responsa.

The Written Law is defined as the origin of authority. This definition is derived from the ancient tradition and the belief concerning the original revelation on Mount Sinai, when God ascribed the Torah to Moses and to the Jewish people. The Torah is not an ordinary text of law. It is an expression of God's revelation, teaching and guidance for man. The attitude to the Torah is therefore as to a unique and holy divine text, which includes moral values as well as practical laws. The Oral Law interprets, expands and elucidates the written Torah and regulates new rules and customs. Its authority is derived from the written Torah.

Relationship: Halakha-Medicine. A mutually respectful relationship exists between halakha and medicine. Halakha recognizes the sacred duty of healing and uses medical knowledge in the solution of halakhic problems. Medicine draws ethical principles and legal concepts from the halakha. From a practical viewpoint, conflicts occasionally arise between halakha and medicine. The Tora permitted the physician to heal and gave healing the status of mitzvah. Medical practice is accepted as law by

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all halakhic authorities. Since the ultimate goals of both halakha and medicine are identical, appropriate and acceptable solutions can be found. Throughout the generations, many of Jewish religion authorities had extensive knowledge in medicine.

Jewish law (halakha) and reproduction. Jewish attitudes toward infertility can be discerned from the fact that the first command from God to Adam was, “Be fruitful and multiply” after he was created (Gen. 1:28). This commandment has been interpreted as an obligation on the part of the man to reproduce. A Talmudic saying from the 2nd century states, “Any man who has no children is considered as dead.” This position arises from the Bible itself and refers to the words of Rachel, who was barren: “Give me children or else I am dead” (Gen. 30:2). Indeed, many halakhic authorities view infertility as illness. The laws of Shabbat are intricate and form an integral part of the life of the halakhic-committed Jew. However, in cases where life is threatened, these laws are suspended. Many halakhic authorities maintain that infertile couples are considered to be in the category of those who are dangerously ill but whose lives are not in danger. Therefore, it is permitted to ask a non-Jew to perform work, to provide infertility treatment on Shabbat for such a person even when a biblical prohibition is involved.

A directive is given in Isaiah 45:18, which reads, “He did not create the world to be isolate, but rather inhabited.” The quote from Isaiah, commentators have explained, pertains both to men and women – thus, women are included in the obligation to fill the world. Marriage is a legal contract between a man and a woman. The couple commits themselves to their mutual duties and creates between them a binding religious relationship that also affects others. From a practical perspective, marriage is a religious duty, and is considered to be among the most useful means of preventing sexual sins. It is also the proper framework in which to fulfill God's command to be-fruitful and multiply. The duty to marry and procreate is independent of social status or religious position.

The Jewish approach to sex as a part of human life has always been free, healthy and lacking frustration and Jewish law recognizes sexual desire. Each partner has conjugal duties toward the other. The wife has conjugal rights based on the elementary duties of the husband: supporting his wife with food and clothing. The frequency of sexual relations to which she is entitled depends on the man's occupation and his style of life.

The beginning of human life. The consensus about the time when human life really begins is still not reached among scientists, philosophers, ethicists, sociologists. Procreation is acknowledged in the Bible to be the gift of God, but the Bible does not

make any direct references regarding the beginning of human life. Life began for human being when God breathed breath into him (Gen. 2.7). The Bible does not make any other direct references regarding the beginning of human life.

The response literature concludes that complete human life does not begin at the embryonic or fetal stage of development. The Jewish Talmudic law assumes that the full title to life arises only at birth. The legal text states that if “the greater part” of the fetus has already been delivered, the fetus should not be killed. This is based on the belief that the fetus becomes a person only when most of its body emerges from the birth canal. After the forehead has emerged from the birth canal, the fetus is regarded as a person, and neither the baby nor the mother can be killed to save the life of the other. Some Jewish authorities have asserted that if the fetus placed its mother's life at risk, the mother should be permitted to kill the fetus to save herself, even if the greater portion of its body has already emerged from the birth canal. Such a child, being in pursuit of the mother's life, may be destroyed as an aggressor following the general principle of self-defense.

Objection to abortion in Jewish law is strong but not absolute. It is not permitted even if the fetus carries a genetic conditions or other congenital malformation, nor for social reasons. Abortions are not permitted for economic reasons, to avoid career inconveniences, or because the woman is unmarried. However, some rabbinical authorities have been known to approve abortion in the early stages of gestation, within the first 40 days. Afterward, it is considered subhuman until it is born. The fetus has great value because it is potentially a human life. It gains “full human status at birth only.”

Various criteria exist in Jewish law, which determine the status of a fetus or an embryo. Man's creation “in the image of G-d” confers infinite value on every human life and renders its destruction a capital offence. The Talmudic status of “40 days embryo” has significant implication in ART like: preimplantation diagnosis (PGD), cryopreservation, sex preselection, embryo research, use of embryonic stem cells for regenerative medicine etc. The destruction or use of a pre-implantation pre-embryo for research is forbidden, as long as it has the potential to implant. It is permitted to create in vitro pre-implantation pre-embryos for research if there are real chances that the sperm owner may benefit and have a child as a result of this research. This view is largely based on historical tradition and sacred writings, which largely focus on human destiny. The Jewish tradition emphasizes that man is in partnership with God. In Judaism, religious status is passed down through the mother and tribal designation is passed down through the father. Thus, a child needs both a mother and a father to save and preserve human life.

Definition of Death. The definition of death has serious medical, legal, moral and theological significance. The definition of death in Jewish law is first mentioned in the fifth-century Babylonian Talmud that: Up to his heart, life manifests itself primarily through the nose, as it is written: In whose nostrils was the breath of the spirit of life. The renowned biblical commentator Rashi explains that if no air emanates from his nostrils, he is certainly dead. The classic definition of death in Judaism is the absence of spontaneous respiration and heartbeat in a patient with no bodily motion. A brief waiting period of a few minutes to a half hour after breathing has ceased is also required. Donation of an organ from a living person to save another's life, where the donor's health will not appreciably suffer, is permitted and encouraged in Jewish law. Recently Chief Rabbinate accepted brain stem death, but heart transplantation is still Halakhic problem, because The Torah prohibits the unnecessary mutilation of the dead, postponement of burial, benefiting from the dead. Also the practice of euthanasia is contrary to the teachings of Judaism. Any positive act designed to hasten the death of the patient is equated with murder in Jewish law, even if the death is hastened only by a matter of minutes. The physician must make use of any medical resources which are available, not hazardous to prolong patient's life.

Conclusion. A mutually respectful relationship exists between halakha and medicine. From a practical viewpoint, conflicts occasionally arise between halakha and medicine. Since the ultimate goals of both halakha and medicine are identical appropriate and acceptable solutions were found by Jewish religion authorities.

GERMAN-POLISH ROOTS OF THE THERMODYNAMIC CARCINOGENESIS AND ITS FEVER THERAPY

Rudolf KLIMEK¹ and Andrzej WASYLEWSKI²

Heat is a potent measure of effect on the level of biophysical repair reactions of the body and has been used for centuries to treat many diseases, including cancers. Increased body temperature is a natural symptom of not only the body's fight of a cold or a viral and/or bacterial infection, but it combats the emergence or existence of cancer cells in the effective prevention and treatment of neoplastic diseases as well as in confirmation of the thermodynamic causes of carcinogenesis, which is mathematically described as the generative entropy in the information equivalence of mass and energy $E = mc^2$ [4]. Each of the body cells must produce hormones, enzymes, antibodies etc. to maintain among other the whole body optimum temperature (36.6° Celsius). The steady increase of the temperature harms the patient who can prevent it using only the cellular structures which are not necessary to maintain their own metabolism and whose mass they may turn in some cells the energy necessary in order to maintain their own life in the adverse conditions. Therefore, when the ambient temperature of the body increases by a few degrees, the new tumor cells must die in the absence of their potential energy sources, which are the other normal cells own the organism [1-3]. The therapeutic aim is not only to destroy cancer cells without harming healthy tissues, but also to strengthen the fight against cancerogenic processes already in precancerous cells.

Information is an integral part of the reasons for identifying the occurrence of each material event, as well as a part of each structure, and each process in its surrounding.³ It is the basis of the universe and at the same time essential for understanding the material and energy changes of reality. The equation $E = mc^2$ mathematically expresses the triad of the matter- information-energy reality (the universe) combining, among others, the views about the world of Socrates, Plato and

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³ On the occasion of the Biocosmology Congress it is worth recalling the scientific achievements in the last century within the walls of Krakow Alma Mater Cracoviensis regardless of the state status of our country and the size of the Polish diaspora around the world. In Krakow hundred years ago the world-renowned scholar Charles Olszewski, in his "records its death" wrote, "I am experiencing the toughest moments of my life because of the disease, and also because of the terrible national calamities." Together with Zygmunt Wroblewski, for the first time in the world, he liquefied constituents of air- 29/03/1883 – oxygen and 04.13.1883 – nitrogen and carbon monoxide by sharing this information on 04.16.1889 at a meeting of the French Academy of Sciences. He remained in direct contact with the most eminent scientists of his era, and was nominated several times for the Nobel Prize in chemistry and physics. In the field of cryogenics Krakow was known as the 'cold pole' due to him obtaining the world's lowest temperature of minus 225 degrees Celsius.

Aristotle as the eternal human dream of easily understandable explanation of observed world events, i.e. the formation, existence and interaction of structures and processes. [7,8]. For this the cells use only the intracellular structures, which are not necessary to maintain their own metabolism.

The universe exists due to the eternal, progressively more known and understood natural laws, that is, due to – information, e.g. the newly discovered law of natural dissipative self-organization was understood and described [1,2]. Reducing the activity of biophysical and / or biochemical changes in a cell can result in a multicellular organism's risk of existence, but can also help to control the further growth of the species in depending on the state of reproductive health, which plays a decisive role in the intergenerational transmission of human life with the participation of information that even can ... be seen! [21,24]. For example every man sees in his own image mirror only his informational form (formed of informational resonating atoms), because in a mirrored appearance there is not even one of the atoms forming the real body.

Biology considers information only as describing the structure and function of cells instead of also identifying the causative role of information both within each and the whole universe (reality). Information is virtual (from the Latin: *virtualis* – effective, *virtus* – power, virtue) and is concerned with what is theoretically possible (potential) to occur, actualizing the conversion of matter and energy through the pure informational resonance. From the point of view of teleology in the cause of each event there is information in the form of a program, a potential target, awaiting its execution.

Neoplasms form from the original cells of the patient, who did not provide the necessary conditions for cellular metabolism. On the example of cervical cancer we generalize a German-Polish collaboration, initiated by two of the first gynecological university clinics in Europe – 1751 in Göttingen, followed by Cracow in 1779 (e.g. Vienna 1785, Prague 1789 and Berlin 1817) and worldwide known for theoretical and clinical biochemical oncology, presented in the tome “Biochemie der Tumoren” (1942) written by the German prof. Hans von Euler, a Nobel laureate of 1929, as well as the pole prof. Bolesław Skarżyński, the discoverer of estriol in the flowers of the willow in 1934. As scientists of Stockholm University, with this book (translated to Italian in 1945), they ushered in a new epoch in all of oncology. The importance of ongoing human cooperation is demonstrated by the fate of our gynecologists in the creation of the Polish Gynecological Society at the European medical congress in Berlin during the partition of Poland, and during regular meetings in Krakow of German colleagues separated by the Berlin Wall, which we already began to demolish in theory in 1985, and in fact in 1987 while attending a common meeting in Berlin. This scientific collaboration has led not only to the explanation of the nature of carcinogenesis, but also to the documentation of the role of cervical cancer in keeping the natural character of human procreation [2]. The goal of this text is to demonstrate the effects of the collaboration of not only theoreticians, but also of clinicians working on enzymes (Emil and Rudolf Abderhaldens, Kurt Semm, Hans Tuppy) and hormones (A.V.Schally, K.Dietrich, G.Dörner), biophysics

(M.Skłodowska-Curie, L.Marchlewski, E.Saling, A.Sieroń, R.Tadeusiewicz, P.Lauterbur, H. zur Hausen), surgery (Heinrich and Gerhard Martiusowie, W.Pschyrembel, W.Stoeckel, A.Mikulicz-Radecki, A.Rosner, S.Schwarz, J.Zubrzycki, J.Madej, A.Skręt, M.Klimek, H.Ludwig) and conservative treatment (A.Kępiński, A.Dudenhause, W.Holzgrave, T.Pisarski, P.Fedor-Freybergh, W.Szymański, K.Czajkowski, JG.Schenker). For example, the introduction of the relative duration of pregnancy in humans we attribute to H. Hoseman, who, in the 20th century, studied pregnancies conceived during the so-called 'trench vacations' of German soldiers (Normale und Abnormale Schwangerschaftsdauer in Biologie und Pathologie des Weibes, 1952), due to which the true development time of the fetus could be determined, since there are more births in the eleventh calendar month than the tenth month of pregnancy duration counted from the last menstruation (Oxytocin and its analogues, Cracow PTE 1963). Lately, the recognition of cancer as “Caesar of all diseases” has gained new importance when the biography of cervical cancer, originally known as mothers' cancer and/or premature sexual intercourse cancer, was linked with the termination of pregnancy via cesarean section performed without obstetric indications [10].

Preventing any illness lowers the oncological risk, and the physiological progress of a pregnancy promotes not only health, but because of preventing the plague of cesarean sections serves as an example of oncological prevention. New analytic techniques allow for a qualitative and quantitative analysis of circulating cells and their structures for answering clinical questions and the exploration of molecular phenomena in individual cells. It is important to see the emergence of neoplasm as a natural phenomenon from self-organizing mother cells. One must understand that information is the third aspect of reality (together with mass and energy).

In treating neoplasms doctors use scalpels, lasers, radioactive radiation and poisons as effective tools, part of which is also language, made up of words, which are understandable by patients. The word itself is even enough when treating an informationosis, but only a necessary factor in medical prevention and prophylaxis. A special place is taken by heredity and the upbringing of a person, who, due to his free will, lives according to his own autoteleological scale of values and rules of social life. In this view, self-organizing dissipative neoplastic structures appear as the basic regulator of not only the existence and development of a person, but through selective elimination of individuals least suited to the environment guarantee the continuous development of the Homo sapiens species. A special role in this is played by gynecologists responsible for the protection of human procreation. This is why our international collaboration based on the Hippocratic tradition and the social health of humans is so essential.

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WHAT IS NATURAL AND WHAT IS NON-NATURAL IN CANCER?

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Keywords: cancer, telos, measurement, fragmentariness, naturalness and un-naturalness, irreversibility, social ideal

My paper is constructed from both a philosophical and lay person standpoint. It starts by describing why cancer is almost the most *terrifying*, mysterious and important illness of man. Cancer means death, while other diseases – only unpleasant episodes.

On the other hand, cancer is the *model* of the illness: a state – but a sudden, unexpected and never expected transformed state – that interrupts the sweet routine of life, a *limit situation* when someone is pushed in a brutal manner to think to the meaning of life just in a moment when he/she can no longer change the projects and course.

The *measurement* of cancer as the modern view on it is developed in the first chapter: but only as a basis of the ethical message that follows.

Actually, the methodological presumptions of the paper are: (1) that cancer is a *natural* phenomenon, and in this frame the investigation of its manifestation and functioning, its “essence” and the stressing of its naturalness and un-naturalness;

(2) the presumption of its harmful, even malefic character – and in this frame the analysis of *treatments* and *prophylaxis*; in fact, this direction is the most difficult, including because of the *intertwining of the inner logic of scientific approach and the logic of extra-science/logic exterior to the inner requirements of science*; anyway, this was and is the first space of the research of cancer, because it is practical and answers to practical and immediate healing problems: the development of this space has led and leads to the upstream space of theory (1) as well as to the downstream space that follows (3);

(3) the presumption of the necessity to “*compensate*” cancer at the level of “*trans-medical*” *tackling* (at the level of psychology and ethics), either because it cannot be healed and its advancement implies horribly painful feelings linked to the coming of the final moment of life, or because it is prevented by an “alternative” view about health and the human life (and death).

Cancer as a natural and un-natural phenomenon is discussed by emphasising both the physical-chemical and the teleological origin of cancer. If the natural causality of /within the living organisms is *complex and/but explainable in natural terms* – something which was not yet during Kant’s time – and on the other hand the ideas of the reflexive judgement/intellect faculty of man (as purposefulness) are only regulatory and not reflections of the real objective states as the determinative faculty of judgement arrives at, we must think the *naturalness* of the biological states neither as reducible to bottom up mechanical relations nor as a simple normativity introduced by the reason of

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medical doctors and researchers, but as Aristotle conceived of, as a state/"situation" of the whole organism felt and judged from the standpoint of the subject/the human as such.

The naturalness is *felt* and after, is *thought*: consequently, it is both subjective and objective, both considered from within and from without. On the other hand, naturalness is somehow tantamount to the *good/useful/valuable* – and this is the Aristotelian/ancient basis of the treatment of diseases – and thus, to the *normal* state of the functioning of the organism and organs of the individual and, ultimately, felt as such by it. This normalcy of functioning depends, on its turn, on concrete conditions, and relevant situations of normalcy send to a larger picture of what is natural/normal/good from the standpoint of health than that supplied by a statistical analysis.

Cancer is felt as an *un-natural* state. From an ontological point of view, for the human being the *criterion* of naturalness is life, so health as the *sine qua non* condition of life, how finite it may be, and as a main condition of human creation and development of meanings by humans. Then cancer is the questioning of the telic character of the human organism. The leading *telos* is that of the whole organism (Aristotle) and this means the subordination of the *teloi* of the parts to the *telos* of the whole. But there *are teloi* of cells etc., and there is a complex *intersection* of all the *teloi*. Cancer arrives at the level of cells. They seem to “forget” the previous normal pattern of functioning, and normal even with bad inputs. A new law of functioning appears. Nevertheless, for a while the *telos* of the whole organism is stronger. But then, it is defeated.

The main cause of the image of cancer as the most terrifying disease is its *irreversibility*. It is not (fully) understood and thus not controlled.

Actually, the point of my paper is the last chapter – How to fight cancer; and it demonstrates that if man is a *species being*, then the dialectic of the *human individual* and the *human species* must be considered. The ill man, and even more the cancerous person, struggle with the disease as an individual. But in order to being serene, the cancerous person must consider himself/herself as a part of the human species. In order to really/consciously be a part of the species, the individual must be preoccupied about the *social* problems and behave as an “activist”. Only if people consider themselves as members of the human species, they know that they do not/will not fully die: they *will survive through the form of /within the human community*. And, the more they were preoccupied for its issues, the more they fought the factors limiting the humanity of all the human persons, the more they feel as future survivors.

The means to attain this view is the *social ideal*, the altruistic wish related – more than to the individual well-being or happiness – to the creative development of *all* human beings. To have as a permanent priority the social ideal allows both the enrichment of the *content* of life and *resources to fight the suffering of a final illness*. To surpass the generalised model of selfish individual may be a strong compensatory factor of the shock and suffering of illness. But to do this is a difficult educative and transformative process.

To fight cancer is a very un-natural phenomenon: it is cultural, of course. But the content of culture is the responsibility of humans.

LACTOBACILLUS VACCINE (LACTOBIM) IN PREVENTION AND THERAPY OF CANCERS

Dariusz JASICZEK¹ and Rudolf KLIMEK²

The lack of significant progress in combating cancer is the result of focusing on the molecular biology of cancer, as genetic, chemical, physical and biological factors, without the use of basic knowledge, mainly that of quantum thermodynamics. A lot of oncogenetic theories are concerned with various estimations of the same phenomena, which has created the necessity of their generalisation through the presentation of neoplasm as an informational self-organizing dissipative structure, dispersing the matter, information and energy in the host organism – it's biological environment. This brings about the uniqueness of each one of them. The neoplastic disease is caused by a neoplasm which is a different, thermodynamically more efficient, biological system than the host organism tissue which it originates from. A sufficient condition for the neoplastic transformation of the cell in multicellular organisms is the dissipathogenic status of the cell, which, unless it dies, then organizes into a new dissipative structure. The inflammation is always evidence that there is a local and/or general insufficiency of the organisms independent of the causes and reasons leading to such unstable states. The task of medicine, apart from destroying the existing neoplasm, is to remove dissipathogenic areas in the body, as the causes of neogenesis. Dissipathogenic states are diagnosed by clinical symptoms and disorders as well as nucleomagnetic imaging, taking into account oncogenic factors in the past (obstetric haemorrhage, infections, shortened lactation, drug addiction, etc.) and/or the hereditary and socio-economic factors.

Quantum thermodynamics combines matter, energy and information while technical quantization in a novel way differentiates precancerous states as the dissipathogenic ones from the neoplasms as the newly formed dissipative structures. Therefore general rules of therapy focus mainly on: 1) prevention and therapy of the dissipathogenic states; 2) strengthening of the regenerative and defensive mechanisms of the organisms and; 3) finally removal of neoplastic changes as widely as necessary but also as sparingly as possible. For too long time these rules have been used in reverse order.

Human organism defends against pathogenic microorganisms (virus, bacteria etc) not only by informational, physical, chemical, biochemical and immunological means, but also with aid of special own mobile cells (leucocytes, lymphocytes,

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macrophages). All these defensive mechanisms are supported by natural saprophytic bacteria, e.g. *Lactobacillus* living in digestive and urogenital tracts. Lactobim-vaccine contains three types of *Lactobacillus* including in their bodies also antigens of pathogenic microbes and strongly supports local and total human antibodies. The lactobacilli vaccine has an immunogenic effect in microorganisms by restoration of normal flora and transfer of surface antigens by plasmids. On the other hand the lack in human body of saprophytic *Lactobacilli* manifests victory of pathogens owing to loss of their help, especially in cases of neurohormonal insufficiency.

A high incidence of cervical cancer and high mortality rate is caused by law prevention, detection and therapy of precancerous lesions with neuroendocrinal and obstetrical origins. 20% of such women have cervical precancerous changes. Cervical cancer can be promoted by many non-specific factors, including such gynecological ones as: faulty prediction and determination of birth date, instrumental instead of possible natural labor, reduction of lactation, early sexual life, wrong hormonal therapy, long lasting prescription of pills, infrequent diagnosis and wrong therapy of hypothalamic conditioned abortions and premature deliveries, eradication of neoplastic lesion without normalization of its environment. Thus cervical cancer, as any other cancer, is not related only to one virus or to neuroendocrine and metabolic internal state of women, but also to the presence and activity of symbiotic flora, as well as host's lifestyle.

Infections with bacteria or viruses may, but do not have to lead to the diseases generally referred to as "infections" in which an intensity of the symptoms and affections depends on the internal state of the organisms. R. Klimek has introduced immunotherapy of cervical intraepithelial neoplasia (CIN) during the 2nd EAGO Meeting in Paris after its first presentation during Jubilee Congress of Polish Gynecologists (1985). CIN was cytologically diagnosed and proved by colposcopy and in questionable cases diagnosis was confirmed by biopsy. The treatment consists of three injections every second week of 0.5 ml Gynatren (Solco-Trichovac) containing 7.10^8 lyophilized coccid forms of *Lactobacillus acidophilus*. The lactobacilli vaccine has an immunogenic effect in serum and locally in the vagina as a natural protection against many foreign pathogenic microorganisms by restoration of normal flora and transfer of surface antigens by plasmids. This effect is apparently stronger in women without CIN as well as two weeks after the third injection. Lactobim vaccination connotes to advise all women with Pap test abnormalities or after treatment of already established dysplasia. Again, first of all, it has to be advised that in such cases there exists an effective immunotherapy using *Lactobacillus* vaccine.

Natural capability of the viral and bacterial antigens to induce immune response is being used to develop a preventive vaccine against infection by microbes

causing a wide spectrum of proliferate benign, precancerous and cancerous lesions. Clinical trials of this vaccine have shown its efficacy in the prevention of cervical precancerous lesions. Routine vaccination is recommended for women and men to prevent as well as to protect and treat genital infections and neoplasia. Rare adverse reactions are of transient character and usually disappeared within a few days after administration. Infections are most common sexually transmitted disease and a significant epidemiological problem all over the world. Lactobim-vaccine use to prevent infection is an element of primary prevention to decrease the incidence of diseases caused by infection, whereas the superior goal is primary prevention of cancer. Moreover, the vaccine brings about additional economic benefits for the health care system in the form of decreased number of biopsies and other invasive procedures related to the confirmation of abnormal cytological tests.

Going further on this track, it can be stated that money must be a kind of derivative energy (because this is the information). This energy is derivative, because it arises from the conversion of something real to something functioning in the information dimension. At the same time, it is worth to remember the interaction of information with the human mind, along with its cognitive and biological limitations. Information during its interpretation by the human mind is subject to greater or less (but always some) filtering. These in turn are the source of unpredictable human behavior, making all predictions very imprecise. Attempts to correct them often over-regulated – introduce further ‘echoes’, which makes it difficult to analyze and improve the forecasting apparatus. Money also provides information on the status of the holder, not only as a determinant but also as a means of controlling the ability of a particular person to seize a particular social position. When the holder has acquired them by means of specific rules of the game of economic activity, the fact that he has obtained certain privileges does not raise major tensions in society. However, if the acquisition of these funds and privileges take place through succession and without sacrifice, then social disturbances occur. The game must be replayed each time in accordance with the same rules, giving the world a liberal breath. After all, it is a means of improving humanity. We know, however, that such facts do not take place in society anymore – for reasons of the lack of natural empathy. Consequently, cumulated money’s energy degenerates the original society and causes the formation of cancer-like mutations.

Immunotherapy can be compared to the regression of lesions on the cervix of women with hypothalamic insufficiency under the influence of normalization of their state with natural hypothalamic hormones. Women with neurohormonal hypothalamic insufficiency have cytological detected precancerous states in more than 10% of cases, and twice as often when detected via colposcopy. When cervical intraepithelial neoplasia (CIN) was found, it was shown that in 67% of cases there

was obstetric hemorrhage, 52% have had a shortened lactation and, 70% of cases showed cervical “erosion”. In contrast, in the absence of CIN, patients show statistically significantly less hemorrhage (25%), disorders of lactation (7%) and the existence of erosions (36%). Thus the need for limitation of iatrogenic conditions of cervical cancer, among which there are: infrequent diagnosis and wrong treatment of hypothalamic syndromes and the resulting miscarriages and premature births, excessive births via operation instead of births via the natural method, shortening of post-partum lactation instead of promoting it, or long term use of hormonal contraception, especially among young girls. Thus the need for limitation has not only of iatrogenic causes. So, it can be also summarized as (1) “back to nature” call: less pharmaceutical, less penetrating (not only surgery, also not as much invasive as it is); (2) “more holistic view”: cure person, not cure this tissue or that cells at specified time; cure person as unity of soul (at least, psyche) and body, and cure person as entity stretched between babyhood and old age.

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PHILOSOPHICAL FOUNDATIONS OF THE THEORIES OF LIFE'S ORIGIN

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The study of the origin-of-life is already a few decades old. Therefore, it may seem astonishing that considerable achievements in this branch of knowledge (in the last sixty years more than 250 theories of biogenesis has been published) paves its way with difficulty not only to the wider public, but even to the circles of specialists. One may sometimes have the impression that the realization of theoretical achievements in the field of biogenesis-research is hindered by something, which is deeply rooted in the basis of this branch of science (rooted not deeply enough to prevent empirical research in this field, however, perceptible in theoretical discourse). The problem of philosophical foundations of the theories of life's origin has been vividly discussed in the recent years in theoretical-biological journals. As it outcomes, the opinion according which a 'mature' kind of science can and should be 'philosophy-free' (expressed by academic philosophers) is unfortunately shared sometimes also by scientists themselves.

I shall try to show that the lack of philosophical consciousness by some origin-of-life researchers may cause deeply erroneous presentation of this branch of science. I take the view that the inclusion of the problem of life's origin in the field of scientific research was a philosophical breakthrough. In the ontological aspect it required the rejection of understanding matter as an inert substance an instead of that the matter had to be perceived as active. In the epistemological aspect – it meant abandoning scientific criteria connected with classical physics for the ones offered by evolutionary biology. The common denominator of the current theories of biogenesis may be expressed briefly: life is a natural emergent property of matter. It is nothing more and nothing less than the essence of the new (non-mechanistic) philosophy of nature, as postulated by Ilya Prigogine: "Nature must be described in such a way that man's very existence becomes understandable".

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THE ORGANIC BEAUTY OF THE THOUGHT OF CONFUCIANISM ABOUT THE VIRTUE OF BENEVOLENCE AND ITS FORMATION

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Keywords: Confucianism, the Virtue of Benevolence, Organic, Beauty

The thought about the virtue of benevolence as the foundation and the core concept of Confucianism theory system, fundamentally shape the aesthetic ideas of Confucianism. Confucianism benevolence thought system includes three basic level aspects, such as the structural style “Mosaic”, the basic meaning of “be oneself” and the practice mode of “extrapolation”. These three levels are all highlighted the organic properties sufficiently. The structural style “Mosaic” means that the Virtue of Benevolence as the kindheartedness and loyalty character is presented among interpersonal relationship just as Confucius said, ‘the benevolent love people,’ ‘Give others what you want, what you are dislike don’t give others.’ The basic meaning of “be oneself” means that practicing “the Virtue of Benevolence” is from the individual wish, depends on self will, for the improvement of oneself. Just like what Confucius said, ‘benevolence depending on oneself’, ‘benevolence coming when you want it,’ ‘Doing according benevolence is duty of oneself.’ The practice mode of “extrapolation” means the process of building the Virtue of Benevolence is from self to others, firstly self, then others. Just as Confucius said, ‘being leader in doing justice,’ ‘Requiring being of others after your being, can you ban others only if you are not doing.’

These organic properties of Confucianism thought system about the virtue of benevolence embodied in three aspects fully highlights “organic” attribute of Confucianism aesthetic idea. “Organic” attribute of Confucianism aesthetic idea also embodies in three aspects, namely the generating beauty of “the enriched virtue of benevolence”, the harmonious beauty of “the coordination between literary and simple”, the natural beauty of “the unity of monastery and willfulness”.

Confucianism thought that beauty of image and temperament come from rich and plenty of inner spirit, Enrich oneself with the spirit of the noble and elegant temperament is an important path to win a beautiful image and qualitative. Just as Mencius said ‘Reasonable requirement means good, physically means belief, enrichment means beauty.’ The beauty of image and temperament means that plain

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natural beauty and man-made modification complement each other in the style and scale of its embodiment. Just as Confucius said ,‘decorative more than plain means vain, plain more than decorative means wild , coordination of decorative and plain means beauty.’ The metaphysics trend of the beauty of image and temperament is suit to nature and ‘tao’, It is said “Destiny means character, fully reveal personality means being in line with ‘tao’, practicing ‘tao’ means enlightenment.” Nature and willfulness, suitable for ‘tao’, transforming destiny into self-character sufficiently, and keep Justice and awe-inspiring temperament, can achieve “full and glorious” beautiful image spontaneously.

The organic properties of the thought of Confucianism about the Virtue of Benevolence and the organic characteristics of Confucianism aesthetic founded by the former fundamentally defines Confucianism education of ‘to be human’ must follow the concept of organic formed by the unity of beauty and goodness. On the one hand, education of ‘to be human’ must strengthen the foundation of moral, civilize glorious image and good temperament through the enrichment of the Virtue of Benevolence and improvement of quality ;On the other hand, education of ‘to be human’ must strengthen the edification of aesthetic ,motivate and lead the cultivating of moral and spirit. So that making “moral education” and “aesthetic education” being united organically, working coordinated ,and Cultivating a generation of talented people with the characteristics of the unity of beautiful and good, excellent quality , beautiful image, harmonious and comprehensive development.

ON MARX'S ORGANIC WHOLE THEORY

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Keywords: Marx; Organic theory; Naturalism

According to Aristotle's organic whole theory, the world as a whole, and organically united. Nature is a movement, not a static one. On the one hand, he inherits and emphasizes the naturalistic view of generative nature, regards the nature and the society as an organic whole, and points out the naturalism of the society and nature. On the other hand, he points out that the natural movement and social change are not mechanically physical movements. Nature and society are not only rational and orderly, but also accord with the reality, which are also oppose to the transcendence of nature and society. In addition, he established the natural existence of the reality as the active and substantive existence of freedom, self-development and self-movement. The organic development of society, not only is a part of nature, but also has its unique characteristics.

Marx's theory is also a theory of organic whole. Marx, not only inherits the views of Aristotle, but also develops the views of the Aristotle. Marxist theory is an organic theory, which is composed of nature, society and thought. According to Marx, the world is material and substances in the word are in motion. What's more, the material movement obeys the rule. Human being is a product of nature with the property of biology. Besides, the human society which is made up of human beings is a product of nature, obeying the developmental rules of biology and society. Therefore, human thought has both the animal's thought and the social one. The developmental process of human society and thought are first to be that of natural history. Although the organic relation between human society and thought is limited to organicity of nature itself, it embodies on the unique aspects of human society and thought. Marx integrates nature, society and thought organically to build an organic philosophical theory in which he emphasizes the organic harmony of human society and nature as well as the organic unification of human thought and nature. As a result, Marx underlines that naturalism is humanism and humanism is naturalism. Naturalism shows the equality and justice on the basis of humanism. It is the equality and justice that embody on the property of humanism. As Marx says: "Nature of

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humanism is the existence on the premise of social people. Because only in society, nature is the bond of connecting a man with another man. The existence of nature is for that of others and the existence of others is for that of nature. Only in society, nature is the basis for people's existence and the living element of the realization of human beings. Only in society, human beings natural existence can be the existence for themselves and nature can be called the human being for human beings. Hence, society is the completed essential unification between human beings and nature and the real resurgence of nature. And it is the realized naturalism of human beings and realized humanism of nature." Marx makes the unification of nature and humanism, as well as nature and the nature of human beings, whose essence or core is for the realization of the harmony between human beings and nature and for avoiding alienation and contradiction between human beings and nature. Moreover, Marx especially emphasizes that the realization of human nature comes from social practice, and at the same time, the progress of social practice is the progress of self-realization.

ABOUT TELEOLOGICAL AND INTEGRALIST APPROACHES IN THEORETICAL EVOLUTIONAL BIOLOGY

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Keywords: *Nature system search-optimization conception, teleological and integralist approaches, theoretical evolutionary biology, neo-Darwinism, nomogenesis*

Important stage of implementing of teleological and integralist approaches in advanced science [Khroutski, 2016] ensues the concrete definition of their methods and means with reference to this or that knowledge subject field. This can come about, e.g., in terms of system search-optimizational (cybernetic) Nature conception [Grinchenko, 2004, 2007, 2012]. With its positions three fundamental components of hierarchic *animate natural system* have following meaning – in terms of biological evolutionism and philosophy (fig 1):

1) *searching activities* of all hierarchic system component (rising arrows in scheme) – this ***motion of matter***;

2) *goal criteria* of target-defining component (descending continuous arrows) – this, actually, ***causa finalis*** on Aristotle;

3) *interstitial system memory as property* of memorizing and reproduction of past experience about the process of hierarchic search optimization in system, and realizing its *mechanism* of restrictions on search optimizational processes introduction, occurring on regarded and at all embedded thereinto (underlying in hierarchy) levels/tiers (descending stroked arrows) – this system-forming, more accurately ***hierarchy-forming***, factor; “the channelity” evolution on Lamarck and “nomogenesis” on Berg is realizing; take place only at systems of animate and personal-production-social nature (it there is no in system of inanimate nature, which ensues not hierarchic, but “chained” – analogue in medieval West-European history: “vassal of my vassal – not mine vassal”).

Red wide arrows and numbers in circles in given in fig. 1 – neo-Darwinism scheme specified: 1 – “**changeability**”, developable by genes; 2 – ontogenesis process (of organism individual development), reflecting “**heredity**”; 3 – manifestation of organisms *specific behavior* within frameworks of corresponding populations; 4 – “**natural selection**” based on criterion “**fitness**”; 5 – message process of negative result selection on organism level; 6 – procedure “**exclusion**” of organism from population; 7 – “*outer addition*”, that is outer nonspecific action on organism (e. g., of catastrophic character), also resulting to its elimination from population. “**The orientation**” of evolution in this scheme is denied.

The comparison of schemes of hierarchic animate natural system and above mentioned neo-Darwinism discovers the fact that last merges evolutionarily

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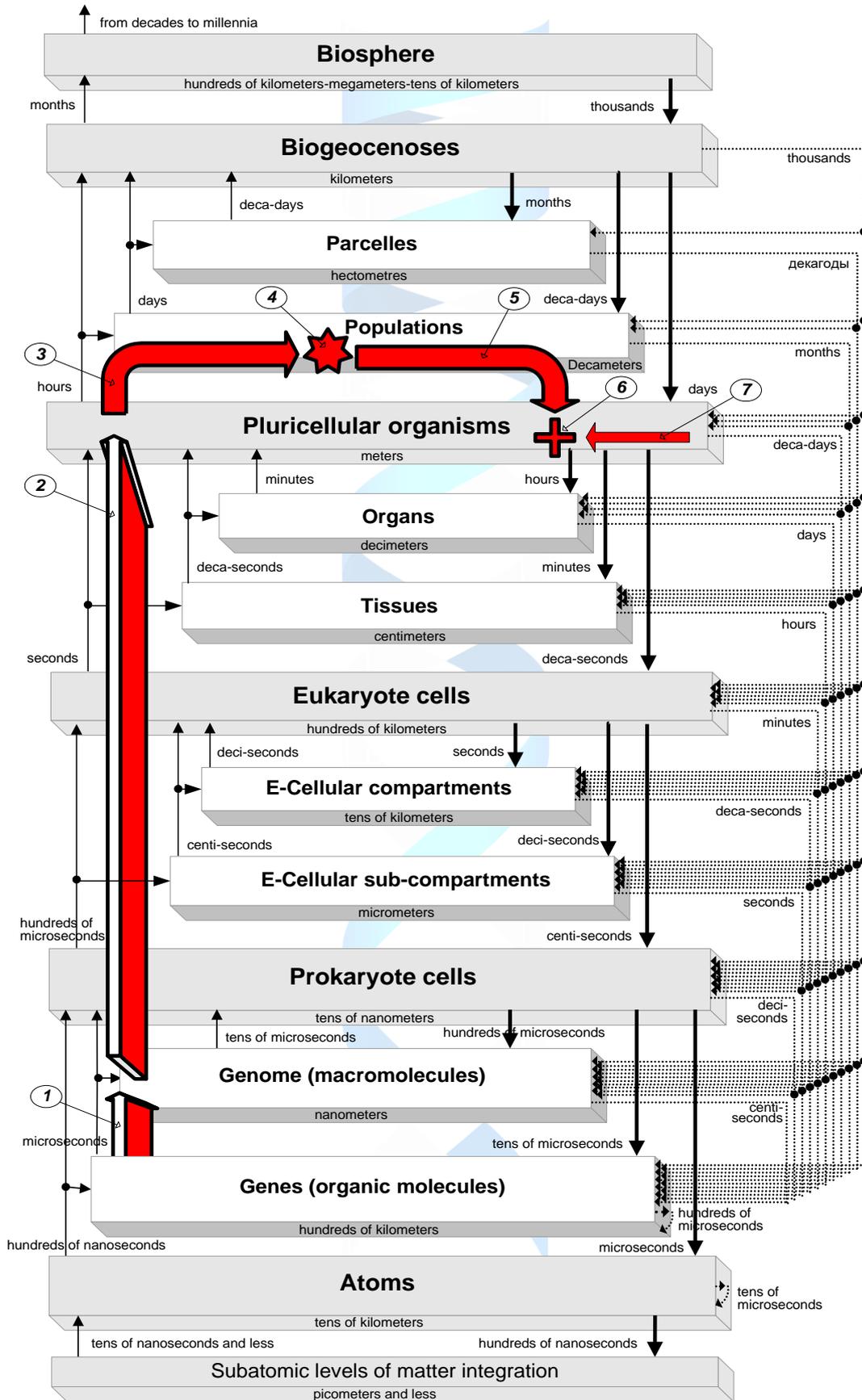
significant processes only to two hierarchy tiers: variability attribute only to genomic, but selection – to population. I.e. with reference to mentioned processes (seven!) tiers in animate system hierarchy, playing in them the enormous role, practically are ignored. In turn, the randomness role in the evolution is denied in model of nomogenesis.

The search-optimizational systemic conception of animate nature directly denotes on integration necessity of both models of evolution, neo-Darwinism and nomogenetic, in the common synthetic model, realizing, hereby, teleological and integralist approaches. Naturally, during this is necessary to realize corresponding corrections of neo-Darwinism scheme: to extend the spectrum of “changeability” generators, to change the type of goal criterion, by changing empirically nonmeasurable “fitness” (“...rather to underscore that about “fitness” could speak only in relation to *own* ecological nich, in order to had become clear the ineligibility of biological progress determination through fitness degree” [Korogodin, 1991: 127]) on optimum hierarchy of energy character goal function, etc.

Finally, need to specify, that opinions about consistency, compatibility and mutual complementarity of neo-Darwinism and nomogenetic evolution conceptions was expressed many times: “...evolution contrasting as a result of natural selection and evolution, as realization special regularities absolutely incorrectly. Regularity of evolutionary trajectories – obligatory consequence, but not darwinism contradiction (...) here we are talking not about mysterious “inherent system” laws, but about physical, chemical, biological, available to rational analysis regularities” [Shnol, 1979: 16], “...discussion between nomogenesis and Darwinian approach supporters based on misunderstanding that these conceptions complementary, but not mutually excluding” [Zherikhin, Rautian, 1997], and others. Possibly, systemic “cybernetic” reading of these evolutionary theories shall give the fresh impetus for their integration?

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Note: arrows pointing upwards have a structure (reflect the relation) "many to one" and downwards - "one to many".

Fig 1. Reconstructing projection of the “neo-Darwinism” model of biological evolution on the optimization mechanism scheme of dynamic hierarchic search.

THE EXISTENTIAL MEANING OF ZHUANGZI'S PHILOSOPHY OF LANGUAGE FROM THE NATURALISM PERSPECTIVE

Jing GUO¹

Keywords: *language, existence, Zhuangzi, existentialism, naturalism*

The relationship between language and existence is a very important issue in existentialism. Zhuangzi talked a lot on this issue. Zhuangzi's viewpoint contained an organic naturalism which has deep correlation with existential naturalism enrooted in Aristotle's naturalism.

The relationship between the language and existence could be thought in two ways. One way is to ask how language relates to existence. Another way is to ask how existence relates to language.

In the first way the main question whether language could describe existence is mainly discussed. For Zhuangzi, it is the question about whether language could talk about Dao. Zhuangzi thought that Dao could not be talked because Dao could never be defined. Speech by its very nature cannot express the absolute. Perfect Tao cannot be given a name. So beyond the limits of the external world, the Sage knows that it exists, but does not talk about it. This idea is in common with Martin Heidegger's view about "the silence". In the silence, Heidegger pointed to the double sides of the language. One side, if language was viewed as a tool to express the mind or behavior, then language would be a cover. Because it not only covers the essence of the language itself but also covers the existence. Just as Zhuangzi said, "Tao is obscured by our inadequate understanding, and words are obscured by flowery expressions." The other side, there would be uncovered where there were the cover. To uncover is to discover existence in the essence of language. Just in this meaning, language is very important to Zhuangzi and other existential philosophers. Studying language is to bring us onto the essence of language to discover existence. How could existence be discovered in the essence of language ?

This will turn to the second way to ask the relationship between language and existence. That is to ask how existence relates to language. Zhuangzi and other existential philosophers thought that seeking the essence of language is to find the ultimate source of language. For them, language comes from existence. Therefore the

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essence of language is not a tool, but is an unusual and extraordinary event to discover the existence.

The event is to come back to the internal emergence nature. This is naturalism which has three kind of levels. Firstly, nature is the internal innate status. Another existentialist Martin Buber also put forward that “the unity of each thing determines in itself the manner and nature of this thing”. Same to Zhuangzi, “Knowledge of the action of the natural and of the artificial has its basis in the natural its destination in virtue.” Secondly, nature is emergence can be experienced everywhere. Buber said, “The unity that verifies itself not only in the manifoldness of things but also in the successive moments in the life of each thing.” Zhuangzi said, “The universe and I came into being together; I and everything therein are One.” Furthermore, “This emerging and standing-out-in-itself-from-itself may not be taken as just one process among others that we observe in beings. ” Just as Heidegger said, “Nature is Being itself, by virtue of which beings first become and remain observable.” Thirdly, the genuine life is to fulfill and converge into the dynamic organic nature. So Buber put forward, “The perfect revelation is therefore not the man who goes his way without alteration, but the man who combines the maximum of change with the purest unity.” Zhuangzi also said, “Let your heart journey in simplicity. Be one with that which is beyond definition. Let things be what they are.”

Through this event, existence is discovered. About this journey of this event, for Heidegger is poem, for Martin Buber is the dialogue between I and you, for Zhuangzi is parable. This kind of way of saying is different from what is said. So there is a transformation of language. Existence is discovered by the transformation of language.

So the discuss about the relationship between language and existence, not only can dig out the contribution of Zhuangzi’s philosophy of language to the existentialism, but also can build a bridge connecting the western philosophy and the eastern philosophy, more important can open up the pathway to discover the existence.

ON XUNZI'S VIEW OF HEAVEN AND MAN IN ANCIENT CHINA

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Keywords: Xunzi, View of heaven and man, distinction between heaven and man, nature and society

In the period of Warring States the Yin-Yang school and Yi Zhuan Philosophy had proposed a global schema, attempting to do a unified description of the whole world and tending to emphasize the connection and unity of heaven and man. By contrast, the characteristic of Xunzi's theory was that it did not mention the world schema and he emphasized the distinction between heaven and man. Besides, instead of regarding the heaven as a heaven with personality, which was the source the all moral will and value, he saw it just as nature and nature law itself. In Xunzi's view heaven and man have different properties. As we known, it was a distinctive thought in that period, for Chinese philosopher clearly declare the separation between heaven and man for the first time, which affect the latter cosmology or universe view profoundly. In this paper, I will try to study the following three questions: (1) Why Xunzi proposed this idea? (2) What was the core idea in his theory system of view of heaven and man? (3) How this thought influenced the latter philosophers in regarding to the views of relationship of nature and society?

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ON THE CLASSIFICATION OF ANIMALS ACCORDING TO BIOLOGICAL FUNCTIONS, AFTER ARISTOTLE

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Keywords: function, organ, reproduction, classification, principle

Functions of animals. At the beginning of his work *Meteorology* [338 a], Aristotle has expressed his intention in the way he spoke in *Physics* about “the first causes of nature, and all natural motion, also the stars ordered in the motion of the heavens” and the like, to see “what account we can give, in accordance with the method we have followed of animal and plants, both generally and in detail” [*ibidem*]. Then the science of natural life, biology, would be part of one and the same science of nature, physics, when it would be talk about the living world in the (same) terms of the causes, consequences, space, time and the like.

When it is about the vital organs and functions in animals, he finds that they basically have a common “order”, even if particular organs are called differently, while their purpose was the same. When he speaks, for example, about the liquid nourishing the body, he will say that it is “blood” or “what corresponds to it”, and about the organ from which it spreads, to be the “heart, or what is in this place”. As to the manner in which he interprets the digestion of food in the body, he will say that it happens only due to the internal heat, the heat of stomach, which is acting on the food to pass through it.

According to Aristotle, blood, milk and other organic “secretions” are due to frequent process of digestion of food, particularly, as a result of a particular extraction from it. Blood is the end product of nutrients in the body, it easily finds its way to all parts of the body, feeding the body to its growth, as well as body organs are composed of it. According to him, the heart heat warms the blood, which by spreading – like liquid that boils – “shock” to heart valves, so to arise heart rates.

Next, Aristotle believes that water and food are introduced into the body in order to cool the interior of the body. Breathing is intended to balance the heat of the heart, and the brain, which is cold itself, and does not contain blood, serves for cooling too.

Otherwise, there are two ways to become a new being: the first is of parents that are similar, and the second – spontaneously. According to Aristotle, form of the embryo comes from the sperm of male and the matter of female, since all that exists

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is unity of matter and form. Aristotle speaks of conception without parents, as a kind of a creation *ex nihilo*. Here the matter is, according to him, of the lower organisms and insects, such as aphids, ticks, horse flies, caterpillars and others. These parasites result from manure, from sludge ...

On the classification of animals in general. Speaking about the parts (organs) of animals, Aristotle, first of all, puts them into two groups: those that are similar to the whole to which they belong (*homeomeria*) and those who are different from it (*aneomeria*). For example, a part of the bone is (still) bone, but a part of the eye is not the eye itself. After, the second main division of all animals, according to him, would be in the blood and bloodless ones. However, in his works we do not find a completed classification of animal species. In any case, he certainly appreciates what essentially defines them, such as lifestyle, which recognizes to be “wild” or “tame” ones etc.

However, the difficulties encountered in this area are mostly from insufficient differentiation of terms *eidōs* and *genos*. For example, when it comes to genus, he notices the difficulty of attributing identical properties to different species, but he basically realizes that only the essential traits are of importance whether the species belongs to a genus, or not. The definition of the latter concept would be after him: “Groups that only differ in degree, and in the more or less of an identical element that they possess, are aggregated under a single class; groups whose attributes are not identical but analogous are separated”. [*On the Parts of Animals* I, 644a].

He, therefore, does not attempt to find a new scientific term for a particular biological group, resorting to the words of ordinary language, and what later will be the merit of biologist Line, who will use for each individual, both in the case of flora, and the case of fauna, together with the name for the species, the name for the genus too. After all, according to Cuvier: “Aristotle has established the zoological classification which left quite a few things to complete in the centuries after him. His major divisions and subdivisions in the animal kingdom are surprisingly accurate and they all resisted to the later developments in sciences”.

If the property to “have” or “do not have” blood was the first principle of division of all animals, when it comes to blood animals, he divides all of them first according the way they reproduce. Such a first dichotomous division is in class of viviparous and class of oviparous animals.

On the principles in the world of living beings. Finally, let us ask whether Aristotle was on the trail of, say, the theory of transformism of Lamarck or Darwin's theory of evolution of species? Insofar as the degree of complexity of organisms appears in his works as some sequence that “suggests” that species in the lower place in the

hierarchy (as) “tend” to pass into those immediately above them. The answer is certainly negative. In him the species do not pass one into another, but they exist as eternal and constant in a place that belongs to them in nature, and such a view in biology is denoted as “absolute fixism”.

After Aristotle, there are more principles that nature follows in the living world, acting completely and perfectly. The first is that it “does nothing in vain”, or that it “always create what is best”, etc. The second would be “compensation principle”, which is in that when nature abridges something on the one hand, it compensates it on the other. This is the case, say, with the brain, which, as cold, is being connected to the spinal cord, which is warm. Next, it is spoken about “the principle of specialization”, which consists in the fact that only certain organs perform certain functions. Aristotle explains also the "principle of economy" of nature, for if it gave to some species certain means of defense: claws, horns, etc., it will not "multiply" them in the same species, as well as to leave some species without them and the like.

Basically, it can be said that the aim of Aristotle is first to point out the importance of formal and final causes for the organ function, in contrast, say, to mechanists, who make it with the material, and efficient cause. Of course, the final cause would receive here a supreme importance, and hence Aristotle will say, for example, that the hands of a corpse, or an arm of stone, are only it as homonyms, and not by their functions.

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Notes:

i. On the first page of the Book of Abstracts there is a photo, wherein Prof. Rudolf Klimek demonstrates the two, synchronously opposite types of the same information – “each person can immediately see their own informational image by looking in a mirror in which her/his picture seen (the mirror pattern form) does not contain a single atom of his body, but is only the resonant result of feedback information.” In the collective article [Bremer, Khroutski, Klimek, and Tadeusiewicz, 2017, pp. 42–44], an attempt is realized to distinguish the two types of information: “Animate (natural, *entelechia* – *from within*) and inanimate (artificial, *idealist* – *from without*) Types of information; and their relation to carcinogenesis aetiology”. In other words, in general – the proposal was made to distinguish between dead (cold, inanimate – *from without*) and quick (alive, animate – natural, *from within*) patterns of: matter (and the animate *hyle* – ὕλη); energy (and the animate potency – δύναμη; and activity – ενέργεια); and information (that is a modern synthesizing notion; and which deeply corresponds to the Aristotelian *entelechia* – ἐντελέχεια). Therefore, we always have (at one the same time) – the viable (*entelechia* – animate – endogeneous natural) pattern of information that has its/her/his dynamic *entelechia* (i.e. its/her/his dynamic potency and activity); and the inanimate (*abstract* – dead – exogenous idealist) pattern. Likewise, in an emphatic manner – the same example is given in the demonstrative video-film¹, created by the Polish Society of Hyperthermia.

ii. On the last page of the Book of Abstracts, the photo of Sheraton Grand Hotel is placed – the venue of Cracow’s “Biocosmology and Cancer” Congress, concurrently with the 14ISBC.

iii. Bibliography (example): Bremer, Josef & Klimek, Rudolf (2017). “The informational turn and the philosophy of information” // The abstract in the Book of abstracts: World Congress: “Biocosmology and Cancer”, with the 14ISBC; Cracow, Poland, July 14-15, 2017, pp. 277–281. In: *Biocosmology – neo-Aristotelism*, Vol. 7, No.2 (Spring 2017), pp. 259–325.

¹ The link to this film –

<https://drive.google.com/file/d/0ByqSCLVIMFtcMHJUSjEyX0dOM3M/view>



Book of Abstracts

**World Congress: *Biocosmology and Cancer*, concurrently with the
14th International Symposium on Biocosmology (14ISBC), on
*recognizing Teleological and Integralist approaches in contemporary biology, medicine and
health sciences; and reinstating Aristotle's scientific Organicism
(Entelechial naturalism, teleological physics)***

**14-15 of July, 2017,
Sheraton Grand Hotel,
Cracow, POLAND**