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Biocosmology and Informational Anthropology: Some Common Aspects

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ABSTRACT

This paper is the result of the collaboration with Dr. Khroutski for several years. The presented analysis (and synthesis) firstly aims at reflecting common points that belong to both approaches (of BioCosmology and Informational Anthropology), chiefly in the aspect of fundamental (ontological and gnoseological) issues. Likewise, this work illustrates the fact that modern culture has arrived at the recognition threshold (in our knowledge) of realizing new real exploratory approaches that are capable of obtaining the true universalizing knowledge, first of all in relation to a human being.

Khroutski's integrated anthropology (biomedicine), which is approachable owing to his anthropocosmist (biocosmological) method, – is an original conception, but, at the same time, it reflects common exploratory orientation (for those researches who seek for holistic explanation of the world), including my works entitled "Individual's Anthropology" and the "Interface Theory" (Guja C., 1993, 2000). Since 2003, I have traced and analyzed the development of Khroutski's BioCosmology and eventually have arrived at the conclusion of the commonality of the vectors of both (his and my) works.

I am anthropologist, bio-physicist and basically am related to a 'strict science' and, thus, am not the specialist in a philosophical area. At the same time, I have a passion to the philosophy of science, for, at present, we do have the actual need for the creation of integrated anthropology, basically realized on new fundamental (philosophical) principles. At least, my attempts to meet the correspondence between classical theories and the results of experimental researches in the field of anthropology have revealed their acute collision (particularly, regarding the study of a *human individual*[1]. Conducting these researches, surprisingly, we have ***revealed an interesting paradox: by studying the unique (the individual) we have managed to reach maximum generalization.***[2]

Up to now, anthropology as a science is focused on populational and typological aspects, and less on individual aspects. Human being, herein, is regarded as an average or representative of the human group or type. Particular or exceptional cases, in the statistic data of populational anthropology, are generally left out. "Individual's anthropology", as we tried to develop in our researches, should avoid the ignoring of particular cases that put a limit to and isolate the areas of the "human possible" and, thus, should seek their real significance. The need for *individual's anthropology is obvious*; – we are to create a science, in which man will be viewed as a bio-psycho-socio-cultural entity.

To the point, a human being (in Individual's anthropology) is certainly a "monad", however, not a "monad" in the original meaning of Leibnitz, which is autonomous (self-dependent) and always a separated unit in the world. In contradistinction, our "monad" is put in the sense of Khroutski's BioCosmology (and, thus, it has an analogy with Aristotle's substance), for, it is specifically – inherently, substantively – integrated into the one whole self-evolving world. In this light, we might treat a human being as the representative for a group and also as the unique complex universe with her/his own identity – "*a conscious (indivisible) bio-socio-cultural-cosmic atom"*.

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[1] We (the group of medical anthropology at "Francisc Rainer" Institute of Anthropology, Romanian Academy) have implemented these researches in the *Lab. of Individual's Anthropology of Biophysics and Physiological Research*.

[2] The substantial characterization of our explorations is given at the site: http://www.corneliaguja.home.ro/index.html , link to the "original contributions".

Essentially, to our mind, the human phenomenon does not only behave like a system, accurately – *does not entirely behave like a system!* The human phenomenon ("human life process", in Khroutski's expression, – human ontogenesis) is under permanent evolutionary action, change and transformation. We have reached the conclusion (after checking the validity of our results by a great number of tests and basically making sure of their correctness) that a new theoretical framework (adequate to these specific scientific results) is required. Eventually, we have elaborated, in a general scientific way, the *Interface*-concept that treats a *human being as interface.*

Previously, the term "interface" was used only by specialists in technical fields and, thus, was nearly absent in dictionaries. However, in the second half of the 20th century (1960–1990) the term "interface" appeared in such fields of science as *cybernetics and synergetics*. These are the branches of complex sciences, which study the non-linear processes of natural and life phenomena and are based on the theories of chaos[3], fractals, catastrophes, etc. The aforementioned complex sciences have made a major contribution to the growth of scientific knowledge, as well as to the elaboration of methods of cross- and interdisciplinary research and collaboration.

In my interdisciplinary approach I use both the collocation *"Phenomenon MAN"* from Francisc Rainer (Rainer F., 1944) and "man as a system" of Victor Sahleanu's conception (Săhleanu V., 1973). I also use Stefan Milcu's idea of "*the unity and complexity of the human psycho-neuro-endocrine phenomena* in which *the female/male couple* has a particular significance leading to meditation on the *human being androgyny*" (Milcu Şt., Maximilian, C., 1967). *Mutatis mutandis*, "man as a system" becomes for me "man as interface", following the principles of the above mentioned theories, – *a complex phenomenon of dissipative, fractal, catastrophic, chaotic, coexisting, integronic, etc. systems/interfaces.* The usual meaning of the term "interface" (in the vocabulary): "something, connecting two separate essences". In a system/interface couple, the *system* owns the following categories: substance, structure, entropy; while *interface* owns information, communication, negentropy.

In this light, we might treat 'system' as referring to the tangible – *objective* – aspects of observable phenomena (that really correlate, following the arguments of Khroutski, with Aristotle's notions of *causa materialis*, *causa formalis* and *causa efficience*), while 'interface' relates to the non-material – *subjective* – properties of the phenomena under study (herein, we see the link to Aristotle's *causa finalis* and *entelecheia*). Stephen Modell argues that Aristotle's *causa efficience* plays the main role in modern scientific explanation of objective phenomena and that even "personal functionality can be explained by causal efficiency" (Modell S., 2007, p.2). However, the proposed *interface*-concept certainly correlates with the essential meaning of Aristotle's *causa*

[3] To the point, Khroutski's BioCosmology has a particular (opposite) direction, aiming at the creation of a theory of *cosmos* and, thus, - at the substantiation of a future safe harmonious world.

finalis and Khroutski's similar conception of *adaptational* (microevolutionary) and *creative* (macro-evolutionary) teleological and axiological subject causes. With respect to a person, the latter are subdued to her/his Basic Cosmic Functionality – the ultimate aim (and self-executing functionalist program) of a human's ontogenesis (Khroutski K., 2006–2007).

Significantly, the term "informational" (in the *interface*-conception and with respect to anthropological issues) does not reflect any material or field (energetic) substratum. On the contrary, our 'information' signifies a distinct substratum *generically called 'halo',* which has both the mode of *manifestation and expression (shape, proportion, organization, program, significance, archetype)* – the aspects that accompany the phenomena known up to the present, as well as the mode of *our whole existence.* We treat "information" as *informational processes*: information goes around and is self-regulated in spontaneous conditions in the encoded form. This (elementary, primary) *archetypal universe* is *non-space-temporal (*non-ST) and is a dimension of our physical universe. From this standpoint, our notion 'interface' might be interpreted as the physical expression of intrinsic (non-material – *informational*) essences that actually reflect the inherent life activity of an observable living entity (of a human being, first of all).

In his turn, Dr. Khroutski takes the world or cosmos (similar to Aristotle) as the given organic whole self-evolving entity and, thus, he treats every living substance as the inherent organ (unit) of this real world (organism), which has its/her/his peculiar inherent place and functional destination in the Cosmos. Hence, he considers active motive forces of the Cosmos as the given, which are the subject for our disclosure and definition, but are not available to our explanation. *Man and her/his intellect is the product*[4] *of the cosmic evolution, but not vice versa, and this is a proper position.* However, from our point of view, we might complicate this issue (aiming at obtaining useful results) in case of referring to the state-of-the-art achievements of modern science. In this way, we develop the consideration of living systems' selection, adaptation and integration as qualitative phenomena that belong to the *archetypal non-ST-universe*. In other words, we might discern in our physical universe the four objectively accessible (space-temporal) dimensions and the fifth non-ST dimension that has informational-archetypal essence. The fact is that this dimension opens the perspective of decoding universal codes, of a "cosmic genetics", the information being inscribed in a language that expresses the succession of the evolutionary states (levels, stages) of natural phenomena.

As it was mentioned above, our *informational anthropology* is based on theories derived from the science of complexity and morphogenetic revolution namely *the morphological theories* as the

[4] Hence, a human being is the essential and necessary means, but never the ultimate end of the cosmic evolution.

theory of catastrophes (Zeeman C., 1972–74, Thom R., 1982), *the fractal theory* (Mandelbrot B., 1982), *the theory of dissipative structures* (Prigogine I., 1977), *the chaos theory* (Yorke J., quoted by Boutot A., 1993), *the general systems theory (*Bertalanffy L., 1973). *Complexity science* deals with integration of knowledge from various fields. *Synergetics* is part of the general systems theory and is a step forward in physics, opening a new perspective on the processes and systems in our universe. *The scenarios of transition*, from determinism to chaos theory have changed the approach to the problems of stability of non-linear (real, nonideal) dynamic systems. *Computer models* of the dynamics and evolution of complex systems made it possible to investigate self-organizing phenomena; *Fractal analysis* of the uneven objects and the non-periodical series made it possible to develop new complex classifications and discrimination processes.

A major consequence of research in the field of complexity is the *changing of a researcher herself*, as s/he learns to see the world and science in a new light, modifying her own conceptual filter by which s/he perceives complexity of life. We are practically forced to *jump from the arithmetical vision based on adding processes to fractal geometry, based on multiplying, iteration, and recursive processes* in order to eventually arrive at a harmonious approach. With respect to the elaborated *interface* theory we claim that this approach to the study of the human individual aims at achieving of the unity of anthropological sciences. Moreover, developed and extended in this way, anthropology may become the instrument of universal study in all the fields that deal with the human being and human society.

The development of our trans-disciplinary concepts on informational anthropology, especially the conception of *interface as physical reality that is determined by the real archetypal encoded information*, – is based on verified experimental demonstrations (Guja C., 1993, 2000, 2008). A human being as the system/interface may be considered a fundamental component of her/his "human society" and of the nature/cosmos system as well, just like a hydrogen atom is the elementary constituent of matter under the material form. A human being may be therefore considered, from the informational point of view, – "a *conscious cosmic-social-cultural atom*". Similarly to the natural sciences research that conduct the decoding of the enigmas around the atom, we might consider a human being as a dynamic, complex phenomenon, taken in its integrality, – and this position will facilitate our better understanding of a person and the human society. In other words, the disclosure and decoding of universal archetypal codes at the human level, thus acquiring the strict and thorough knowledge of the properties (laws) of a human being, – will be a valuable material for the resolution of critical (system) social problems. In the appendix, there are given the results of our works (Guja C., 1993, 2000, 2007, 2008), including several schemes that are meant to facilitate the perception of the *informational anthropology*.

In conclusion, the given analysis of BioCosmology and Informational anthropology interrelations shows firstly their Universalist openness. Indeed, similar to the Aristotelian integrity of physics and metaphysics, they are based on the unity of philosophy and science, leading to integrative anthropology – a holistic approach to the global perception of the human being. The unity of her/his material (objective) and non-material (subjective) properties integrate the potentials of existing scientific and humanitarian paradigms. The basic point, herein, is that both approaches: BioCosmological and of Informational anthropology – are based on opposite fundamentals. The former – on the original theory of Cosmos (of "Purposeful – Cosmos-centric – Awake" organic activity, in Khroutski's metaphor), while the latter – on the existing theories of Chaos (of "Restorative – Subject-centric – Sleep" organic activity, wherein auras are visible and have the decisive scientific significance). All this might be treated as the *coexistence couple factor*, for, both these life cycles – Awake and Sleep (although inverse, but consecutive) – belong to the same life process, for instance, – to the life activity of a myocardiocyte (of the consecutive cycles of Systoles and Diastoles), or to the whole ontogenesis of a human being (personality), or to the entire evolutionary process (including the cultural development) of the life on Earth.

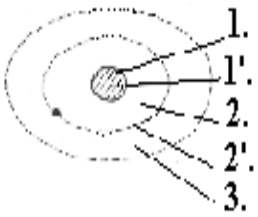
APPENDIX:

Schemes and figures are taken from the works of Cornelia Guja (2007–2008):

FIG. 1. – CONCENTRIC ARCHETYPE MODEL

HYPOTHESIS: *Human being is the entity that generates human matter, similar to the cell that lies at the basis of living matter; while an atom is the elementary constituent of non-living matter.*

ARGUMENTS:



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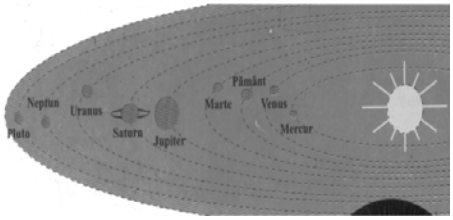

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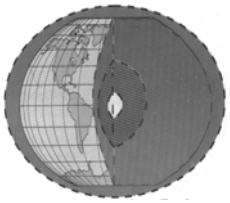

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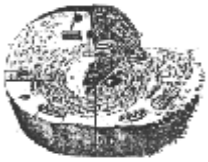

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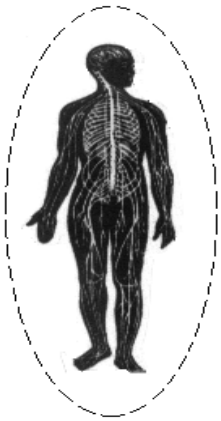

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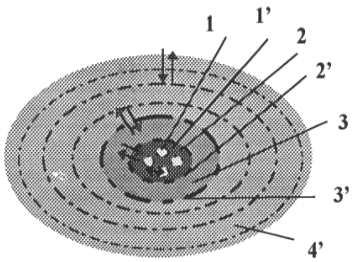
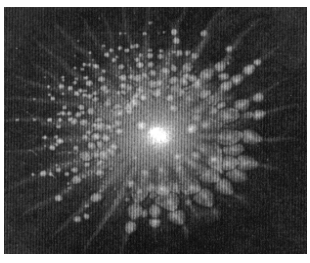


f)

Study models of the entities known in nature: a) atom, b) Solar system, c) planet Earth, d) living cell, e) the model of human entity similar to the nuclear-radiating models, f) archetypal model: atomic, solar, planetary, cellular
1. - nucleus, l'. - interaction zone – nucleus/internal environment, 2. - internal average system, 2'. - Interaction zone – internal environment/external environment, 3. - One's own average external system

EXPERIMENTAL DEMONSTRATION



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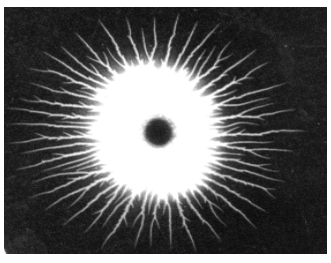

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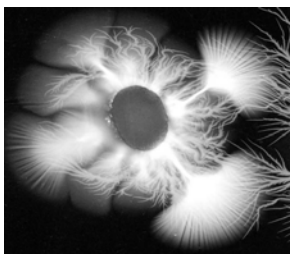
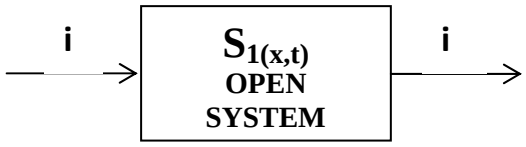


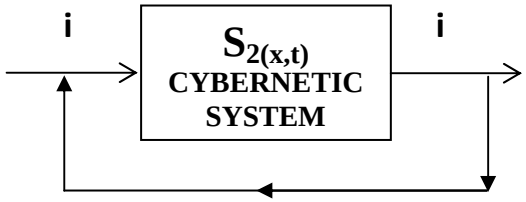
c)

Interface electrographic images
(one's own informed environment generated by):
a) non-living matter (object), b) living matter (egg), c) human matter (finger)

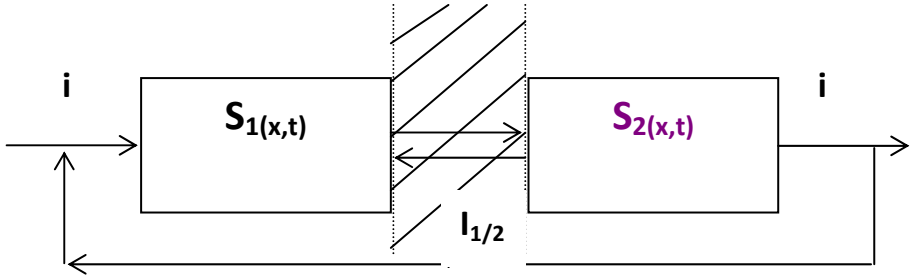
FIG. 2. – THE MODELING OF ARCHETYPAL INTERFACES

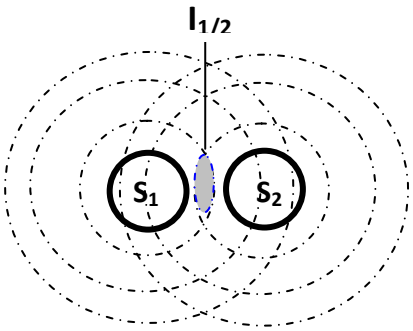


- **i = information**
  S = body or phenomenon



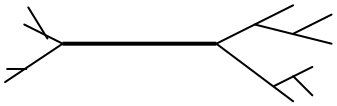
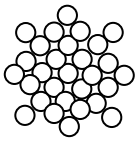
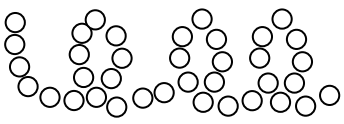
- **Informational circuit through technological <u>channels</u>**
  - **free, natural**





- **Natural interaction between two systems**
  I = Interface

$I_{1/2}$ = **INTERFACES INTERACTION MODEL**

1. 
2. 
3. 
4. 

1. **Archetypal *<u>carrier</u>* communication (globes)**
2. **Archetypal *<u>simultaneous</u>* communication (ramifications)**
3. **Archetypal *<u>antenna</u>* communication (radial-radiating/ floral shapes)**
4. **Archetypal *<u>helicoid</u>* communication (genetical code)**

FIG. 3. – Natural Archetypal communication between Systems by Interface

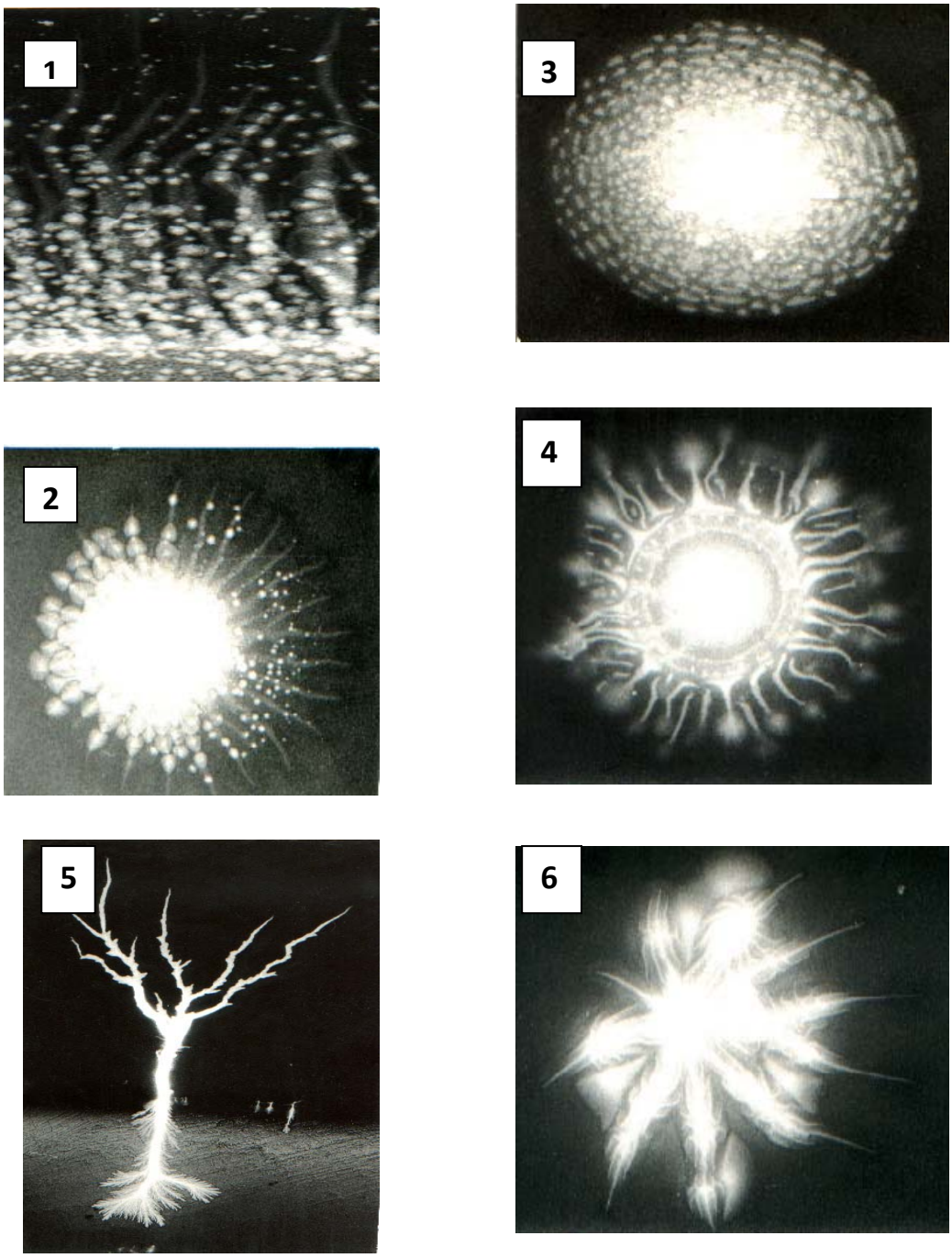
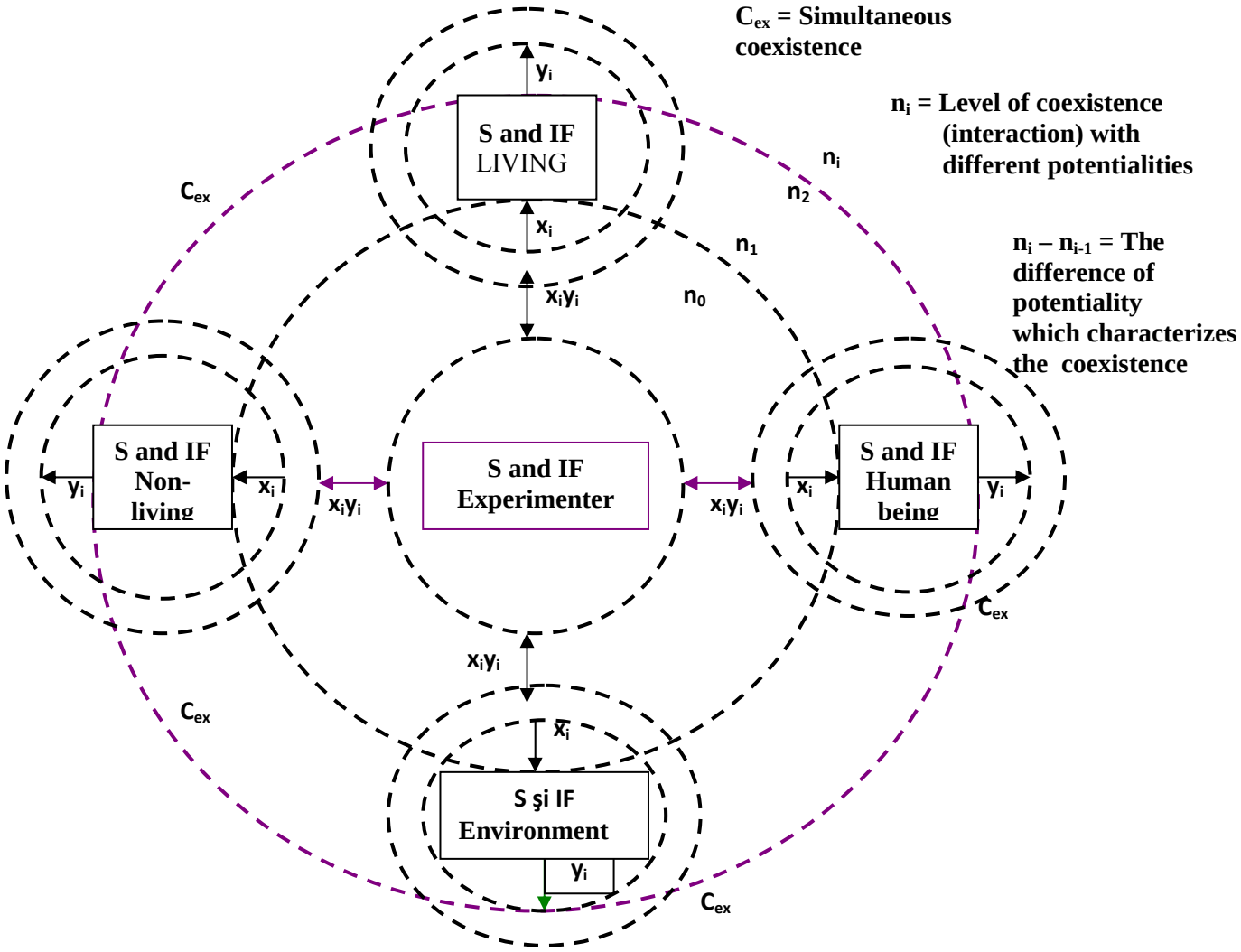


Fig. 3. – **Types of Archetypal Communication Code (**electrographic signals) – caught on photosensitive film at bodies interface with different archetypal shapes: 1, 2 – **linear and radial** globular shapes, 3 – **globular** shape detail, 4 – **floral** shape detail, 5 **– ramified** shape, 6 – **spiral-circular** shape detail **(helicoidal**)

FIG. 4. – Conceptual model of the subjective knowledge



Legend:

S – System;

x, x_i – Entrances;

y, y_i – Exits;

L_S – Relative specific laws

R – Interdependency relationship

IF – Interface

We gave the studied bodies and phenomena the attribute of SYSTEM and of INTERFACE like a complementary function. In the issue, *a hyper-complex interaction* is highlighted, as much between the studied entities as between them and the experienced subject.

REFERENCES:

1. Ambos-Spies, K., Homer, S., Schoning, U., 1993, *Complexity theory – current research*, Cambridge University Press.
2. Bertalanffy, L., 1973, *General SistemTheory*, Published in Penguin University Boooks, New York.
3. Boutot, A., 1993, *L'inventation des Formes*, Editions Odile Jacob.
4. Casad, A.L., 2000, *Individuality, Anthropology, and Morality*: An Existential Approach, Ed. Institut of Antropologi Kobenhavn's Universitet.
5. D'Andrade, R., 1995, *Moral Models in Anthropology*, Current Anthropology, vol. 36, Number 3, p. 399–408.
6. Devaney, L.R., 1989, *An Introduction to Chaotic Dynamical Systems*, Addison-Wesley Publishing Company.
7. Drăgănescu, M., 1990, *Informaţia materiei (Information of the matter),* Edit. Academiei Române, Bucureşti.
8. Dumitrescu, I.Fl., Kenyon, J., 1984, *Electrographic Imaging in Medicine & Biology*, Neville Spearman Ltd, Suffolk.
9. Guja, C., 1993, *The Haloes of the Bodies. Interfaces with the Cosmos*. Encyclopaedic Printing House, Buchurest.
10. Guja, C., 2000, *Aura corpului uman. Introducere în antropologia individului, (The halo of the Human Body. Introduction in the Individual's Anthropology),* Editura Polirom, Iaşi.
11. Guja, C., 2000, (coord.), *Aurele corpurilor. Interfeţe cu cosmosul (Haloes of the Bodies. Interfaces with Cosmos)*. Edit. Enciclopedică, 1993, Bucureşti, reeditare Edit.Polirom, Iaşi, p. 103–122, 160–176.
12. Guja, C., 2007, *Bioethical Aspects in the individual's Anthropology,* Human Diversity and Biocultural Researches, Selected papers of the 15-th Congress of the European Anthropological Association, Edited by Eva Bodzsar and Anamaria Zsakai, Budapest, , pag. 191–207.
13. Guja, C., 2007, *Introductory Aspects of Informational Anthropology in the Perspective of Interface Theory*, Ann. Roum. Anthropol., 44, Bucharest.
14. Guja, C., Adina, B. 2008, *Guide of General Anthropology in Vision of the Interfaces Theory*, "Carol Davila" University Publishing House, Bucharest.
15. Guja, C., Adina, B. 2008, *Individual's Anthropology*, Chap 13, Guide of General Anthropology. Interfaces Theory Vision, "Carol Davila" University Publishing House, Bucharest, p.135–149.
16. Guja, C. 2008, *Informational Anthropology,* editura Academiei Romane, Bucuresti.

17. Khroutski, K.S., 2006, BioCosmology – Science of the Universal Future. *E-Logos: E-Journal for Philosophy*. URL: http://nb.vse.cz/kfil/elogos/science/khrou106.pdf
18. Khroutski, K.S., 2007, Arousing a Dispute over BioCosmology. A Reply to Stephen Modell. *E-Logos: E-Journal for Philosophy*. URL: http://nb.vse.cz/kfil/elogos/biocosmology/khrou107.pdf
18. Mandelbort, B. B., 1982, *The Fractal Geometry of nature*, W. H. Freeman, San Francisco.
19. Milcu, Şt., Maximilian, C. 1967, *Introducere in antropologie* (*Introduction in Anthropology*) , Editura Stiintifica, Bucuresti.
20. Modell, S.M., 2006, The Two Arrows of Efficiency: A Commentary on Konstantin Khroutski's BioCosmology – Science of the Universal Future. *E-Logos: E-Journal for Philosophy*. URL: http://nb.vse.cz/kfil/elogos/biocosmology/modell06.pdf
21. Nicolau E., 1971, *Omul Informational, (Informational Man),* Edit. Junimea, Iasi.
22. Peitgen, H.-O., Saupe, D., *The Science of Fractal Images*, Springer-Verlag, Publishing Company, Inc., USA, 1989.
23. Prigogine, I*., 1979, La thermodinamique de la vie*, Edition Gallimard, Paris.
24. Rainer, F., 1944, *Materia şi viaţa (Matter and Life),* Imprimeria Naţională, Bucureşti.
25. Renault, A., *1989, L'ere De L'Individu,* Edition Gallimard, Paris.
26. Săhleanu, V., 1973, *Eseu de biologie informaţională (Informational Biological Essay)*, Editura Ştiinţifică, Bucureşti.
27. Thom, R., 1982, "*La Physique les formes*", La Pensee physique contemporaine, Moulidars, Editions Augystin Fresnel.
28. Yorke, James A., quoted by Boutot, Alain. 1993.
29. Zeeman, C., *Catastrophe theory*, Selected papers 1972–1977.