INTRODUCTORY ASPECTS OF INFORMATIONAL ANTHROPOLOGY IN THE PERSPECTIVE OF INTERFACE THEORY

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Summary. This work is an attempt to point to the main stages that led to elaborating a new theory which we called "Interface Theory". The work underlines its necessity and utility for the development of the researches on the individual's Anthropology and of the electrographic investigations that resulted in outlining a new field, 'Informational Anthropology'.

The present paper is a synthesis of laboratory researches and interdisciplinary theoretical researches (1975-2006) and aims at defining certain general aspects of human knowledge, of the human individual by means of the *modelling method.* We tried to extend its classical anthropological approach towards the modern field of the complexity sciences. Even today Anthropology as science is focused on populational, communitary and typological aspects, and less on individual aspects; man is regarded as an average or representative of a human group or type, by rendering the average general. In populational anthropology statistic data, particular, exceptional cases are generally left out. "Individual's Anthropology", as we tried to develop in our researches, should avoid ignoring the particular cases that put a limit to and isolate the areas of the "human possible" and should seek their real significance. In this way there resulted the necessity of the *individual's anthropology,* in which man should be viewed as a bio-psycho-socio-cultural entity, at the same time representative for the group and also as a unique complex universe with his own identity, "*a conscious (indivisible) socio-cultural atom".* We have reached an interesting paradox: by studying the unique we managed to reach maximum generalization.

MATERIAL AND METHODS

Starting from these conceptual premises, we realized that the approach of the human individual from the position of classical anthropology in the research laboratory is very difficult especially for making up the investigating methodology, not to speak of the processing and finally the interpreting methodology. It is practically necessary to find a new approach to change the paradigms in this field. My attempts to meet the exigencies of the classical theories and to use their concepts (mainly that of *system* were often contradicted by the results of the experimental researches in the field of anthropology), oriented towards the ***human individual studied in the lab of biophysics and physiological research*** and especially owing to the electrographic method. This

method highlighted new aspects regarding man's adapting to the natural electromagnetic environment and to the interactive social one.

The human phenomenon as we see it does not only behave like a system, it is under permanent change, transformation and activation. After repeatedly checking the results to make sure they are correct, we have reached the conclusion that a theoretical framework, adequate to these specific researches is required. ***The revealed phenomena did not behave as systems entirely!*** That is why we started to use the concept ***INTERFACE*** in a general scientific way – ***the human being as interface.*** The term interface was used, until a short while ago, only by the specialists in technical fields and was not to be found in dictionaries. Our methodological searches became much easier owing to the fact that certain theories we needed had already been established alongside with others dominating the researches in the scientific world (1960-1990), such as ***cybernetics and synergetics***. They implied the theory of dissipative systems, the morphological theories (they spoke of the revolution of morphological theories) and the complex sciences, in which the theories of chaos, fractals and catastrophies have an important place. All these theories had major contributions in deepening knowledge under its most varied aspects, but required specialized training and consequently, close inter and transdiciplinary collaboration.

I used multi-and interdisciplinary study means because, on the one hand, the ***systems generalized theory and the theory of information*** (interdisciplinary fields by definition) were in fashion, and, on the other, lots of new theories were generated by new ideas resulting from them. Under the circumstances I took over the syntagm ***"Phenomenon MAN"*** from Francisc Rainer, which allowed me to place the ***human individual*** beside all the other natural phenomena studied by physics – ***and the atom is defined as a phenomenon!*** I also took over Victor Săhleanu's conception ***"man as a system".*** He developed, in a book having the same title, over 20 facets: man as ***integral, heterogeneous, anisotropy, geometric, open, substantial, energetic, in compartments system, a system with self-control, retroaction, co-variance and counter-variance, informational, cybernetic, reactive, hierarchic, non-linear oscillating, automatic, dynamic, evolutive, anti entropy system***, etc. This book makes ***Victor Săhleanu one of the precursors of informational anthropology.*** Our researches had in view Victor Sahleanu's idea that anthropology needs to be rebuilt abstractly, taking into account three entities lying at the basis of life: ***substance, energy and information***. The couple system/interface connects substance and information in a unitary whole by means of ***energy.*** From Stefan Milcu, my doctoral supervisor, I took over the idea of ***the unity and complexity of the human psychoneuroendocrine phenomena*** in which ***the female/male couple*** has a particular significance leading to meditation on the ***human being androgyny.***

Mutatis mutandis ***"MAN AS SYSTEM***" has, at the same time, become for me "***MAN AS INTERFACE"*** which, following the properties described by the above

mentioned theories, will be: ***a complex phenomenon of dissipative, fractal, catastrophic, chaotic, coexisting, integronic, etc. systems/interfaaces.***

Focus on the human individual is common with many sciences and should occur in anthropology, too. Special attention should be granted to *the individual's conjugation in and with the surrounding world, especially with society*, having in view the dual origin of the human phenomenon: biological and cultural.

For this reason I made up the following working hypotheses: a) ***the human being is organized on the principle of universal similarity by archetypes***, which are to be found at all organization levels, b) ***in nature bodies have at the same time the quality of system and of interface in the sense of complementarity corpuscle / wave, as it exists in light.*** In the couple ***SYSTEM / INTERFACE,*** the system owns the following categories: substance, structure, entropy, and interface owns information, communication, negentropy. We consider that this approach of the study of the human individual may illustrate and achieve the unity of anthropological sciences. ***Elaborated and extended in this way, anthropology may become object of study in all the fields having to do with the human being and human society***.

The term "informational" used in connection with anthropology refers to aspects that are not based on substantial material substratum or on field (energetic) substratum. They are based on a distinct substratum ***generically called 'halo', having as mode of manifestation and expression: shape, proportion, organization, program, significance, archetype, aspects that accompany the phenomena known up to the present, as well as our whole existence.*** Among the various systems of reality there are informational processes, information goes around and is regulated in spontaneous conditions in an encoded form. This (elementary, primary) ***archetypal universe*** is ***a-space-temporal (*AST)** and is a dimension of our physical universe.

Selection, adaptation and integration of living systems are qualitative phenomena belonging to this ***archetypal universe***. In other words, our physical universe, with the four directly accessible (space-temporal) dimensions reflects by AST dimension the informational-archetypal aspect. The fact that this dimension is known opens the perspective of decoding universal codes, of a "cosmic genetics", the information being inscribed in a language that expresses the succession of the evolutive states of the natural phenomena.

I mentioned above that informational anthropology is based on theories deriving from the science of complexity and morphogenetic revolution. As they are little known, I will further enumerate them in order to clarify the new approach: ***the morphological theories*** attempt to describe and explain, if possible, the appearance, existence and disappearance of the forms, and to understand genesis and stability in a multitude of fields; the ***theory of catastrophies*** (Christopher Zeeman, Rene Thom) made up mathematical models capable to take into account the existence and sum total of forms, their appearance and disappearance, in one word, morphogenesis; ***the fractal theory*** (Benoît Mandelbrot) studies the fractal forms mathematically defining the concepts of

fractal object and fractal dimension; ***the theory of dissipative structures*** (Ilya Prigogine-Nobel Prize for Chemistry, 1977) studies the forms of self-organizations occurring in certain cases and conditions; ***the chaos theory*** (James Yorke) is another attempt to conceive the world of forms , of uneven forms, that confered, for the first time, the term of chaos a precise mathematical meaning and status; ***the general systems theory*** (Ludwig von Bertalanffy, 1962) defines the system as an assembly of interacting elements; ***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 pespective 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 the self-organizing phenomena; ***Fractal analysis*** of the uneven objects and the nonperiodical series made it possible to develop new complex classification and discrimination processes.

These conceptual mutations have immediate consequences in organizing the experimental contexts and study methodologies in all the fields of scientific research, leading to reconsidering modern informational transmission, i.e. communication by means of chaotic phenomena. For instance, a post fibrillate cardiac resuscitation device with chaotic behavior has been recently manufactured and introduced in the emergency practice.

A major consequence of research in the field of complexity is ***changing of the researcher*** *himself*, as he learns to see the world and science in a new light, modifying his own conceptual filter through which 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 finally reach a harmonious approach.

RESULTS AND DISCUSSIONS

We applied these new points of view to the systems human society and human being, while the construction of our concepts on informational anthropology was based on the experimental demonstrations proving that ***interface as physical reality is the real support of*** archetypal encoded ***information.*** The human being as system/interface may be considered a fundamental component of the system "human society" and of the system nature/cosmos just like the hydrogen atom is the elementary constituent of matter under the substance form. The human being may be therefore considered, from the informational point of view, "a conscious social-cultural atom". Similar to the importance and significance for matter research held by decoding the enigmas around the atom, considering the human being as a dynamic, complex phenomenon, taken in its integrality will lead us to a better understanding the human society. It is important to

solve the critical states of the social systems on the basis of thorough knowledge of the laws of the human being, by finding and decoding the universal archetypal codes, as the present statistical based analyses, no matter how efficient and laborious, are no longer enough.

Figure 1. Concentric archetypal model

Figure 2. Archetypal interface modelling

Figure 3. Types of 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)

The new point of view of the researches carried out by the Romanian school of anthropology, represented by the group of medical anthropology at "Francisc Rainer" Institute of Anthropology, belonging to the Romanian Academy, was communicated to the specialists in various international congresses of anthropology or published in specialized journals. The discussions on our new interdisciplinary and transdisciplinary approach pointed to the originality of the viewpoint and underlined our attempt to re-place the paradigms and methods in anthropology, mainly by the individual's anthropology and informational anthropology. We think it is worth mentioning that in "Consonantist psychology" the Romanian physician Stefan Odobleja described the phenomenon of inverted reaction (called feed-back today), which he called the law of reversibility. Ten years later (1948) a whole new science was built on this concept, Cybernetics, by the American scientist Norbert Wiener (1894-1964). Taking into account his entire work, Stefan Odobleja could also be considered a precursor of informational thinking, His conclusion that at the basis of the phenomenon man there also are physical laws is significant in this sense. For instance he spoke of TUNING-COMMUNICATION by resonance, consonance, while we generalized speaking of INTEGRATION by COEXISTENCE in systems that are at the same time INTERFACES.

The term informational I associated to anthropology, considered integronically, refers to aspects that are neither of substantial (material) nature nor of the nature of a field (energetic); it is of a distinct nature generically called 'halo', that manifests itself through characteristics such as: ***shape, proportion, organization, programme, significance, archetype.*** I am sure that the development of informational anthropology will prove useful in a knowledge based society, when all the means of scientific analysis become easily available to those who bend upon the problem of man and society and are supposed to solve them.

The whole evolution of knowledge demonstrates that scientists can only foresee a probable future. This probability tends to be more certain if one becomes aware of the reality that behind an adequate interdisciplinary scientific action there are more and

more people who focus their energy and creative force in the service of knowledge. Anthropologists are no exceptions.

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