CONSTRUCTIONIST-FRACTAL ANALYSIS.
A TRANSMODERN VIEW OF TRUTH

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Abstract: Constructionist-fractal method is essentially a semiotic-hermeneutics method. It traces the analysis of the transmodern paradigm under three classical aspects: syntactic, semantic and pragmatic. The model’s syntax is the law-ontognooseology axioms that will be repeated in other areas of the transmodern speech. Semantics consists of transmodern upgrading of philosophy and scientific data. In the semantic analysis we find a structural model of cognitive reconstruction of the world, based on the idea of fractal holism called quantum metaphysics. Constructionist-fractal analysis method consists in identifying a paradigm agreement to semiotic scales and thereby identifying cultural axioms, epistemic, or social and successive restructuring of cultural or social acts consistent with the paradigm model proposed.

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Constructionist, epistemology and the end of sciences

The "linguistic turn" of the twentieth century has as its starting point the concept of "structure". The postmodernism is based on the deconstruction of structures of representation, having as main argument the idea of language game, as a "grammar" of understanding reality. Postmodernity also emphasizes on the power of words to organize the world. Florea Lucaci (2005:104) observes the "reduction to language" which is specific to late modernity and postmodernity. Eliminating the "absolute" (in this case the word as logos), postmodernity operates with the possible, and in a natural way with the plural, as Wittgenstein (1991: 401) says, "the sentence is a model of reality as we imagine it".

The removing of transcendent in postmodernity gives rise to a new humanism: "beyond the person is void, nothingness". The existentialist humanism still kept the "the human being" as a metaphoric referential, which contrasts with the "nothing" (Sartre, 2004). Postmodern humanism remains focused - on one hand - on the issue of freedom taken from Sartre, but break it apart from any other form of transcendence, from any possibility of ontological focus. On the other hand, the postmodern humanism is centered on the distinction. Postmodernity is a "civilization of minorities, having as main model the sexual minorities (Codreanu, 2005:67).

As a cultural paradigm, characteristic to postmodernism is deconstruction. The fact that this "concept" allows a hermeneutic centrifugal and without poles drift shows the difficulty of understanding a way of thinking, of supreme tolerance which accepts any text. Man is subject to its own language, understanding that, involuntarily, accepting the language involves not trying to justify it in any way. None interpretation of deconstruction, came from Derrida, in the sense of the universality of language, is possible because any interpretation makes the game of deconstruction to show what deconstruction makes clear (Silion, 2002:2).

Deconstruction is a philosophical shift from the domain of real ontology towards the semiotic of "Human Being". The words make the sense that we want to give to them, and the metaphysics
Discursive conventions had its monopoly period over "the construct of truth." The concept of truth is changing within the constructionist epistemology. As formulated within science that departs more and more from what may be actually experienced or realities. Concepts such as plausibility become more appropriate to describe the nature of new laws based on relationships and supports the role of the individual in the construction of significant constructionism abandons the idea that the individual mind is the mirror of reality. Constructionism is observed directly.

To a plurality of possible realities that is ordered through the action of the researcher in a series of qualitative- that has the assumption that the research should include the researcher’s system and his interpretations in a plural world or even a plurality of worlds, and also the correlation with the cultural mediation of interpretation. There is no single sense that corresponds to a single truth but a meaning of words and interpretive will. It detaches from postmodern deconstruction through social or cultural discourse, is a paradigmatic model, relatively independent from the scientific model of origin. Cultural derive of meaning of concepts underlies the semantic convergence of any socio-cultural constructionism kept its antirealist nature, centering on the multiplicity of experiences and consequences with the results of experiments. Feynman (2006:144) believes that theoretical models must be constructed so that the calculated consequences can be compared with the experiment. This new epistemology gives up the claim to explain the causal reality for a better understanding of it, especially the accordance of consequences with the results of experiments.

Epistemology has become a particular type of discursive pragmatics that is a coherent system of rules of meaning capable of producing "a construct called truth." Besides the scientific and epistemic discourse, other types of speech actually build their own constructs of truth; for example, we have a truth of theological, political, etc. nature of Gergen (Gergen, 2005). The language convention proposed in scientific discourse on truth, is socially privileged in society. Other types of discursive conventions had its monopoly period over "the construct of truth." The concept of truth is changing within the constructionist epistemology. As Ştefan Cojocaru (2005:25) stated, constructionism abandons the idea that the individual mind is the mirror of reality. Constructionism is based on relationships and supports the role of the individual in the construction of significant realities. Concepts such as plausibility become more appropriate to describe the nature of new laws formulated within science that departs more and more from what may be actually experienced or observed directly.

Cosima Rughiniş (2007:18) analyzes the influence of symbols socially labeled on preferences, considered naturally in a culture or another. The author shows that the aversion to the use of insect (as food) in Western cultures wastes the nutritional potential of insects by destroying them, to make room for crops whose nutritional value is lower but are socially accepted. This example contradicts Weber’s theory of rationality of human actions, emphasizing the need to consider such cases subjective beliefs, habits, feelings in behavior analysis. Another example provided by the author is the use of condom as a contraceptive method. Considered unacceptable in the view of the Catholic Church, the condom use is not widely exposed in prevention programs of HIV, although its use, as OMSC (2007:20) believes, would reduce the risk of infection by 90%. The social influence of the church can be felt in official public policy even if there is stated the separation of church and state.
**Constructionism and postmodernism**

Constructionism is seen as part of the postmodern paradigm because of models relativization and reporting reality to negotiation of interpretation. Constructionist epistemology is through its structure close to postmodernism, to Lyotard’s vision according to which our picture of reality is a narration, a consensus of speech - considers Hacking (1999:196). The scientific discourse is a particular form of speech and can be analyzed in a constructionist manner as textual analysis.

Constructionism can be used methodological, based on the importance of the epistemic subject in the social construction of truth. The concept of truth has therefore significance in relation to a socially accepted fact or experience. Social constructionism can be applied to a series of theories that have as a starting point Gergen's work, of which the following articles can be considered defining: The movement of social constructionism in modern psychology (1985), Towards a generative theory (1987), Affect and Organization in Postmodern Society (1990), An invitation to Social Constructionism (1999), Organization Science A Social Construct (1999), Postmodern Potentials (2000).

Constructionism is concerned mainly with explaining the processes by which people come to describe, explain and take note of the world they live in and it includes them (Gergen: 2005). Campbell, Coldcitt and Kinsella (1994:18) believe that the constructionist view proposes a model through which reality is created in the process of communication and with language tools, each individual influencing and shaping the responses of others. Constructionist emphasis is on the network of interactions between individuals in the communication process. As a postmodern orientation, constructionism deconstructs the "ontic" in terms of independent existence, moving reality at the level of language experience. Significance and meaning of words are not given on a correspondence theory of truth but especially of a theory of social negotiation of the meaning and indirect of substitution concept of truth with the concept of adequacy and verisimilitude. Continuing this idea, Campbell Van Nistel Roof (1999:21) considers that the illusion of ontological rupture between subject and object should be eliminated and replaced by a construct of intersubjective reality. Analyzing Van Nistel Roof, Van der Haar (2002:16) considers the fundamental concern on constructionism as a sensification process - meaning creation- by which individuals give a meaning to the subjective experience on reality. Individuals are thus capable to produce different realities - parallels realities.

Schawandt (1998:240) sharpens, starting from Gergen's theory, the social impact of language conventions on sensification process. Van der Haar (2002:18), commenting the philosophical significance of constructionism, indicates the adherence of this trend to an alternative epistemology because knowledge and reality analysis can only be the contingent of human relations being the result of continuous practice of reification, sedimentation and habitualization. The constructionist perspective can not admit knowledge itself, free of any axiological foundation nor can conceptualize a disjunctivity between subjective and objective which involves a clear distinction between knowledge and reality

The sociology of science can be viewed, after Van der Haar (2002:18), from a constructionism’s general perspective. Knowing the world is essentially a human creation and not a mirror of an independent reality. The central premises of constructionism proposed by Van der Haar (2002: 22), starting from contributions of Burr, Gergen and Bouwen, are:

- Social constructionism assumes that the world cannot be known as it is but rather as a series of multiple socially constructed realities;
- Social constructionism sees language, communication and speech as having the central role of the interactive process by which we understand the world and ourselves;
- Social constructionism sees language and communication as a process of coordination of actors;
- Social constructionism deals with relational process through which social actors construct social realities;
- Social constructionism requires an exclusive distinction between subject and object; it is not a happy or necessary construction and therefore proposes the overcome of the restrictive dualism that sees the two as existing independently of each other;
- Social constructionism adepts consider important the reflection on the social, cultural and historical fund of our assumptions and constructs and maintain of our openness to other possible realities constructed.
A physical interpretation can be formulated on any state of existence but its understanding depends on social negotiation. Nini Praetorius (2003) considers that before you can actually understand in terms of quantum physics even the mere phenomenon of pain, there must be the primary concept of pain, which is itself a social construct that ensures that a set of unpleasant sensations experienced by many people is the phenomenon of pain. The mechanism of producing pain can be physically explained, but not the state of pain which is an individual experience certified by social experience. Andrew Pickering (1999:60-85), author of the volume: Constructing Quarks: A Sociological History of Particle Physics, introduces the constructionist method in the philosophy of science. The author used this method in correlation with an analysis of the development of science from classical physics to new physics. Analysis of physical theories is made from the perspective of their significance for the development of science. Constructionism is seen as part of the postmodern paradigm because of models relativization and reporting "reality" to negotiate interpretation. Seale (1999:24) believes constructionism as coming from berklevan idealism. As we stated above, constructionism epistemology is by its structure close to postmodernism, to Lyotard’s vision that our picture of reality is a "narration", a consensus of discourse - considers Hacking (1999:196). Scientific discourse is a particular form of speech and can be analyzed in a constructionist manner as textual analysis. The constructionist model is seen by Jean Francois Lyotard as a deconstruction of the concept of reality to the social construction of "narrative" level, a discursive practice generating consensus.

Paul Gross and Norman Levitt (Gross, Levitt, 1988) argues that science is a highly developed set within a particular culture and particular historical circumstances of a measurable body of knowledge in terms of real world. It is a speech for specialized interpretive communities created within a complex network of social circumstances, political, economical priorities and ideological climate, all together forming irreversible a scientists environment. Science can be understood as a discursive community among other existing or that existed contemporaneously in history. Therefore the author believes that scientific truth is self-referential and is supported by appealing to scientific standards that define the scientific community and are defined by this, distinguishing it from other social backgrounds.

Constructionist Semiotics fits usually in the general trend of postmodernism promoting interdisciplinary knowledge. We prefer to place constructionism at the level of an area of intersection between postmodernism and transmodernism precisely because aspects of network analysis are made possible by constructionism. Affirmative orientation specific to transmodernism can be exemplified in a particular area of constructionism: appreciative model.

The social development, being essentially an integrative process, is prone to transdisciplinarity, and that's why I chose this dimension of social practice to illustrate the interpretative divide of some social techniques caused by changes in a paradigm offered by the shift from transmodern epistemology centered on interconnection.

**Characteristics of constructionist epistemology**

As an epistemic method, constructionism is drafted by Burr (Burr 1995: 4-9) through the following fundamental assertions:

- The anti-essentialist nature of constructionism and critical understanding of access to knowledge. This view opposes the understanding of knowledge nature as equivalent to the existence of the type: what exists is what we can understand, in one form or another, as its existence. Our knowledge is rather dependent on the construction we rely on, in interpreting the real construction developed in daily interactions between individuals.

- Antirealism. The version of reality in which we live is socially and culturally constructed through interaction, and it can not be an objective fact but rather an assumption of a significant model.

- Historical and cultural relativism of knowledge and of the concept of truth. All forms of knowledge, both scientific and common, have intrinsic historical and cultural specificity. Truth itself varies historically and culturally as a concept depending on social interaction processes by which people are related. Thus transdisciplinarity and interdisciplinarity is possible because globalization is a construct of contemporary culture.

- Language is a form of action by which the world receives constructs. The way we understand the world comes not from the objective reality but from other people of past and present. Language is not simply a way of expression but through communication the world receives constructs and thus reality for us. Thereby language is a form of action. At epistemological level we can say that
scientific truth is the vision of the universe that satisfies both the scientific community and the laws of their own paradigms.

The constructionism itself has an anti-naturalist vision starting from the following perspectives: the theories do not describe reality itself but they rebuilt it in consciousness, going to the point where it introduces in the theory entities whose existence there are no experimental evidence or observation, but make theory coherent, consistent and with measurable results. We can consider the measurement of results a consequence of the theory and the way of choosing the type of experience or observation to be made and an inherent pre-quantification of results that is expected to be obtained. Thereby, the scientific theories, especially the contemporary ones, are themselves social constructs in a special form of social interaction called scientific research, and in a given social cultural and historical context called contemporary science and the scientific community.

Gergen moves the interpretive focus from reality to reality context and social network which generates for the individual the experience of reality. Gergen (Gergen, 1973) makes a remark towards the Cartesian vision, paraphrasing Descartes: "I am connected therefore I exist". By the paradigm change proposed by Gergen, epistemology becomes dependent to semiology, as "reality" itself is a sign constructed in a social convention.

The transdisciplinary paradigm. A required synthesis

The impact of holistic model generates a paradigmatic shift in the entire contemporary culture. We are today in full transmodern paradigm, based on transdisciplinarity and interdisciplinarity. It extends itself in the sphere of art, in ethics and pragmatics, psychology, sociology, and also in the biggest social-political constructions of globalization and globalism, of global communication, sympathy for tolerance and multiculturalism, asserting the identity of minorities, environmental paradigm and philosophy of criminal justice restitution.

We believe this new humanist vision to have as foundation the anthropocentricism, and as epistemic foundation the fractal constructionism. This epistemic humanist constructionist model starts from the centering of the connoisseur subject, as symbolic catalyst for the reconstruction of reality. We stand on the position of a "spiritualist anthropism", according to which the Universe as Spirit knows itself as a fundamental unit of reality in any iteration of fractal (part of the fractal). The Universe needs the human being to know oneself because we identify lucidity as a cosmological motivation. The rules of the game are the laws of the world, and the players are the aware subjects (individuals) that are part of the Universe. The creator projects himself in a holographic way in every human being, which creates after his image and likeness. We understand the ontological chasm between God and human as an intensive- extension difference, in Bohm's (Bohm, 1995) terms, the totality of wrapped existence versus explicit way of life in human beings. Christ is the ultimate explanation of Divinity in human beings. Through his volume "Transdisciplinarity", Basarab Nicolescu (2007:48-58) opens the way for a cultural construction, based on cooperation in knowledge, on the overcoming of borders between branches of science. The epistemic premise of transciplinarity is the existence of a fundamental unit of the world, the theme of unity of knowledge. In this respect, Rodica Rosca (2007:5) believes that "parallel to the processes of differentiation appears new forms of integration; the research models are an approach to cross borders of other sciences". In turn, Huessy (see Codreanu, 2005:179) considers - in terms of vocation ethos - transmodernism as the desire to transcend the limits imposed by neomodernism and postmodernism, claiming esoteric traditions, both European and Oriental.

Basarab Nicolescu (2007:58-600) in an edition of the mentioned work, suggests a multidimensional reality structured on multiple levels. In an attempt to reunify the multidimensional reality, the author asks himself about the theories capable of describing the transition from one level to another and the role of observer in the existence of one unit on all levels of reality. Nicolescu (2007:61-64) propose - starting from Stefan Lupașcu's model - a logic of included third, able to describe the coherence between levels of reality. According to this logic of third included, two contradictions became complementary on another level of reality, in a unified state T. This state T. participates in its own level of reality to another pair of contradictions resolved on the next level of reality. The reality levels are consistent allowing transfer of information from one level to another. The level of reality's consistency stops in extreme levels. The unification of the world is done by a "non-resistance zone." The areas of transparency in knowledge appear as being "cloaked" because - according to D'Espana (see Nicolescu, 2007:64-65) - knowledge has the shape of a reflection that is not permitted in the areas of transparency. Nicolescu identifies the "non-resistance area" to knowledge
as sacred. Sacred is therefore not a level of reality in itself, but the transparency that occurs between levels of reality.

The inseparability model generates in social science different theories such as feminism, appreciative perspective, neuro-linguistic programming. The principles of appreciative inquiry in sociology (Cojocaru, 2005:48-50) are related to the idea of inseparability of researcher and the social environment. Social organizations are the results of interactions between mental models of individuals who compose it. The objectivity of an organization is given by the correlation of subjective realities. Research of an organization and its changes are simultaneous. Social Reality (organization) - as Elliot (cf Cojocaru, 2005:49) believes - can be viewed as a text that can be "permanently" interpreted.

At the level of social reality, the map (image of social reality) precedes the territory (reality itself). "If people define situations as real then this situation is true by the consequences of defining them as real" (Wachowski, Thomas cf. Cojocaru, 2006:49). The consequences of the scientific theories, propose experiments to be performed to justify it. These experiments fractured the reality to match the theoretical model. The researcher's map, the scientific theory precedes the territory (experiment). Quantum physics has shown that the nature itself responds the researcher through the nature of the experiment. The theory builds the reality model. Basarab Nicolescu (2005:144) does the distinction between real and reality, "the real signifies what it is, while the reality is linked to human experience".

Reality is designed to have levels. A level of reality incorporates all of the systems which are invariant under the action of general laws" (Nicolescu, 2006:51). Thereby there are designed a reality on the quantum level, the level of human and cosmic. Each level of reality corresponds to a logic of its own. The existence of levels of reality makes it necessary to introduce the concept of complexity. Complexity can be understood in the sense proposed by Dent (1999:5), as a description of the transition from one level of reality to another. Basarab Nicolescu (2007:140-142) examines the dependence of complexity of the nature of space time. Space time with 4 specific dimensions of our reality, has its own level of complexity, different from that of a multidimensional world, existing at the quantum level or macrocosm. At each level of reality in part is built a complexity, which is structured by their "level of integration." Several levels of integration may belong to a single level of reality. The idea of levels of reality is not new in philosophy, it can be found for example in the cosmology of Jacob Boheme (cf Celmare, 2006:50). Husserl (cf Celmare, 2006:53) proposes the existence of levels based on "different levels of perception of reality to the subject observer". Esfeld (2004:601-617) proposes the term of "structural realism" for holistic analysis of the reality, perceived as hierarchy of systems.

Basarab Nicolescu proposes a multidimensional model of reality, having an open structure based on multiple levels. Nicolescu (2007:145) considers the structure levels of reality as being godelian, resulting that is impossible to construct a complete theory for describing the transition from one level to another, and thus to describe their unit. The levels of reality correspond to regional ontologies. It is not enough to put the question on what is it; will also have to address the additional question at what level is it? Ontological levels are not by themselves a fracture of Being, but a way of saying that Being is different, depending on the subject expert. Being and man are inseparable once again. The fractalic ontological model, proposing a hierarchical reality, can be understood, in our opinion, from the perspective of an epistemology that takes into account the fractal of world and the importance of re-signify of reality.

The object of transdisciplinary research consists precisely of "all levels of reality and its complementary zone of non-resistance" (2007:65). For Nicolescu (2007:65), "the reality is not only multidimensional but also, multireferential, complex plurality and open unity, being two aspects of a single reality". Through this is based the "Principle of Relativity" of the levels of Reality: "no level of reality is a privileged place from where you can understand all other levels of reality".

In the "Manifest of Transdisciplinarity", the author proposes the unification of object and subject of the transdisciplinary through the unification of the areas of non-resistance. Thus, the study of the Universe and the study of human being research are mutually reinforcing, interpreting the area of non-resistance as a "third secret project", which unites the transdisciplinary subject with the transdisciplinary objects (Nicolescu, 2007: 60-67). Starting from the Transdisciplinarity principles, Basarab Nicolescu proposes a new synthesis of humanism as transhumanism. The systemic opening proposed by transdisciplinary starts with the idea of integral development of the human being, both in a personal way, as well as in a social, cultural and spiritual way. The transhumanism does not entail homogenisation of cultural identity, but rather updating destructive creative potentials under the
auspices of unity in diversity and diversity in unity. New (Trans) humanism is centered on the high human dignity - at least according to Nicolescu - at planetary and cosmic level.

Radical deconstruction has as a necessary step the synthesis. The birth of transmodernism is a new semiotics revolution, which - by analogy with the "linguistic turn" - was recently named and defined in the semiotics terms of Traian D. Stănciulescu (2008) as "transmodern turn". While the linguistic turn was focused on "language games" as a way of deconstruction-construction of reality, the "transmodern turn" focuses on "ontological game" generated by the transparency to knowledge, as described by Basarab Nicolescu (2007: 64 - 65).

**Constructionist-fractal axioms in transmodern analysis**

The axioms identified by us in transmodern research are the following:

1. **Ontological assumption.** The opening of consciousness towards otherness may be the premise of a new ontology. We relate the openness towards otherness with the wakening of mystical tradition. The way of relating to Supreme Otherness generates in a fractal-type design an entire cultural paradigm. Ontological apophasism and the ontological gap between man and god has created an ethos ban, an epistemology centered on objectivity and even full fragmentation after split model into known and unknown object and a pragmatic teleological action (the action for a purpose, a thing). Removing reference to the sacred within this paradigm will result a positivist epistemology and a positive development of knowledge, an individualistic pragmatic, and hedonistic punitive ethos. On the contrary, a fractal constructionist reporting on supreme otherness will generate in axiological plane the value of unit identification, an affirmative ethos and a self-assertion pragmatics. In epistemic plan, subject centrality will work under inseparable systemic form. In praxeological plan there will be generated a trend towards communication as mutual sharing, the trend towards unique models. We understand by ontological reporting of constructionist fractal type as an assumption that individual subjects are specific projections to their own fractal level, to the Supreme archetype. Under this model, the universe is a fractal hierarchy of supreme archetype representation at different levels of existence.

If between man and God there is a hierarchical- structural continuity based on ontological con-subsstantiality, knowledge will be of mystical type as an essential union. Reporting to the transcendent involves a hiatus of being, and thus knowledge would be rational, discursive and fragmentary. According to transdisciplinary paradigm proposed by Nicolescu (2007:65-67), the transcendent, sacred, appears just at the hiatus between levels of existence. Being perfectly transparent to knowledge these areas of hiatus are non-discursive. Transdisciplinary knowledge aims a multidimensional approach on unity of the world as constructionism (negotiation of interpretations). The world itself is not a construct, but the image (map) is such a construct. Semiology, ontological or epistemic models are just such multi-dimensional mapping of a multidimensional reality.

2. **Gnosiological assumption.** New paradigm of Physics, involves mutations within the meaning of the term reality, objectivity, materiality, legitimate. These changes concern in particular the transition towards a holistic epistemology, which takes into account the significance of the connoisseurs’ subject in the knowledge act. Epistemological perspective is centered on an universal Anthropic Principle, the source of a new humanism. Being a knowledgeable subject-centered epistemology, it will be admitted as "reality" only those things which belong to the subject's causal continuum. The subject, as part of the system, will always be "out" that can not speak with sense.

3. **Semiotic assumption.** Having meaning only in relation to the subject knower, reality’s construct (its map) is "a sign" for a deeper reality, through which totality is asserting to the subject knower. Reality is a sign of existence. Objects are not entities in themselves, but signs of deep existence, shaped like a boot strap sequence of events, resulting in a vital whole, as a fractal pattern in the form of holographic resonance.

**Conclusions**

Once we identify the fractal axioms, we will find the law generation of it in “one in multiplicity” form. Multidimensionality of the world is the space that generates fractals. In transmodern paradigm, constructionism can be methodological used, starting from the importance of epistemic subject in the social construction of truth. Therefore the concept of truth is in relation to a socially accepted fact or experience. Fractal analysis as we discussed, seeks to identify an epistemic or critical pattern and processing it on various levels of existence.
Fractal thinking may be under the axiomatic form: There is an "x" that appears in conjunction with "y" in many known situations. In a given case "x" we grasp the emergence of "x" and say with a high degree of probability the existence of "y" and hence there is a law to bind "x" by "y". Fractal thinking is actually what makes science possible in constructionist meaning explained earlier in this chapter. Fractal model (Gavriluta, 2005) appears to be a constant of our thinking, of problem solving ability, to extract from the unknown.

We can criticize, in phenomenological sense, to this model that assumes the absolute existence of 'x'. In fact we can extend the model into a multidimensional fractal universe. There is 'x' in correlation + or -y and there is always at least a world in which we have + y, one in which we have -y and one in which we fly. Dimensional worlds are fractal structures where each unit, event, object corresponds to a type like: + object + event, + object – event, - object + event, - object - event.

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