

FROM MODERN DISCIPLINARY “SCIENCE” TO POSTMODERN¹ TRANSDISCIPLINARY KNOWLEDGE

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Abstract: After a short description of my quarrel with (the concept of) “science” and its derivatives (see previous Editorials in ETC in the last years) I enlarge the discussion with new arguments and new suggestions for further research. My starting point is that the concept of “science” is an obsolete one with bad consequences to the knowledge creation and even to “science” itself. “Science” is a post-feudal construction that modernity developed in its previous feudal structures instead of replacing them, and it is still taught in most universities today, in the postmodern times. Former “science” could be divided into “research” and “knowledge”, just in order to have more specific and clear distinction between a) (re)searching and b) finding something new. Some may say “knowledge” is too large and no distinctions can be made against philosophy and religion. So, what? The borders are futile in a globalized reality. The feudal arrogance of the (quasi) modern “science” needs to be replaced with the democratic meritocracy of any new idea able to enrich our knowledge. Old modern “science” started with disciplines as feuds with big walls and a feudal in the top of the hierarchy which is frightened of new ideas that could replace his monopoly with oligopoly or with a competitive market of new ideas. Of course the “scientific” feudal is interested in stealing new ideas, in borrowing others’ ideas and promoting them as being his merit. This old style structure of “scientific” research has a bad management and a very low rate of return. The side effect of any euro/ dollar invested in “scientific” research is still to be evaluated and to clearly appreciate its effectiveness. Nowadays, at least in Europe, research is a public/ social affair with low public effects and especially with private/ individual benefits. In Information Era, in Knowledge Economy, the accent is put not to information, nor to knowledge, but to “science”, i.e. to an unclear reality of mixing up good intentions with personal interests and financial matters. Here could be found the roots of plagiarism, onerous contracts and a lot of imposture in the “scientific” life. This is a good explanation of lack of researches and studies in research management. I suggest interested people to converge the efforts to change this reality. No revolutionary movement is necessary; just honest attitudes and real interest in desocialization of “science”.

Keywords: “science”, research, knowledge, disciplinary research, transdisciplinarity, postmodernity

Introduction

Some would say, reproaching, that in this article there are too many personal memories, opinions and particular visions. Are they important to a “scientific” paper? My answer is YES. If an article does not contain personal beliefs, proofs, proposals and personal contributions then what is that

¹ Just because there are many definitions of and attitudes towards postmodernity I confess my own one. By postmodern thinking I understand something (relatively) different of modern thinking, after modern period (closed at mid of last century, but in Romania about the eighties) and having some characteristic features: melting up of ideas, tastes, disciplines or former hierarchies. Also, I think modernity made disciplinarity and specialization as its great success, but postmodernity is melting disciplines, forming interdisciplines, then, postmodern thinkers try to fill up the empty space among disciplines and interdisciplines with new knowledge. In Romania, postmodern attitude was first of all in poetry and later in philosophy. Some make sharp distinctions between postmodernity and transmodernity, but I consider anything non modern is postmodern. **George Soros** is critical to the postmodern realities: “The postmodern idiom do not recognize reality, but only the narrative. I think this position is as erroneous as the illuminist positivism. The truth is somewhere in the middle. ...The extreme relativism of our postmodern society does not offer us a satisfactory criterion for truth and false, good and bad.” (Soros, 2007, p. 37) (my translation from Romanian).

article aiming at? Some decades ago a “scientific” article (study, paper, analysis, etc.) should have contained at least some pages with formulas, equations, algebraic signs, or some logical inferences. Of course, authors accepted this requirements and a lot of articles of small practical usefulness invaded the journals. As a result, nowadays very few journals use mathematical equations, but, at the same time a big wave of lack of confidence in the “science” virtues appeared. Qualitative and narrative postmodern research is replacing modern quantitative and logic-mathematical research.

Since I was a student – at the end of the 60s - the words “science” and “scientific” were used by us, students with a critical attitude, more and more in an ironical sense. I experienced the university years when every subject/ discipline was presented/ introduced by (too) serious teachers to the innocent students as pure and true “science”². So, Birotics was presented as a new “science” that will generate more efficiency and prosperity³...A lot of “sciences” (as a matter of fact, disciplines, or “scientific” disciplines) appeared every day after 1950. **Basarab Nicolescu** counted over 8000 disciplines (self considered as “sciences”) at the turn of the century⁴. This cancerous growth generated an increasing suspicious attitude from many of us. At the same time the trust in “science” decreased. A good example is the evolution of Economics, which may remain a terrain for discussion but not a precise tool to predict future results. The ideologists of pure market mechanisms do believe that econometrics may be helpful to decision makers to predict the future and the consequences of human actions⁵. But, I do agree that *“The only function of economic forecasting is to make astrology look respectable”* (**John Kenneth Galbraith**). Soon after the financial and economic crisis started to be very present in our daily life a journalist exclaimed: *“Now, we’ll throw out through the window all Economics books”*.

The end/ purpose of this article is to underline the incompatibility between concepts (“science”, “scientific” disciplines, “scientific” research, man of “science”, “scientific” prediction, etc.) and the reality they pretend to depict. This is a plea for sincerity and righteous connections between theory and practice. Finally, I discuss about evaluation of research and propose some things to be pointed out in an article or study. One of these propositions is to clearly underline the level of original/ new contribution, i.e. to clearly describe what are the new things/ truths added to knowledge. I just propose a classification of articles after some universal standards established by global networks of researchers and every author could self evaluate which category the article is part of. All these may generate a true transparency in research funding and research evaluating. This is more and more necessary since the transdisciplinary approaches are quite different from the disciplinary ones and their evaluation should be different, as well. The relativism of the postmodern thinking makes quite difficult to strictly evaluate the value of a study/ article, but interested people may use an axiological scale of human ends and concrete means. This relativism should not be an open door to plagiarism and mimetic research.

“Scientific” Management and “Scientific” Socialism – two facets of the same coin: excessively belief in Modern (Social) “Science”

² **Kotarbinsky, Tadeusz** apud: **Raboaca, Ghe., Ciucur Dumitru**, Metodologia cercetarii stiintifice economice, Editura Fundatiei Romania de Maine, Bucuresti, 1999, p. 19. Kotarbinsky defined science as “any knowledge that is sufficiently grown up to be considered to be taught as a university discipline”. The result of this too generous and imprecise definition was that a lot of more or less useful information was labeled as “sciences” after introducing them into university curriculum.

³ *“When science became a narrowly focused search for something immediately practical, it was bound to eventually be hijacked by people who wanted to use the cover of science for very impractical efforts. Keep in mind that communism, once upon a time, was considered irrefutable because it was supposedly hard-nosed science about the human condition and destiny - the crackpot theories of an out of touch German intellectual were peddled as if they were on par with the theory of gravity”* said **Mark Noonan** at September 4, 2006 12:03 AM on a blog debate on the death of science at <http://www.blogsforbush.com/mt/archives/007726.html>

⁴ In Aristotel times there were only seven basic disciplines and this number remained until 1300. At the end of modernity there were 54 disciplines, but in 1975 1845 disciplines. In 2006 this number exploded till 8000, said **Basarab Nicolescu** in his lessons to doctoral students in transdisciplinarity.

⁵ It is interesting to note that **George Soros** is tempted to add capitalism and trust in markets as another secular ideology similar with socialism, communism, fascism, and national-socialism. (**Soros**, 2008, p. 53). He explains this by lack of belief, lack of reflexivity and fallibility of theories and ideologies that build up the upper mentioned social systems. He said that “where knowledge is impossible to grow, a way is opened to belief.” (**Soros**, 2008, p. 53).

Time demonstrated that American “scientific management”⁶ (**Frederick Winslow Taylor**⁷ with his 1911 book “Principles of Scientific Management”) and the **Engels’s** “scientific socialism” (later on called Marxism-Leninism and applied to Soviet Russia after 1917) are equally “scientific” (i.e. they pretended they could build new and better realities only by respecting some “objective” laws, rules and principles). For short, “scientific” human behavior was supposed to mean/ to describe non-utopian, mathematically measurable and logically demonstrable human actions leading to maximum of individual happiness or/ and social efficiency. After a while, new “scientific” discoveries proved that the previous “scientific” discoveries were wrong... Many examples are taken from the so called “social sciences”, but a lot of other examples may be extracted from the so called “exact sciences”⁸. On the other hand many successful activities are not based on “scientific” rules. This opinion was shared by **Kelly** who stated some decades ago that “*A large number of business enterprises have been very successful economically despite the lack of rigorous theories of organization from which the principles of executive behavior may be deduced.*” (**Kelly**, J.1968, p.15). Of course, this does not mean I am making a plea to eliminate any rules and principles extracted from experience that proved to be useful in everyday life or in business. My principal attack is addressed at false laws and principles, mimetic research efforts done only for obtaining funding and “prestige”, or to establish nondemocratic regimes. National-socialism ideology is a closed relative of international communism, both imposed by force and “scientific” propaganda, with the result that they try to destroy each other, as competitors on an open market of “scientific” propaganda. A lot of lies and misconduct are promoted by the “science” of selling (marketing), by how to impose your decision to others (“scientific” management). Financial tools as derivatives or hidden clauses in banking contracts are “scientifically” proved by cognitive “scientists”, “neuroscientists”, “neuro-marketers” a.s.o. Secret/ intelligent services are asking psychologists and behaviorists how to influence or even to attack some people in order to extract information and to change attitudes or beliefs. Stealing and lying have (official) “scientific” backgrounds and motivations. Wars are fueled with the latest discoveries of destroying as many people as possible in less than one second... I think that all these could be important reasons to think over what “science” is, to state which are the limits between real and false research, between the declared ends and the real purposes. The ethical and ideological issues would be only tangentially touched in this article, but if we accept to teach students to lie (i.e. to convince people to buy a commodity which is not only unnecessary but very unhealthy), then why not accepting to sell diplomas directly to any possible buyer?

A lot of other rules for paying the research activity are needed. First of all, public transparency is needed in any public funded research. As a former expert in a state organization that allocated big money for research I found out that the principal rule was to share money with those having the last word in approval of a certain project. The results of research were not publicly made, so the rules were directly addressed against the honest researchers that didn’t accept to share money for their real efforts...

A lot of opinions, assumptions, hypothesis and “proofs” are taken for granted and considered grounds for general understanding of human existence. A lot of “men of science” appeared every hour and the prestige of being an “intellectual”, a “scientific researcher” etc. became a commodity to be bought on a parallel/ black market. Plagiarism, corruption and false “scientific” prophets exploded all over the world, but especially after 1989, in countries that enjoyed too much the freedom of the non-dictatorial regimes (Central and Eastern Europe countries have many representatives in the top of

⁶ Kelly Joe, *Is Scientific Management Possible? A Critical Examination of Glacier’s Theory of Organization*, Faber and Faber Ltd, London, 1968

⁷ Taylor, F.W., *Scientific Management*, Harper, New York, 1947

⁸ “Falsification Of The Atmospheric CO2 Greenhouse Effects Within The Frame Of Physics”, Version 4.0 (January 6, 2009), by Gerhard Gerlich and Ralf D. Tscheuschner, Electronic version of an article published as *International Journal of Modern Physics B*, Vol. 23, No. 3 (2009) 275{364 , DOI No: 10.1142/S021797920904984X, © World Scientific Publishing Company, <http://www.worldscinet.com/ijmpb> “By showing that (a) there are no common physical laws between the warming phenomenon in glass houses and the fictitious atmospheric green-house effects, (b) there are no calculations to determine an average surface temperature of a planet, (c) the frequently mentioned difference of 33 degrees C is a meaningless number calculated wrongly, (d) the formulas of cavity radiation are used inappropriately, (e) the assumption of a radiative balance is unphysical, (f) thermal conductivity and friction must not be set to zero, the atmospheric greenhouse conjecture is falsified”, p.2

(<http://www.worldscinet.com/ijmpb/23/2303/S021797920904984X.html>)

most corrupted countries and Romania keeps the top even in 2009. On internet a lot of diplomas are sold, with guarantees that they would help (stupid) employers to hire any owner of such a piece of paper called (university) diploma. In Moscow, university diplomas are sold at newspapers kiosks. Why not, if some other fools may believe that a diploma is a guarantee of intelligent and rational behavior... The competition among universities is, nowadays, more and more, not a competition among “scientific” competences, but among marketing techniques to attract students and to mime the research process. Of course, in this (higher education) very competitive market, not research skills are to be supplied to students, but the illusion they may get a job having a diploma and big marks on it... Since almost ten years ago, I tell to students (especially private university students) that they are fool enough to pay two times for obtaining ... nothing: once, to pay to be enrolled as a student (i.e. to learn) and secondly, to pay for passing exams without learning anything (i.e. not to learn). So, can someone explain this mad behavior: to pay two times and to receive nothing? (I say nothing because obtaining a Diploma is... really nothing, without obtaining some info and skills). In all these contexts, science and scientific disciplines are all the time evoked as the real content of university studies. From all these observations and from the simple fact that “scientific researchers” are still consuming resources in the name of “science”, “truth” and “objective knowledge” without any big and serious & useful discoveries (or at least credible) explanations, I concluded that “science” is an empty word, a false friend and that it describes a “reality” which is especially only in some minds.

As a partial conclusion to the above facts and situations I wonder if blind belief in scientific theories (**Taylor**, **Marx** or **Darwin**) strongly influenced the political regimes, especially Bolshevik and Nazi dictatorships. Religious dogmas were replaced by ideological and “scientific” ones, and education transferred these “truths” in the children’s heads.

Against “science”, “scientific” disciplines, “scientific” research and (wo)men of “science”. For an integrated global knowledge

My opinion is that the word/ concept of “science” should be excluded from our vocabulary, together other phantasmagoric words and phrases like: “scientific communism”, “free speech and public opinion in dictatorship” or even “scientific research”. “Science” is one of the myths of the new brave world called modernity, capitalism, industrialism or materialism. But we are living today in a postmodern, post capitalist, post industrial and information era. To use all these above mentioned modern words and phrases in a postmodern world is exactly as using geocentric theory for going to study far galaxies. I personally make a proposal to linguists and semioticians to coin new terms for some of the reality covered by the old modern concept of “science”. My suggestion is to replace the word “science” with “research”, “research results” or simply “approach” if it is applied to the process of investigating realities, and with the word “knowledge” if it is applied to the obtained results of the previous investigation processes. This will help to cancel out another old modern dichotomy between “exact/ natural sciences” and “social sciences”. “Social sciences” considered (or, at least accepted the implication) that human beings are not part of nature, and they are viewed as “inexact sciences” (a contradiction in terms). A quite interesting point of view on “modern science” is formulated by **Mazilu** and **Porumbreanu** (2008, p. 8-9) which, underlying the crucial role of mathematics⁹ in Modern Science, they advance the idea that “Science proved to be an expression of the original sin. (i.e.) *Man replaced God in creation of facts*”. This excess of imagination (good for creation of new theories and disciplines) misdirected the modern science towards undesired results. One of it was the accent put by modern “science” on *force*, while Bible puts the accent on *light*. Even light is explained by the concept of force. I think that a parallel may be made between these two pairs of concepts: force was “scientifically” proved to be useful in dictatorships (force = dictatorship) and light was naturally promoted by democracies (light = democracy). As a conclusion, I consider that “*modern science based on force*” generated a lot of bad realities, so it comes as very normal to reject it and to move our interest on the “*light of knowledge*”.

⁹ The authors (Mazilu & Porumbreanu, 2008, p. 25) prove to be honest researchers by mentioning Augustine with his not very pleasant opinion about mathematicians: “A good Christian should keep out mathematicians and other guys who hold forth lip service. There is a risk that mathematicians made a pact with the devil to darken the spirit and to handcuff man into hell”.

It is worth reading the “*Poetical theorems*” of **Basarab Nicolescu**¹⁰ and to find out a suggestion not to make a new myth from the modern science. Here are some theorems on this issue: “(1) the modern science is the first rational adventure to discover the unknown. Far for being a frightfully adventure, the unknown encourage us for new ones; (2) the first postulate of the modern science: the existence of mathematical general, universal laws. This postulate assumes that man knows the universe as a whole; (3) the second postulate of modern science: the possibility to discover by experiment the mathematical universal law. But through what kind of miracle could human spirit understand the language of Nature? Does human being contains in itself all past, present and future universe? (4) The third postulate of modern science: the perfect reproducibility of the experimental results. As **Charles Sanders Peirce** observed should we make an infinite experiences to proof the perfect reproducibility of the experimental data and the validity of a law?”¹¹ (The postulates 1-4 are my translation). **Edmund Husserl** draws our attention on the fact science becomes more and more a fetish. Against this fetishization and mythi(c)ization I I suppose more and more researchers should fight from now on.

From a suspicious attitude towards modern “science” many of us came to a strong belief that there is no “economic science”, no “management science”¹² no “political science”, no “computer science” and no “social sciences”. The word “science” itself became a meaningless and an unusable one. Even physics and biology are suffering from not having generally accepted principles, rules and laws. Are they “sciences” (i.e. they offer objective truths) or are simple collections of opinions, visions, tools etc.? For some years, I simply prefer not to use the word “science” anymore, just because it is confusing and not having the pretended accuracy and clarity in demonstrating how the world is structured and how it functions. It became a sort of mythical thinking we need to learn and believe by taking it for granted. But almost any question mark to one or another “classical scientific” theories are raising the ironic question: “Oh! Are you smarter than **Einstein/ Marx/ Leibniz** etc.?” Even the title of “man/ woman of science” that initially tried to indicate a strong-as-steel state of mind, a very clever scholar with an irrefutable judgment and a solid prediction for future is nowadays less and less used. When in crisis many parts of our societies (especially journalists, politicians, managers) are crying: “*Where are now our scientists/ scholars/ intellectuals to show us a way out from this crisis?*” And debate may begin: is a crisis originated in less or in more “science”? The war itself is studied by a new “science”: polemology. This year, a newspaper announced that a new science was born: psycho-cardiology. Probably, every day, any new connection with a small or big part of the infinite reality will transform itself into a new “science”.

One thing is certainly needed to be changed: our vision on “science” and on its functions. “Science” was/ is an overused word, till its own semantic (self) extinction. So, (I do repeat my favorite slogan: *(Modern) “science” is dead! Long live (postmodern) research, information, cognition and knowledge!* Even with this correction, a lot of criticism followed. **Theodore Schick Jr.** (1997) asks himself: “*Why is science increasingly viewed as a failed ideology rather than an epistemological ideal?*” (see: <http://www.csicop.org/si/9703/end.html#author>). My opinion is that one of the modern ideologies called “science” is failing just because the ideology of modernism failed and offered the necessary reasons to postmodern thinking to appear. But ideology is not a dead thing... It is only changing its content. To assert that we are witnessing the death of ideology (**Daniel Bell**, 1960) is the same thing as asserting the death of human thinking or of human curiosity. In this respect I am making pleas for using the word “ideology” in a positive, initial sense, not in its pejorative one, that appeared as a critique addressed to communist ideological propaganda¹³. But not the word itself was a guilty one...

¹⁰ Physicist, promoter of transdisciplinarity and dialogue between religion and science, philosopher, fond of art and beauty as forms of harmony

¹¹ Nicolescu, Basarab “*Theoremes poetiques*, Rocher, 1994 and its Romanian translation “*Teoreme poetice*”, Junimea, 2007, pp. 44, Chapter III. *Stiinta si Traditia* (Science and tradition)

¹² Telling a friend that management is not a science, he asked amazed: “and how do you teach it to students?” This comes from Kotarbinsky’s vision that a discipline taught at university is becoming immediately a “science”...

¹³ In a conference organized by Basarab Nicolescu on “The Dialogue between Science and Religion in the Orthodox World” (Bucharest, 25 – 28 September 2008) I observed that “ideology” was generally used in a quite negative meaning, as a reminiscence of the fight against the communist ideology. I asked some participants (Basarab Nicolescu and Adrian Lemeny among others) not to anymore use the ideology as blasphemy word. My argument was that religion itself is an ideology. All of them warned me that my attempt to re-offer to ideology

From modern “science” disciplines to postmodern transdisciplinarity and holistic approaches

In my mind, **modern** thinking means: disciplinary segmentation/ fragmentation¹⁴/ specialization of knowledge, feudal isolation of disciplines, strong belief that rationality may solve any problem, exclusion of intuition and imagination as irrational tools in research, etc. **Postmodern** thinking means interdisciplinary and transdisciplinary approaches, mixing up of methods, domains and fields (disciplines), synthetic, chaotic, complexity and synergic approaches, new logics, non linear thinking, intuitive and inductive methods, qualitative and narrative research, etc. For example, synergic thinking is a way of melting up more disciplines, methods or approaches¹⁵. From this point of view, management is a synergic approach for obtaining better results in organizations. The managerial theory and practice presupposes a lot of information and knowledge from disciplines and interdisciplines like: psychology, social psychology, sociology, cognitive theories, anthropology, behavioral economics, theory of institutions, communication and communicology, information theory, semiotics/ semiology, hermeneutics, logics, theory of decision, cybernetics, neural sciences, finance and accounting, economics, politics and ethics, etc. But, feudal castle walls do not permit communication and transfer of information from a discipline to another¹⁶. Also, synergic vision presupposes taking into consideration simultaneity and continuous existence of all these approaches/ disciplines. Very synergic is the unity of the six triads in *End Means Methodology (EMMY)*¹⁷, and especially **Holly Trinity** whose understanding is simply impossible without imagining the simultaneous and continuous existence of its three component parts. The six fundamental triads in EMMY are: temporal triad: past-present-future; spatial triad: micro-macro-mondo; existential triad: substance-energy-information; human essence triad: end-means-end/means ratio; theoretical triad on human essence: politics-economics-ethics; spiritual triad: Father-Son-Holy Spirit). Any human action (with a specific and clear end and with clear means to be used in order to attain that end) should be “passed” through the 18 criteria (6 triads X 3 components each = 18) in order to better adequate means to ends and ends to means. This is a quite transdisciplinary approach just because it is necessary not a fragmented knowledge on almost aspects interfering our actions. Some already simplified EMMY and say: it is very, very simple to apply this approach: first we establish the end to be achieved and then we need to find the means to reach that end. That’s all.... Probably many other approaches started with very good intentions but little by little the (over)simplification appeared and destroyed them and their usefulness. As a matter of fact, EMMY is Management and this is not simply at all... On the other hand, Management is about human behavior (studied by Ethics), so I do consider that Management = Ethics = EMMY. Do you think that Ethics is simply to understand and apply? Researchers need good definitions and correlations to solve theoretical and practical problems but it happened that research itself was confused by considering science as a substitute of God. The

its initial positive meaning will fail. Napoleon and Marx charged the concept of ideology with a very negative meaning, but its launching by Destutt de Tracy was a critical, anti feudal and anti imperial attitude. This is really a serious issue to research, and it is part of replacing the feudal meaning of “science” with two concepts: “research” and “knowledge”. I’ll mention here some relative recent attempts to recharge “ideology” with positive energy and light: it is about Deconchy (2010), and Sandru (2009 and 2010).

¹⁴ Many analysts believe that fragmentation is one of the big sins of postmodern thinking. My conviction is that fragmentation is part of the old modern thinking, took from older feudality and transferred to postmodernity as a poisoned fruit... A colleague of mine was surprised to hear me declaring I am a postmodernist fighting against fragmentation, but I still consider fragmentation/ disciplinarity is part of modernity, and unification/ transdisciplinarity is part of postmodernity.

¹⁵ “synergos” is the Greek word for “putting things together”, “acting together”

¹⁶ I personally remember many feudal attitudes of exclusion any attempt to enter on the territory of a feud. When writing a literary chronicle some asked me: but, are you a literature specialist? When working as a journalist some asked: do you have a diploma of journalist? A.s.o.

¹⁷ EMMY was founded, in its essential features, in the 80s and reached to be a general theory of human action, also called management or ethics. Redefining the essence of Politics (ends establishing and following), Economics (means collecting, combining and consuming) and Ethics (fitting, matching or adequating ends to means and means to ends) the conclusion is that the three former disciplines are just one and it is impossible to separate them. It is a very big error of our (still modern) education to separately teach and educate people in these three essential parts of human thinking, feeling and action. It is exactly the same thing as teaching brain functioning at a faculty, blood circulation at another faculty, and legs and hands at another one... Some articles on EMMY may be founded in ETC (www.ugb.ro/etc).

only thing that, when defining “science”, people offer a lot of (different) definitions creates a lot of suspicions, confusions and false images.

It is a historical (proved) fact that at its beginnings human knowledge was not fragmented at all, and then some disciplines appeared. Some of them separated into Philosophy, others generated modern (exact) sciences, the social sciences appeared. The madness of multiplying of disciplines was, surprisingly, a fact of postmodernity, but this could have an explanation. As modernity took the feudal model of development, so did postmodernity that took the modern style of development (specialization and diversification). Modernity strongly underlined the distinction among philosophy, science and religion, but postmodernity suggests putting them together again. It is interesting to observe that if Modernity abruptly separated from Tradition, Postmodernity is closer and closer to Tradition. But Tradition was less fragmented and Postmodernity is also suggesting a unification of disciplines of “science”, but also to reduce any differences between “science” and Philosophy. The cognitive slogan of our postmodern times could be: “Disciplines from all over the world, unite!”¹⁸. From here a quite practical idea came to me: compacting of knowledge, in order to make possible this unification. At his turn, compactization can be made through essentialization. I am using essentialization process in EMMY at redefining Politics, Economics and Ethics.

Hilary Kornblith (2002) makes a plea to replace the preoccupation of Philosophy for concepts with a direct “attack” of the realities. So, the American author argues that “*The subject matter of philosophy of mind is the mind itself, not our concept of it. And the subject matter of epistemology is knowledge itself, not our concept of knowledge*” (Kornblith, p.1). Of course, “scientists” would pretend that the borders of their disciplines are broken out, but who cares... The trend is clearly breaking borders...in a globalized world. “*I am not in a position to say exactly how philosophy differs from the special sciences...Along with W.V. Quine, I see philosophy as continuous¹⁹ with science*” (Kornblith, p. 171). But the perception of reality may generate different realities and different level of knowledge. It is useful to mention here a remark of a senior adviser to **Bush** who cynically described the difference between reality created by the power of empires and the reality studied, later on, by intellectuals²⁰. The dialogue was also used by **George Soros** to describe his own vision on “*The Postmodern Idiom*”.²¹ For short, this vision makes a clear connection between the postmodern idiom and **Bush** administration ideology, suggesting that this one was similar with the totalitarian ideologies: manipulating the public opinion²². My own opinion is that this temptation to manipulate the truth is specific to any state power. The greater is the power of the state, the bigger the temptation to manipulate. But this is common to all big states/ empires from all times (in pre-modern, modern and postmodern times). As a conclusion I do not share the **Soros**’s idea that manipulation is (only) a postmodern feature.

¹⁸ **Disciplines of the world, unite!**, From Deirdre N. McCloskey, *Times Higher Education*, 7 October 2010

¹⁹ I am happy to find out the idea of continuity as part of our contemporary common knowledge. I put it in the center of my EMMY; especially in the theory of human action where I underline that end-means adequation is a simultaneous and continuous process in at least the 6 fundamental triads.

²⁰ <In the summer of 2002, after I had written an article in *Esquire* that the White House didn't like about Bush's former communications director, Karen Hughes, I had a meeting with a senior adviser to Bush. He expressed the White House's displeasure, and then he told me something that at the time I didn't fully comprehend -- but which I now believe gets to the very heart of the Bush presidency.

The aide said that guys like me were “in what we call the reality-based community,” which he defined as people who “believe that solutions emerge from your judicious study of discernible reality.” I nodded and murmured something about enlightenment principles and empiricism. He cut me off. “That's not the way the world really works anymore,” he continued. “We're an empire now, and when we act, we create our own reality. And while you're studying that reality -- judiciously, as you will -- we'll act again, creating other new realities, which you can study too, and that's how things will sort out. We're history's actors . . . and you, all of you, will be left to just study what we do.” > The quotation, quoted by **George Soros** in his book on “The new paradigm of financial markets: the credit crisis from 2008 and its implications” may be find out at http://www.nytimes.com/2004/10/17/magazine/17BUSH.html?_r=1

²¹ The above quotation was mentioned by **George Soros** in his book “*The new paradigm of financial markets: the credit crisis from 2008 and its implications*”, Romanian translation, Litera International, 2008, p. 49 - 50

²² Probably it is not a simple happening that some important American TV and some video clips promoted on YouTube announced the Soros’s positive feelings to Nazi ideology... It was the same in Ceausescu’s Romania: if some critically addressed to him an accusation of being “legionnaire” (member of a fascist movement in Romania in the 1927 – 1941) appeared immediately. I mentioned that because there is a “science” called History and which pretends to tell the truth and only the truth...

From the “science” of Management to Ethics and EMMY

I defend the idea that **Management = Ethics** (or, from the practical point of view, **good management = adequate²³ behavior**). Bad management is, practically, bad behavior, generated by bad thinking and feeling concerning a present/ future action/ behavior. I do consider that behavior is applicable both to individuals, organizations, corporations, states and the mankind as a whole, although thinking and decision is an individual process. More than that I need to underline that in defining a kind of behavior at a certain level of social aggregation we have to consider simultaneously and continuously all the other possible levels. As Ethics is not only about “good” behavior, the Management is not only about “good” management. Both bad behavior and bad management are implied in the two names of the (still) two academic disciplines: Ethics and Management. As a matter of fact, there exists only one such a discipline about human behavior: some call it Management and others call it Ethics²⁴. It is really immoral (or, the same, it is bad management) if we’ll continue to consider the two as separated and different. The “history” of last half century demonstrates that every year the management books are including larger and larger chapters on (business) ethics. The other chapters of any management book are also about thinking, feeling and acting in function of goals/ purposes (ends), principles, rules, codes, contexts, resources (means) etc. The first bad consequence of not putting an equal between Ethics and Management will be the necessity to have books on Management and books on Ethics, and then to have books to show the necessity of including business ethics in ...management. Lose of time and, worse, lose of the key point: there couldn’t be any management activity without ethical dimension. It is like the definition of God (God is where the big infinite includes the small infinite and vice versa). So, we have Business Ethics when *Management includes Ethics* and *Ethics includes Management* continuously and simultaneously). Or, the same, Ethics is (especially good) Management. When we forget it, we open the door to bad management or to unethical behavior. This assertion is the very result of a three decades research ended in a coherent and general theory of human action called **End Means Methodology (EMMY)** and I prove that **EMMY = Ethics = Management**. We need to have such a general theory that condenses both Ethics and Management in it in order to be more convincingly and to save time in education and to diminish the misunderstandings in teaching and applying social rules, legal laws or civic attitudes.

Management = theory/ practice on thinking, feeling and acting of human beings

Ethics/ Morality = theory/ practice on thinking, feeling and acting of human beings

EMMY = theory/ practice on thinking, feeling and acting of human beings

Any of the three denominators have exactly the same content, but this may be demonstrated later. Any of the three theories/ practices are starting with defining/ proposing the **ends** to be achieved in function of the **means** we may use (this is mostly referred to feeling, thinking, and acting), then continues with choosing the adequate **means** to achieve the proposed **ends** (this is mostly referring to thinking, feeling, and acting), and finally ending by simultaneously and continuously comparing the proposed **ends** with chosen **means** (this needs simultaneously thinking, feeling, and acting). Proposing an **end** is more emotional, choosing **ends** is more rational, and comparing **ends** to **means** presupposes/ implies both²⁵.

Humans could be defined by the following formula:

²³ Especially after 1990 I largely (worldly) promoted my EMMY and underlined the crucial importance of one word from it. This is “adequate” (which etymologically means to equal, to arrive at equal terms in a balance, to equilibrate). Some of my branch colleagues intensely used it as a (at least) twofold reason: one was to use a quite rare and new word and second was to show others that they may use EMMY... Of course, I was pleased by this apparent acceptance of EMMY, but soon things became dramatically: a lot of journalists, especial from audio-visual, and politicians are (over)using it day by day, emptying its meaning... Of course; the term is not my invention. My contribution is to fill it up with an essential meaning, that of harmony and equilibrium in human action.

²⁴ There is a German joke which says that the German culture has a giant poet, but lack of instruction people does not know his right pronunciation: some pronounce Goethe, some pronounce Schiller. Similarly, there is a very good theory of human behavior; some name it Management and some Ethics.

²⁵ I was surprised not to find any preoccupation on ends and means in American management. I suppose the explanation is relatively simple when finding out that Americans, as more pragmatic people, are using means-ends binom in order to manage a business. Indeed, “end-means” (starting from human needs that generate specific human ends) is more idealistic and “means-ends” (starting from the existing means and proposing specific human ends) is more realistic.

Human being = f (Ends; Means; Ends/Means ratio)

i.e. any human being could be defined as a function of the ends proposed, the necessary means to be used in order to achieve that purpose and the permanent analysis of the degree of adequacy of means to ends and ends to means. But an individual needs to take into consideration all other existing humans with their ends (hopes, desires etc.) and the means to be used. Such a framework determines us to be as transparent as possible, to take into consideration “the otherness” and the wholeness (holism) of the world(s) we are living in. Finally, any individual should keep account of the context/ environment when taking making/ taking decisions.

I used sometimes “human beings” instead of “individual” or “collective” decision makers, just to underline the idea that by human beings I understand an individual, a collective/ group or the entire humankind. EMMY is referring, simultaneously and continuously to all three levels of aggregation. No individual action is strictly individual; it is both collective and global at the same time. Or, any human action is to be considered – simultaneously and continuously - as individual, collective and global.

EMMY is using triadic structures in order to obtain consensus: Temporal (past-present-future continuum), Spatial (micro, macro, global or individual-collective-humankind continuum) Structural/ Ontological (Substance-Energy-Information continuum) to mention only three fundamental triads. All these refer only to contexts of human action. But there are triads that are directly connected with the human action: **end** (goal, aim, target, purpose, hope, ideal, desire, wish, plan, strategy, and program); **means** (human resources – not only the human actors but also contextual and tangential people, material resources, time resources, money or financial²⁶ resources, experience, creativity, new ideas, climates, social realities, human contexts, level of aspirations etc, etc.). A lot of journalistic stuff using **ends and means** as keywords in banal contexts generates a lot of confusion just because they simplify excessively the realities. Or, the world is more and more complex: there are hidden ends, future ends or collateral results when we are fulfilling a certain **end** and choose specific **means**. When I say “my end” I need to compare it with as many as possible other present and future ends. In a lesson offered to students in cinematography in Bucharest a well known Romanian journalist, **Cristian Tudor Popescu**²⁷, said that “*the essence of the postmodern civilization is, in my opinion, the contradiction between ends and means. More sophisticated means tinier ends. So it happens in our contemporary society: we see a huge use of technological means in order to give birth to almost nothing*” (!). If this would really happen, we’ll assist at the biggest inefficiency in the whole history of humankind... Popescu’s opinion shows that this couple of words is, for some ones, a simple fashion... Other authors insist to have at least a phrase containing “means and ends”. **George Cristian Maior** (Maior, 2010, p. 12) explains the features of contemporary information services: “*In espionage activity, there remains the old adversity among states; despite more and more sophisticated means of the postmodern spies there are changes of methods not of the background, i.e. of ends of activities*”. An epidemic of “ends and means” there exists in the public sphere in Romania. As I said, in USA a lot of “means-ends analysis” appeared.

Computers and programming are called to help in this immense world of ends and of means. The chaos theory, games theory and complexity theory are nowadays most appropriate approaches in management/ ethics.

One example of un-appropriate using of end-means rationale is: “could bad means justify good ends?” (a propos to Machiavellian ethics). But “good” and “bad” are just **relations** between ends and means. There is no end in itself. The ends are all the time intimately co-related with means. The means are all the time co-related and directed to specific ends. There is no means collected, combined

It is interesting to observe the etymology of the word “finance”. It comes from the French “fin” that means “end”. So, if English speaking people were the founders of what the French people called “fin-ance” the French term may be “end-ance”... But the realm of ends is the object study of Politics, as the realm of means is the object study of Economics. No Politics without Economics is possible and no Economics without Politics is possible. They are not only twins but intrinsically intertwined and impossible to be studied separately. That is why I compare the ends-means continuum as a stick with the two ends. We may consider one end as “a means” and the other one as “an end”. Or, vice versa. From here we may put an equal between ends and means and define anything or action as an end or as a means. This is a kind of relativistic Ethics, i.e. there are no rigid rules to be followed but to continuously and simultaneously adapt ends to means and means to ends.

²⁷ YouTube stored this lesson at <http://www.youtube.com/watch?v=LJa638kmbZM&feature=related>

and consumed as such, without any purpose in our mind. Even Sisyphus work had a kind of purpose... (Maybe this was to demonstrate that an endless work is nonhuman and stupid by definition). According to EMMY, "good" is the result of considering that means are adequate to the proposed ends. So, "good" (situation/ action) implies both ends and means, not only ends or only means. Saying "good ends" is a non sense; it is possible to say only "adequate ends to means", or "adequate means to ends". That is why EMMY is often rejected: it is oversimplified and then appreciated as vulgar psychology or common thinking ...

A true ethical behavior is based on provisioning most, if not all, possible consequences and assuming the responsibility of doing that or that. The present global (economic and financial) crisis is the very result of in-adequate decisions, i.e. means used to attain strictly personal or corporate profit, *pereat mundus!* Or, the "good" management (the ethical behavior) is to keep in mind that only micro-macro-mondo continuum may decide what ends and what means are chosen and what degree of adequacy is between them. Otherwise, we may sometimes decide to destroy the global environment (i.e. the mondo level) for personal profit (i.e. micro level). Of course, this will be also the death of all three levels... It is not the place here to develop EMMY but it may be studied from other articles or books. Here it is sufficiently to declare that discussing and planning in terms of ends, means and end-means adequacy is a very good beginning to avoid ethical dilemmas. But remember, EMMY is about future actions not for justifying the past ones... We may use EMMY for a post factum analysis but only to test if the plans to action are correctly done.

If this (new) vision on Management/ Ethics is accepted a lot of good things could happen in the process of understanding of human life. Business and Medicine are the most visible stakeholders of EMMY. A sound curricular reform in pre-university level of education is imperative. This reform will put together all info on humans in one and the same discipline and no separation between Politics, Economics and Ethics could appear. We may call it either Ethics or Management. Of course, this proposal is hardly accepted by the disciplinary feudal of modern thinking and of doing "scientific" research. So, EMMY is not "scientific" at all; it is only long lasting research, a contribution to improving our knowledge and a tool to improve and making more efficient the research in human actions field.

Business Ethics is Ethics/ Management applied to any kind of business. There is no specificity of Business Ethics in comparison to other kinds of human actions, others than the specificity of business itself: profit seeking, corporate social responsibility and contractual relations.

Probably, many people who are living (for money!) the illusion of doing (big!) science will react negatively or, at least will ignore any approach contrary to what they do consider is authentic "science". I used to replace the word "science" with "research" (when someone is trying to demonstrate/ suggest/ find out something), and with "knowledge" (when there are obtained some concrete informational results from the previous data or research). For example, my **End Means Methodology (EMMY)**²⁸ does not pretend to be another "science", but I think it can generate new useful knowledge, if appropriately applied. Similarly, transdisciplinary approach is not a "science" in a classical meaning, although some try to introduce it as a discipline in curriculum... And the usefulness of new knowledge on humans may be appreciated if it is less time wasting, is easier to understand and apply and if it helps us to better understand our behavior. Of course, it can be simply ignored (as many other visions) if the promised improvement wouldn't appear. Did I say "simply"? Oh, when it is about vision changing things are not simple at all. We may remember the joke about an Australian who intended to throw and change his old boomerang, but he didn't succeed to just because when he throw it away the boomerang soon came back, again and again... Probably, the solution could be to destroy it, not to throw it. The same it happens when trying to throw away dogmatic and rigid old and un-useful "scientific" principles, rules and formulas... Immediately, someone find them and offer them to us again and again... When we critically speak about (former, older and "modern") "science", and about replacing it with some critical and postmodern approaches, a lot of criticism appears from old modern dogmatic thinkers who imagine that someone is destroying in a minute all the progress the humankind acquired in centuries...

I already mentioned the lack of trust people see at disciplines as Economics, Political Science or Social Science. But things are more serious than it come at the first sight. Let mention some.

²⁸ Just to found out what is about in this transdisciplinary vision on human feeling, thinking and acting you may see at www.ugb.ro/etc where I published in almost every issue of ETC articles on EMMY, on "science" and its necessary reform.

A strange “science” is history. It pretends to be as truly as geometry, but it is full of claims, interests, stories and fantasies. Here is the opinion of **Stephen M. Walt**, on history, published in Foreign Policy, 07/30/09: *“I’m equally baffled by when someone invokes “history” to justify a territorial claim and assumes that this basis is unchallengeable. This view assumes that sovereignty over some area is infinitely inheritable (no matter what has happened in the interim), ignores the fact the borders have changed a lot over time, and further assumes that there’s only one version of history that matters. I understand why Serbs invoke the Battle of Kosovo in 1389 to justify their current claims to control that region, why Israelis and Palestinians invoke different readings of history to justify their positions on Jerusalem, or why certain Asian states invoke different historical claims to assorted rocks in the South China Sea -- they are all looking for some way to persuade others to let them have what they want. What’s odd is that people who make such claims tend to think their view is simply incontestable and other equally valid historical claims aren’t worth paying attention to. You’re entitled to your version of history, I suppose, but why do you assume that anyone is going to be persuaded by it?”*²⁹ The so called “social sciences” may well be melted in a unique and coherent corpus of knowledge on human beings and their evolution. I will propose, again and again, a curricular reform with the suggestion to introduce transdisciplinary approaches as a way of getting synthetic knowledge, reducing time consuming with learning by heart a lot of unuseful disciplinary things and with the good result of thinking globally. This may be considered as a solution to the informational aggression of a lot of “sciences” over the poor and undefended children. The new corpus of knowledge could be simple named as “On humans”, “About human life” or similar names...

Just since 1975, **Paul Feyerabend** wrote that *“Science is much closer to myth than a scientific philosophy is prepared to admit. It is one of the many forms of thought that had been developed by man, and not necessarily the best. It is conspicuously, noisy, and impudent, but it is inherently superior for those who have already examined its advantages and its limits. And as the accepting and rejecting of ideologies should be left to the individual it follows that the separation of state and church must be complemented by the separation of state and science, that most recent, most aggressive, and most dogmatic religious institution. Such a separation may be our only chance to achieve a humanity we are capable of, but have never fully realized”*. (Feyerabend, 1975, p. 295). Such a mythical belief is promoted by **Sigmund Freud**, the modern scientist, who strongly thought that only “science” can offer us what we need to know: *“No, science is not an illusion, but it would be illusory to think we can find elsewhere what it cannot offer”*.

The limits of “science” come from its arrogant attitude towards reality. When the “scientific” discourse can’t demonstrate what life is, which are its origins and where “science” and spirituality converge, it prefers to offer proofs of the superiority of its own logic and thinking. There is a classical example in Romanian literature, in a novel of **Marin Preda (1955)**, which shows that self conviction and self believe are stronger than reality itself. The story says that an old man arrived at a Zoo Garden and sees an animal with a very long neck (giraffe). His exclamation *“Such a thing does not exist”* shows that his belief in the power of his brains was stronger than the objective world around him. This kind of “scientific” arrogance is better described by **Peter Ustinov** who said that *“The last voice someone may hear before the world will blow up will be that of an expert who will shout: “such a thing is impossible from the scientific point of view”*. A kind of joke very well described the attitude of young pupils towards the arrogance of different “sciences” to explain the world: *“If it’s green – is biology; if it smells – is chemistry; if doesn’t function – is physics; if it is meaningless – is mathematics; if it is senseless – it is or economics or psychology”*. Even the daily newspapers take position against the so called “bad science”.³⁰

²⁹ See: <http://walt.foreignpolicy.com/category/topic/history>.

³⁰ Guardian columnist Dr Ben Goldacre takes us on a hilarious, invigorating and informative journey through the bad science we're fed by the worst of the hacks and the quacks! When Dr Ben Goldacre saw someone on daytime TV dipping her feet in an 'Aqua Detox' footbath, releasing her toxins into the water and turning it brown, he thought he'd try the same at home. 'Like some kind of Johnny Ball cum Witchfinder General', using his girlfriend's Barbie doll, he gently passed an electrical current through the warm salt water. It turned brown. In his words: 'before my very eyes, the world's first Detox Barbie was sat, with her feet in a pool of brown sludge, purged of a weekend's immorality.' Dr Ben Goldacre is the author of the 'Bad Science' column in the Guardian and his book is about all the 'bad science' we are constantly bombarded with in the media and in advertising. At a time when science is used to prove everything and nothing, everyone has their own 'bad science' moments -- from the useless pie-chart on the back of cereal packets to the use of the word 'visibly' in

The issue under fire is “SCIENCE” in its feudal arrogance to solve almost anything and to offer predictions and rigorous explanations. Is it what we really need? Can it satisfy our insatiable curiosity? Is it really improving our life? Do people do “science” whenever they say they do? Is research a quite special thing or it is a common everyday activity? Is research a job, a vocation, a pleasure, or a simple speculation to generate fame and proud? Is “science” really over or it might be so? Can we speak about the death of science or it is about the death of *modern* science with its pretensions to find truth (even The Answer!), to generate a good for all theory and theories for everything? Is modernity over and what replaced it? Is postmodern thinking a derivative of modernity or is it trying to be quite different/ opposed approach? These too many questions may generate a lot of research, but not very many expected answers. Not to tell about The Answer... A lot of books doubting the tools and the results of modern science appeared. After the already proclaimed the End of History (**Francis Fukuyama**), Death of God (**Fr. Nietzsche**), Death of Ideology (**Daniel Bell**) here it came the Death/ End of “Science”.³¹

Another recent and interesting approach to what “science” is and could be is the **Nicolae Mazilu**’s Book “*Science as a Sin*” appeared as a kindle edition in August 2008, and published in Romanian together another author, **Mircea Porumbreanu**, at Dacia, Cluj, 2008. My quotations are from Romanian edition and translation of quotations is mine. Essentially, the aim of the authors is to reconcile Modern science with old Biblical Tradition. The cornerstone of any true Science is its fallibility, said the authors in **Karl Poppers** good tradition. The authors put a very interesting question: “*Is Science faithful to itself?*” Indeed, even many of us do believe in Science as in God, Science is not very faithful to itself. The demythization approach of the two Romanian authors is based on a simple observation: instead of trying to prove that any scientific theory is fallible all scientists claim for infallibility! “Science is infallible!” cry out the modern scholars in their attempt to replace Bible with Science. Fallibility is the supreme truth criteria for a true “science”. If a theory could not be demonstrated part of it is uncertain and possible to offer vague answers, then it is not “scientific”. The presupposition that a theory is perfect is the very sign that something is wrong with that theory. “[*Karl Popper*] thought we may be wrong; I think our destiny is to be wrong. I name this the radical fallibility postulate, which is based on the following: we can extract ideas from reality, but as we understand more and more, we have to understand more and more” (**Soros**, 2008, p. 53). This was a solid argument for Soros to offer his open society idea a quite strong foundation. “*What is not perfect may be improved; radical fallibility gives space for improvement*” (**Soros**, 2008, p. 55). So, fallibility is good, perfection is bad... Strange, but true: Soros proud imperfection, as a way to perfectibility. Otherwise said, relativism is bad, and then long live the absolute relativism! The result is that postmodern relativism is a good opportunity to build a strong knowledge, not to accept a weak “science”.

From schizoid modern disciplinary approaches to postmodern integrated, holistic and transdisciplinary ones

This schizoid approach (or Bible or Science) is also criticized by **Basarab Nicolescu** in his books to promote transdisciplinary and the logic of the third included (**Nicolescu**, 2008). Also, **Basarab Nicolescu** is promoting the postulate of the hidden third included as another name for the presence of divinity or of God³² in his entire Creation. On the other hand, **Nicolescu** is promoting another kind of obtaining more information using the logic of the third included and transdisciplinary approaches. **Basarab Nicolescu** already created a school of thinking which is producing new ideas

cosmetics ads. This book will help people to quantify their instincts -- that a lot of the so-called 'science' which appears in the media and in advertising is just wrong or misleading. Satirical and amusing -- and unafraid to expose the ridiculous -- it provides the reader with the facts they need to differentiate the good from the bad. Full of spleen, this is a hilarious, invigorating and informative journey through the world of 'bad science'. Bad Science is Ben Goldadre's savage attack on made-to-fit science, where some ones takes fact and turns it into fiction to suit their own needs.

³¹ One of its writers is John Horgan with his “The End of Science”. All the above mentioned ideas and opinions determined me to buy and read **John Horgan**’s book “*The End of Science. Facing the Limits of Knowledge in the Twilight of the Scientific Age*”, published in USA in 1996 and in UK in 1997. I’ve read the British edition that contains an interesting and useful “Afterword”

³² **Basarab Nicolescu** is a Romanian thinker living in Paris and teaching at Cluj Napoca (Romania) at a doctoral school preparing students to obtain PhD in transdisciplinarity. One of his keen preoccupations is to reconcile religion and modern science using transdisciplinarity and logic of the third included as principal tools.

and arguments in favor of transdisciplinarity and integrated (non-disciplinary) vision on reality. I'll mention some recent contributions of his school of thought just as an argument that it is quite impossible that modern "science" may remain the same as in the former modern times (a historical period that ended at the mid of the last century). One interesting contribution is that created by a triad (sic!) of Romanian authors and entitled "*The transdisciplinary research. A fusion of horizons from theology, science and philosophy*" (Memelis et al, 2010). They use transdisciplinarity as a methodology of dialog between science and theology and promote the transreligious spirit of Christianity. Even I do not agree the excess of using the word "science" (reader is invited to observe that the next text gains in clarity if we omit the word "science") I agree with their attempt to "*inaugurate in the scientific knowledge a methodological and terminological flexibility which permit enlarging the knowledge horizon beyond the reductionist models and language clichés, towards an <apophatic> space of science itself.*" (Memelis et al., 2010, p. 16). In one of his poetical theorems, **Basarab Nicolescu** wrote that "*There are two asymptotic postulates of modern science: reductionism and holism. It is ridiculous to have a big fight between them: both are right*". (Nicolescu, 2007, p. 49).

In a quite suggestive and plastic metaphor of Genesis **David Brower** (apud Passet, 2010, p. 13) argues for rapid change on the Earth Planet: "*Il y a six jours que la Terre a commence a se former; l'homme est apparu depuis trois minutes; il y a un quart de seconde que le Christ est ne et un quarantieme de seconde qu'a surgi la societe industrielle. <Il est maintenant minuit, samedi soir, et nous sommes entures de gens qui croient que ce qu'il font depuis un quarantieme de seconde peut continuer indefiniment>*". I'll translate only the conclusion of this historical vision: the industrial era represents 1/40 seconds from the 6 days life of the Earth and there are people that do believe that this era will last forever...

Transdisciplinarity is "en plein marche" all over the world and it is time to put it officially in the high school curriculum. My opinion is that the model of primary school with a single teacher to more disciplines is a good one to be followed in secondary school, as well. The reason is to melt up knowledge from different disciplines in order to clarify parts of reality not parts of a curricular program. **Margaret A. Somerville** and **David J. Rapport** said in the Preface to the book edited by them: "*The now widespread recognition of the need for transdisciplinarity represents a very new insight and a revolutionary change. ...it is about change, not just about theory*" (Somerville, 2000, p. XIII). Problem is that this change is not possible without an official recognition of it. I do not know if transdisciplinarity is part of law on education in other countries, but a project of law on education in Romania is mentioning the necessity of "transdisciplinary evaluation" of pupils in high school. **Julie Thompson Klein** underlies that "*In an age characterized by new dimensions of complexity, scale and uncertainty, calls for transcending the limited horizons of disciplines have mounted*" (Somerville, 2000, p. 4). In a similar plea for introducing transdisciplinarity in our ways of thinking is made by **Alfonso Montuori**: "*The project of transdisciplinarity is an emancipatory one. It provides us with a way of thinking and a way of organizing knowledge and informing action that can assist us in tackling the complexity of the world, while at the same time inviting us to come to grips with the role of the inquirer in the process of inquiry. Transdisciplinarity recognizes that we are living in a complex, uncertain, and pluralistic world, and begins to provide us with the tools needed to confront a world that is different than the one hypothesized by Aristotle and Descartes, two of the founders of the present approaches to inquiry in western thought*" (Nicolescu, 2008, p. ix). This collection of excellent essays should be on the work table of any Minister of Education. It needs to be translated in as many languages as possible just to disseminate the arguments in favor of this new tool of education.

We are living in postmodern times, but the term itself is not known and understood. It is a bad thing that in the discourses of the Romanian political class members there are pleas for "modernizing the Romanian state and our education system", but we need not to modernize, but to match and adequate our actions to postmodernity. Confusion between meanings should be avoided if we really intend to improve our life. To modernize a postmodern world is to go back in the XVIII – mid of XX centuries.

Postmodern world needs postmodern transdisciplinary knowledge!

Conclusion

The evolution of the knowledge of humankind knows three important stages: a) **premodern** classical Tradition, b) **modern** (disciplinary) science and c) **postmodern** transdisciplinary and

integrated knowledge. The last stage is on the way of changing the persistent paradigm of disciplinary and interdisciplinary “science” and building up integrated and holistic transdisciplinary knowledge. In this respect I proposed to give up using the same word (“science”) for describing more stages of obtaining and transmitting knowledge and replacing it with the more neutral and general words: “research” and “knowledge”. I hope my proposal will be critically received and any suggestions are welcome! I repeat my desire/ hope/ end to work with other people at this ambitious project. *A bon entendeurs, salut!*

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ANEXES

The following pages are the slides presented to a recent 3rd international conference of ROASS (Romanian Association for Semiotic Studies) held in Iasi at the beginning of November 2010. I choose to reproduce them as such, just because they are more synthetically presented.

Redefining the essences (signs) of disciplines, recreating integrated sets of (inter)disciplines and rebuilding the transdisciplinary unity of knowledge

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- The human knowledge is a huge and growing elephant that no one (or very few) can see it as a whole and unitary being
- This article could be named “Incrementa et Decrementa Scientiae” just because the humankind is on the edge of a process consisting in decreasing volumes of (nonuseful) information in the benefit of increasing sense and utility. For short, instead of big volumes of data and info keep only their essences/ senses and easily manipulate them to improve the understanding of this and future world. Another titles for my paper could be “Demassification of Science”, “Less quantity - more quality” or “Small is beautiful” – a slogan that re-launched the Western and global economy some decades ago
- Compacting and unifying knowledge is determined by the cancerous growth of the “scientific” disciplines (from under 10 in ancient Greek and Roman times until over 9000 nowadays)
- The very sign of knowledge (the Apple Tree and apples as its fruits) is simply destroyed and decomposed into molecules and atoms. The result is: no taste, no use, non sense.
- Even the chance to analyze quanta and sub quantum levels of the knowledge apple simply remains, I do consider is time to study especially the seeds and the genomic dimension of knowledge (especially on humans)
- Multidisciplinary approaches generated Interdisciplinarity, but the growing number of “interdisciplines” added to the growing number of disciplines... The very result of this process is the growing lack of intercommunication among researchers and the loss of sense in knowing very much about almost nothing
- Complexity theory and Chaos theory help us to stop a bit and to ask ourselves: Is there a possible end of this process of dissolution? Is compacting only necessary but not possible?
- *The diversification and differentiating of human knowledge into thousands of pieces (disciplines) attained its principal end/ goal: to split the hugeness of knowledge and to penetrate it, step by step. From seven disciplines in Greek and Roman cultures, in two millennia humans generated over 9000, with bad consequences for knowledge process itself. Interdisciplinary approaches discovered a lot of similarities and superposition among the so called “autonomous” disciplines and suggested that this is the way to integrate knowledge into coherent sets of knowledge intercommunicating with each other.*
- The Universe in which we are living in has two principal possibilities of evolution: to continuously expand *ad infinitum* from the initial Big Bang of a small black (w)hole - the Great explosion-, or to compact it in a reversing process of re-turning towards initial origins - the Great Implosion
- After Big Bang the evolution of the Universe was from a lack of (visible) light (of the black hole), while the reverse process of implosion is going to a concentrated light which is less and less bright and sparkling. So, the future evolution of our Universe could be from dark to bright light and to more and more light, or, the reverse one, from bright light to dark and very concentrated light
- The evolution of knowledge tightly followed this process, just because Information is an inseparable part of Matter and Energy (see Prigogine). As a consequence, Knowledge should be prepared for both possible processes: a) to expand more and more and b) to compact more

and more. If the foundations of expanding of knowledge were put (especially) by modern “science”, the foundations of the reverse process of compacting of knowledge were put by postmodern thinkers through transdisciplinarity

- The very sign of this breaking point (from expanding to compacting) is questioning the “scientific” process itself. The end/ death of “science” (as it was conceived by modern thinkers) is a process of stopping the quantitative cancerous growth of smaller and smaller disciplines. “Killing” superfluous disciplines without a real content, utility and finality is a necessary process. This will be followed by compacting the disciplines into transdisciplinary visions on large(r) fields/ domains. For example, using the transdisciplinary approach called EMMY (End Means Methodology) ALL the so called field of the Social Sciences may be compacting into a single and very concentrated vision on human knowledge. The key of this process is transdisciplinarity. To concentrate information is possible to be done only by extracting the essences / eide/ signs of the phenomenon we are knowing
- Transdisciplinarity is most adequate to generate holistic knowledge and to re-create the unity of knowledge. In my opinion all three stages (disciplinary, interdisciplinary and transdisciplinary) could be better performed by redefining disciplines, sets of disciplines and knowledge as a whole by their essences (eide – the plural of eidos) which are the very sign of their usefulness. A transdisciplinary semiotic process appears and it is closely linked with phenomenological vision. This is a “compacting” process with quite surprising consequences for curriculum and for giving up the term of “science” as a (presupposed) rigorous and exact term. **Science is dead! Long live (compact) Knowledge!** EMMY started from compacting new disciplines (Politics, Economics and Ethics redefined) and now new disciplines are melted down into this compact knowledge we may call EMMY or Humanistics (the new disciplines are Aesthetics and Logics) **Solomon Marcus** told us about “false barriers and borders” among disciplines.
- Disciplines are specific “languages” to describe different ways to visit (un)known fields of reality. But, as in natural languages, we may use a lot of words to describe an object, or we may use only some. Sometimes, the fewer – the better! You may say about a picture is “nice” or “marvelous”, but some may choose to write a treaty on it. The result is not necessarily more knowledge (in the best case we may have more data and info, but not more knowledge and wisdom!). Keeping in mind this metaphor - disciplines seen as languages - I propose to reduce the number of words to fewer and fewer, until we may retain the most specific/ characteristic WORD. For example, in EMMY I suggested to reduce the “domain” (what a feudal word!) of Economy/ Economics to “Means for End(s)”, the “domain” of Policy/ Politics to “End(s) in function of Means” and the “domain” of Morality/ Ethics to “the continuous and simultaneous adequation of Ends to means and Means to Ends”. All three mentioned disciplines are about Ends and Means, so, we have a single “domain”, not three... Finally, Aesthetics is also an “end/ means adequation” (image to be perceived), so there are four domains reduced to one... And the show goes on....

CONCLUSIONS

- Semiotics (a la Jourdain or not) is a transdisciplinary (TD) approach that enables a holistic and integrative vision on all disciplines, interdisciplines and new fields studying humans
- **“Disciplines of the world unite!”** this could be the slogan that best describes my present paper and approach. This slogan is, as a matter of fact, the title of an article published in Times Higher Education, October 7, 2010. *“Materialism has had its day. To understand the ideas that drive human activity, including economics, we need a new field that combines the arts and sciences”*, argues **Deirdre N. McCloskey**, the author of the article, an American postmodern humanist radical thinker
- **Ideas matter!** This is a conclusion of any passionate of human thinking (feeling and acting). I do agree **Foucault** acceptance of the word “ideology” as a system of beliefs and interests expressed as ideas/ eides (ides). I am in favor of coming back to the initial meaning of “ideology (**Destutt de Tracy**), which was an anti feudal anti imperial and transdisciplinary “avant la lettre” concept on systemic and holistic thinking *“By eidos I mean the essence of each thing and its primary substance” Aristotle*, *Metaphysics*, 1032b 1-2

- Family words: eidos, ideas, idol, identical, ideal, symptom, figure, form, video, vede (Sanskrit)
- Eidos = “something that is seen” (form, figure, appearance, beauty) Plural of “eidos” is “eide”
- My opinion is that ideology is looking for similarities and formal appearances in what people is seeing/ thinking. On the other hand, eidos is a precursor of identical essences of the disciplines, i.e. it is possible to unify knowledge after the common / identical/ similar/ formal essences in a new IDEOLOGY of the third millennium. The new Ideology (or Humanistics) must be a quite compacted and concentrated set of ideas that could better explain the harmony and equilibrium between ENDS and MEANS of humans
- Bacau, 2 Noiembrie 2010 - Iasi 5 November 2010