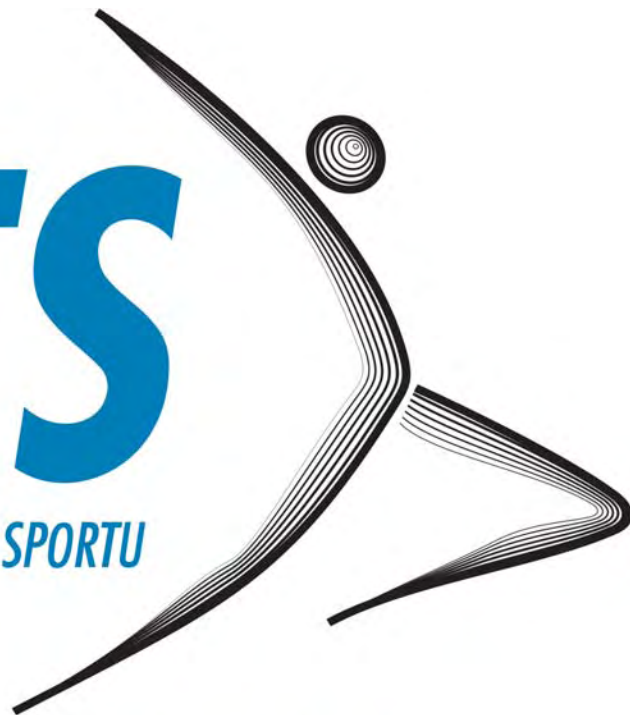


NTS

NOVE TEHNOLOGIJE U SPORTU



**ZBORNIK
NAUČNIH
I STRUČNIH
RADOVA**

SARAJEVO 2005

ZBORNİK NAUČNIH I STRUČNIH RADOVA

PREDAVAČI PO POZIVU

Izdavač	UNIVERZITET U SARAJEVU FAKULTET SPORTA I TJELESNOG ODGOJA
Za izdavača	Prof.dr Izet Rađo
Urednik	Prof. dr Muriz Hadžikadunić
Redakcijski odbor	Prof.dr Azra Kozarčanin Prof.dr Ivan Hmjelovjec Doc.dr. Nusret Smajlović Prof.dr Muriz Hadžikadunić Prof. dr Sabahudin Dautbašić
Tehnički Odbor	Dr.sc. Muhamed Tabaković Dr. sc. Senad Turković Mr. sc. Husnija Kajmović Mr. sc. Ifet Mahmutović Zemira Fazlic, prof. Admir Hadžikadunić, prof. Vahida Kozić, prof.
Tehnički sekretar	Tanja Cerić, dipl.iur.
Ured	Fakultet sporta i tjelesnog odgoja Univerziteta u Sarajevu Patriotske lige 41, 71000 Sarajevo Bosna i Hercegovina
Lektura i prevodi	Zemira Fazlić, prof Indira Mandžuka, prof
DTP	Safet Rašinlić Sead Pokrklić
Tiraž	500 komada
ORGANIZATOR	UNIVERZITET U SARAJEVU FAKULTET SPORTA I TJELESNOG ODGOJA
SPONZORI I PARTNERI	Olimpijski Komitet BiH Federalno ministarstvo obrazovanja i nauke Bosne i Hercegovine Federalno ministarstvo kulture i sporta Bosne i Hercegovine Kantonavno ministarstvo obrazovanja i nauke, Sarajevo Kantonavno ministarstvo kulture i sporta, Sarajevo Nove tehnologije, d.o.o United Investment and Trading Company Sarajevo (UNITIC) Dr.sc. Reuf Karabeg, Klinički centar Univerziteta u Sarajevu Prof. dr.sc. Milan Coh, Fakultet sporta u Ljubljani Prof. dr. sc. Dragan Milanović, Kineziološki fakultet Sveučilista u Zagrebu Dr Dobromir Bonacin, Univerzitet u Sarajevu, Fakultet sporta i tjelesnog odgoja Prof. dr. sc Julijan Malacko, Fakultet za menadžment, Beograd

Table of Contents
 SADRŽAJ

Malacko, J.; Popović, D.: Relacije između sistema morfoloških i motoričko - funkcionalnih varijabli i njihov uticaj na aerobni kapacitet kod dece 5. razreda osnovne škole.....	6
Dervišević, E.; Hadžić, V.; Karpljuk, D.; Jarnovič, Z.: Quadriceps isokinetic peak torque values after 10-weeks of low frequency neuro muscular electro stimulation.....	11
Bonacin, D.: Comprehensive continuum.....	16
Rađo, I.; Bradić, A.; Talović, M.; Alić, H.; Pašalić, E.: Nivo transformacija nakon četveromjesečnog dopunskog programa specifično - kondicionih treninga nogometaša.....	21
Čoh, M.: Savremene biomehantičke tehnologije u sportskom treningu.....	31
Peter Bürger Ekonomija i menadžment u sportu - sportski marketing.....	41
Mišigoj - Duraković, M.; Duraković, Z.: Tjelesna aktivnost i tjelovježba u prevenciji i liječenju pretilosti.....	50
Čatić, R.: Savjetodavni rad u sportu.....	53
Karabeg, R.: Transplantacija autolognih na maticu vezanih multipliciranih hondrocita.....	65
Bratić, M.; Nurkić, M.: Modelovanje treninga džudista prema inovacionim tehnikama.....	69
Duraković, Z.; Mišigoj - Duraković, M.; Kvalja, S.; Kvalja, D.: Iznenadna smrt za vrijeme tjelovježbe - može li se spriječiti ?.....	74
Sudi, K.; Valavanoglou, J.; Bergmann A.: The effects of a low calorie diet on body fatness, peak performance and strength - endurance in sports climbing.....	78
Bajraktarević, J.: Nove tendencije u psihologiji sporta.....	80
Kvalja, S.; Mutić - Kvalja D.; Mišigoj - Duraković M.; Duraković, Z.: Izokinetika - komjutorizirano ispitivanje i korekcija funkcijskih sposobnosti mišića i zglobova u postizanju optimalne fizičke spremnosti i prevenciji ozljeda sportaša.....	89
Milanović, D.; Jukić, I.; Vuleta, D.: Metodološki pristup znanstvenim istraživanjima u sportskim igrama.....	91
Spahić, B.: Aspekti primjene marketinga u sportu i sportskoj rekreaciji.....	101

COMPREHENSIVE CONTINUUM

Dobromir Bonacin

Faculty of Sports and Physical Education Sarajevo

0. Introduction

Through passed few hundred years we are all in some ways witnesses of theoretical foundations that direct us toward theories composed by fragments of scientific truth. Although those fragments do not expose real knowledge and convicted theories, many of us build our research projects under those theoretical determinants. The result is unsatisfied and insufficient knowledge about global rules, not only in Kinesiology, but also in other fields such as mechanics, sociology, economy, communications, and so on. Finally, because we have to solve our growing interactive problems, we build whole bunch of regulation and control mechanisms, which are generated to manage with objects of our interest and object "behavior". This means that we have to accept bad and poor cybernetics models, a Chaos theory, relativistic stands, fuzzy logic, neural networks, and other disintegrated approaches, which are all just badly founded and interpreted partial comprehension applicable in only short bounds of individual problem solutions. Because of those premises, this article offers new and original ideas, concentrated in definitions called: "New comprehensive".

1. Definitions

1.1. Classical terms definitions in Science and methodology

No meter of problem kind and research type, in classical scientific methodology we can easily recognize some terms of which our exploration depends. They are object, variable, case, area and process. Object is a phenomenon, which is to be manifesting or is supposing that really exists. Variable is description of some object characteristic, which is concatenated to an object on some value scale. Case is a realization of individual variable value of any type of object. Area is N-dimensional artificial virtual Universum, with some objects visible in that Universum. Process is a trajectory of continual cases with differences between objects defined in time intervals. As you can see, those terms are basic and with them, seem that is possible to realize any exploration or any research. Unfortunately, it is unlikely, as we will see later.

1.2. "New Comprehensive Continuum Definitions

"New Comprehensive definitions vary in some ways from classical, although some terms are terminologically identical. They are object, variable, comprehension, continuum and development. Object is only really existing phenomenon and is only possible subject of our researches. Variable is non-existent artificial description of some objects with some level of accuracy and with some bound of registration. Comprehension is minimally one information, consisting and represent immanent characteristics of at last one existing object. Continuum is uniform ordered object schedule in according with representative type of highest hierarchical level. Development is repositioning of objects all over continuum in according with correspondence of object comprehension and continuum natural laws. This definition describes scientific methodology in essentially different outlines breaking narrow standard bounds and lead to absolute knowledge.

2. Classical and New Comprehensive Determinants

Classical	Case	Space (area)	Relation	Process	Time series	Regulation
New Comprehens	Comprehense	Continuum	Supra-entity	Composite	Reposition	Natural laws

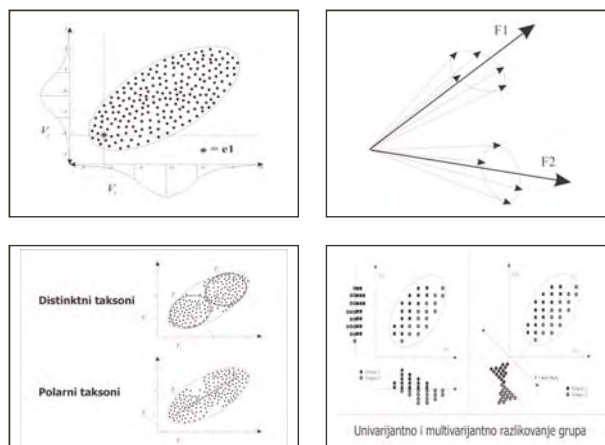
The table above as parallel form describes crucial comparatives between standard (called classical) and progressive (called “new comprehensive”) methodology approaches. It is obvious that the central interest is directed from causality and regulation towards comprehension and natural laws, which means that there is no unintentional case, but only comprehension in continuum according with natural laws.

Finally, one of most important things in this model is rejecting of time series because of explicit mistakes in all situations when we follow any kind of transformation. Those mistakes are caused by obvious contradiction between chronological age and comprehensive age of entity. As we all know there is no difference in ages between any kinds of objects that exists today. Any stone, any chair, any brick, any ant, bird, tree, human, or anything else that we can call object, is in absolutely same chronological position — material of which those objects are composed is approximately about 5 billion years old, just exactly as the our Sun is, or some similar star in Universe. The only real difference between objects is amount of comprehension “captured” in one particular object. That, as some kind of our “soul” represents our identity and us.

3. Approaches Compare

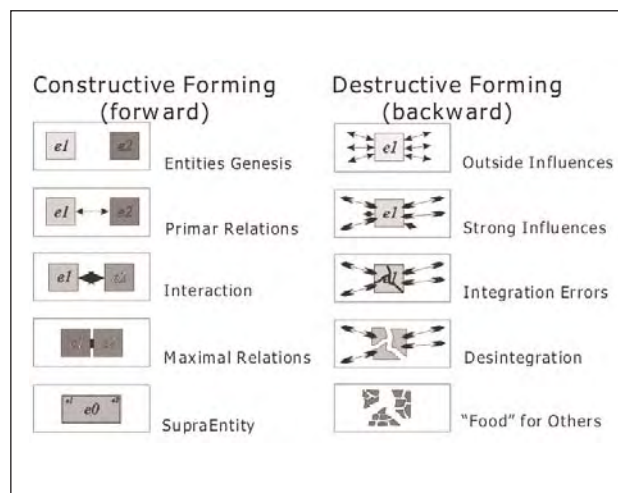
3.1. Relations: Classical Multivariate Approach

Any research that tries to explore unknown phenomena demands appropriate project settings, resources and schedule plan. The next step is collecting a mass amount of initial data concerning problem of that phenomena. Once, when data are available, we use known information and mathematical procedures to proof our stands or hypothesis. Many procedures exist and all of them express relations among characteristics of objects we explore. Our intention is to understand and to explain object “behavior”. All such particular solutions are small bricks, which we incorporate in global ideas. However, the main problem is that we build a mountain of knowledge without absolute reference, so our main reference is constantly growing. That mountain we call science. All mentioned information come from general idea that we do not know global logical and absolute generator of object forming. From that point of view, the only possible and appropriate approach is relations determination.



3.2. Development: Supra-entity forming Approach

Let we, suppose, have only two objects in the moment of their genesis. No meter of type, location, “behavior”, characteristics, those two objects are different, if it is possible to find at least one difference between them. That is not an object registration problem, or a measurement problem. It is logical truth. And, if we have two objects, it is obvious minimally one relation between them, and they always achieve bilateral interaction because they exist in same Universe. Influence can be mutual approaching, refusing, mixing, or anything else, but interaction anyway. Those continual events are Supra-Entity forming. In the space characterized with numerous objects of all kinds, we can recognize constant creating and constant destroying of objects. Logically, on extreme sides of those events, we can recognize Construction and Destruction. If development goes to construction, we can mark it as forward, just because the amount of comprehensions is growing and become complex. If development goes to destruction, we can mark it as backward, just because the amount of comprehensions is decreasing and become simpler. Now, we can establish an absolute logical reference described as development.



4. Continuum

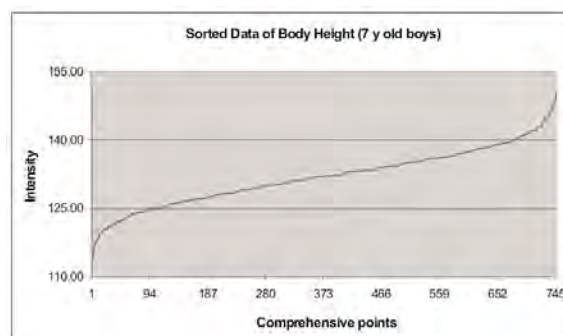
4.1. Continuum (univariant)

Described development is easy to represent with sample of pupils measured in body height.

Each of these objects expose one value on conventional scale with semi-fixed boundaries. If we take such values from different large enough samples, according with Central Limit Theorem we will always get very similar description, characterized as “comprehensive points”. Every child, of course, has to pass through these points, as long as it grows. If we evaluate characteristics of such objects just with body height, the only comprehensions we have about them is a body height. In that situation, every child with bigger value simply contains comprehensions that are more complex. On the extreme sides of this description, we can locate a group of objects with “less” / “more” expressed intensity, and in the middle, we can locate a main part of objects. Those quasi-groups help us to understand and interpret a problem in terms of continuum that is directly responsible for positioning of objects. In some new area, each object learns very fast in the beginning. Then, collect information studying very hardly and persistent, “climbing” very slowly. New thing is that the object continues its development until it achieves highest levels in that area. Especially new thing is that objects can vary in comprehensions what results in repositioning of object over continuum.

4.2. Continuum (multidimensional)

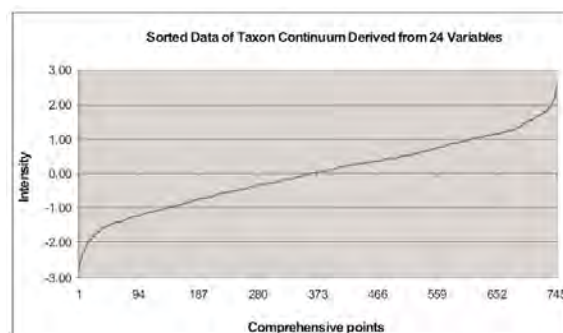
Just like one-dimensional (univariant), in the same sense multidimensional continuum offers identical rules. Differences are only in fact that we have to generate highest-level representation of dimensions we choose in the beginning of research. Among many types of analysis for that purpose, actual available procedure for Polar taxons are probably most complete model. That general taxon contains most important information about the continuum itself according with partial continuum definition stretched as area with initial variables. Objects included in that initial area, under continuum rules, are taking their positions just as their comprehension about that area is. More wide and complex information = higher position. This development model is perfect only because it eliminates final exclusivity of any possible object, incorporates passed objects, and in the same time opens a space for objects in future. E.g., any object that can calculate mathematical integral reached the Integral level, no matter it is a human, a lizard, thinking stone, or extraterrestrial. The only criterion of that hypothetic level is integral calculation. Do not forget, to reaching such level, comprehension “spends” minimally about 5 billion years (in ordinary sense) and billions and billions of different objects (from fluids and gasses through amebas and amino acids to humans and so far...).



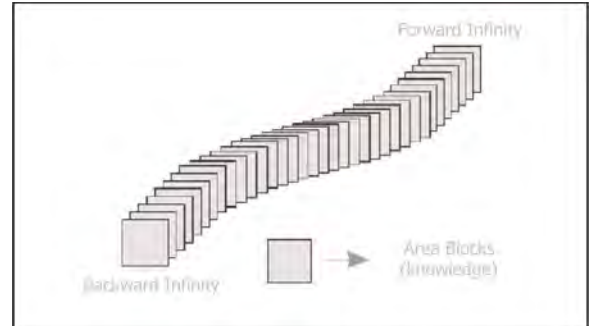
5. Continuum Tunnel

5.1. Multidimensional Continuum — Infinite Tunnel

Total comprehensions of any individual object are evidently different from all others. That characteristic defines appropriate development position, as explained above. However, another important logical dimension exists, a dimension that explains maximization of information in local area. That kind of information, in terms of continuum, is not comprehension but just knowledge. Knowledge, no matter how big, is local collection of information that insures expansion and application on particular artificial comprehension level.

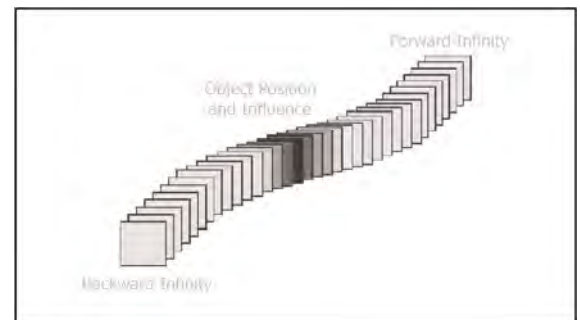


This dimension has no frontiers too, but expansion and wideness of this dimension only maximizes transversal Continuum component without unconditional affecting of object in sense of higher repositioning through Continuum. For progress, approaching Continuum forward infinity, a minimal surface of transversal component is quite enough. Of course, that is possible if Continuum comprehensions are immanent to object, and if the object accepts its actual position trying to advance. Everything more is only a loss of resources and capacities. Otherwise, object became a “soulless” machine for level maximization. For example, from comprehension point of view, if one has four houses, it is obviously senseless to collect 25 more. In that way, Continuum is likely to imagine as a tunnel, stretched to Infinity. If someone wants to collect 25 houses more, he is obviously maximizing some type of “houses level” and that intention presents clear limitation in Comprehension Tunnel Continuum.



5.2. Individual Object Position

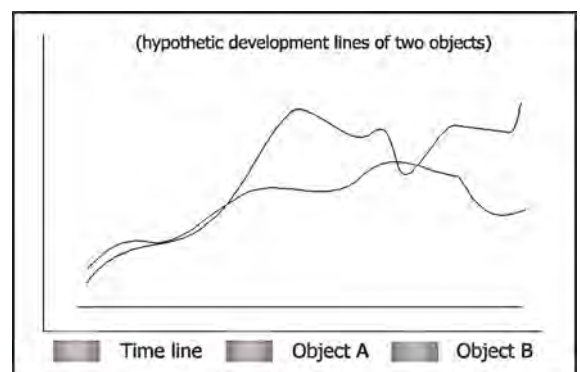
As we can see, there is no something as “relative” position inside Continuum. Maybe we cannot imagine where exactly stands an “integral calculation level” but if exist it keep strict position in according with clear criterion. If it is an important part of Continuum, every further object will have to learn that calculation and keep it inside itself, which will insure development and positive supra-entity forming. Otherwise, Continuum will eject such criterion as irrelevant for comprehension and objects with that kind of knowledge will seek destructive forming becoming a material for others. It is very hard to imagine any object of “our times” that, as it is, will exist in the “future”. The only reasonable conclusion is that object is to be form; acts as “long” as it can, and finally disappear. Something useful remains behind it: a comprehension that all other objects can use for their development. That comprehension will remain forever if satisfies hypothetic rules of Continuum.



6. Comparison

6.1. Time — Comprehension Differences

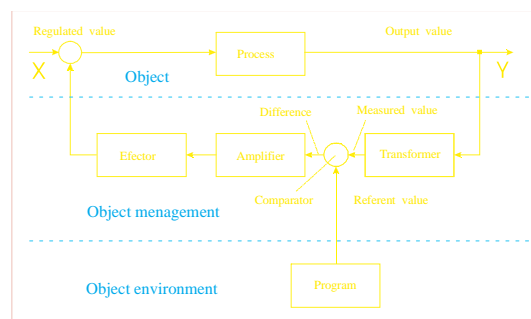
In all parts of this text until now, it is obvious that author intentionally avoid term as “time”. The reason is simple. Time scale is weak and very superficial value system for evaluating development or graduating object comprehension. It is important to understand for all scientific disciplines, and especially for kinesiology. We can easily imagine e.g. two kids of the same age (born on same day) included at the beginning of “regulated training process”. Few years later, although both participate constantly in the “same conditions”, with the same trainer, and work on same transformation tasks, their abilities and knowledge and sport performance are often radically different. This happens because of many particular reasons, genetic predispositions and other objects that influence their lives. Therefore, we can claim that they are of same chronological age, but their comprehension age is relevantly differing. It is not so rare situation that those kids “cannot” understand each other anymore, although they train together for ten or fifteen years. We must agree that a comprehension age is only one absolute reference and that there is not a “transformation process” at all, but composite development. Transformation process can be, more or less accidentally, in harmony with rules of composite development, but also, it could be not. Anyway, paradigm of reference could not be time in any situation. Oppositely, comprehension as reference frame stands always.



6.2. Classical Cybernetics vs. Comprehension

In kinesiology, education, economy, engineering, we manage with objects. Technically, that management becomes control and regulation of object behavior in order with our aims. It is not so bad if that aims represents harmony with global natural development laws and described Continuum. However, if we do not accept those fundamentals, or if we assume them as irrelevant, our aims are often very far from natural laws. As the mechanism of protection, objects we manage can do only one thing: resist our actions to prevent their own destruction. “Process generator” (trainer, teacher, manager, politician) in that situation can do only two things: or to redefine aims, or to start with violence. Aims redefinition is act of comprehension respect, and violence is express of minimal global knowledge no meter what bulk of machines, experts, pharmacological issues etc. is following such violence. The final and concrete aim of violence is always maximization of local ideas that stands in transversal position with comprehension. When everything goes wrong, transformation managers start to regulate. However, “program” that controls object behavior is positioned outside of object itself and is not its immanent part, which means that the object do not learn. Let us not forget: control and regulation are nothing but false imitations of development natural laws. Maybe some children (or parents) will agree with that type of perfidy violence, but we cannot. Modern technologically oriented society accepts such regulation attitudes as normal. So who will yell; that is enough! Cybernetics regulated stories about on-line training went so far, that even scientists unconditionally accepts those attitudes and plan their researches in order with “General System Theory”, without critical distance, and with uncritical enthusiasm. Let us remember: when we make corrections of some “process” in on-line matter, we do not know enough. If we do, no correction is necessary! Therefore, why we do not continue collect comprehensions instead we apply insecure and insufficient knowledge. Oh, how human race like to manage, forgetting that although teacher leads a student (or any object at all), in the same time a student guides a teacher. Result is always an interaction and supra-entity on some new comprehension position. Comprehensive Continuum is offering us totally new and honest approach. Please do not through away this truth.

Regulated circuit model and Comprehension model



7. Literature

1. Bonacin, D. (2004) Identifikacija restrukturiranja taxona biomotoričkih dimenzija djece uzrasta 7 godina pod utjecajem transformacijskih procesa. Identification of biomotoric taxon restructuring of children aged 7 under influence of transformation processes . Sarajevo: Faculty of sport and physical education.
2. Bonacin, D., Rađo, I. (2005). Temeljne kvantitativne metode za analizu podataka. Basic quantity methods for data analysis . Sarajevo: Faculty of sport and physical education.
3. Bonacin, D., Rađo, I. (2005). Univerzalni model selekcije za vrhunsko sportsko stvaralaštvo Universal model of selection for top-level sport performance . Homo Sporticus, , Sarajevo.
4. Bonacin, D., Katić, R., Zagorac, N. (2001). Model kineziološke edukacije Model of kinesiological education . PMF, Split.
5. Malacko, J., Rađo, I. (2004). Tehnologija sporta i sportskog treninga Technology of sport and sport training . Faculty of sport and physical education, Sarajevo.
6. Katić, R., Bonacin, D. (2001). Kineziologija za sva vremena Kinesiology for all times .PMF, Split.
7. Katić, R., Bonacin, D. Blažević, S. (2001). Phylogenetically conditioned possibilities of the realisation and of development of complex movements at the age of 7 years. Collegium Anthropologicum, 25, 573-583.
8. Bonacin, D., Carev, Z. (2002). The universal methodology. of process identification. Journal of Theoretics, 4, 2./on-line/ Available: <http://www.journaloftheoretics.com/Links/links-papers.htm>.