PROCESS IDENTIFICATION IS BASIS WITHOUT WHOM IT IS NOT POSSIBLE TO MAKE A STEP FORWARD IN SPORT SCIENCE

Dobromir Bonacin[1], Danijela Bonacin[1] and Žarko Bilić[2]

[1] *Faculty of Education, University of Travnik, Bosnia & Herzegovina*
[2] *Faculty of Sciences, University of Mostar, Bosnia & Herzegovina*

Review paper

Abstract

Process identification in kinesiology is extremely serious task and should be approached from four fundamental aspects: anthropological, methodical, and transformational and evaluation. In this paper we presented newest discoveries of experimental researches aimed towards recognition of real natural processes, that that occur during the application of kinesiology operators in education, sports, recreation.. Proposition is to seriously review the plans, programs and contents in all levels, since pre-school to schools of highest levels, in order to integrate process identification knowledge as a system instrument into daily operational practical work aimed at improving the efficiency of treatment in the direction of natural processes. We assume that without such application, further step in kinesiology (sport science) is hardly possible, respecting other but particular knowledge of certain areas.

Key words: *sports science, process identification, step forward*

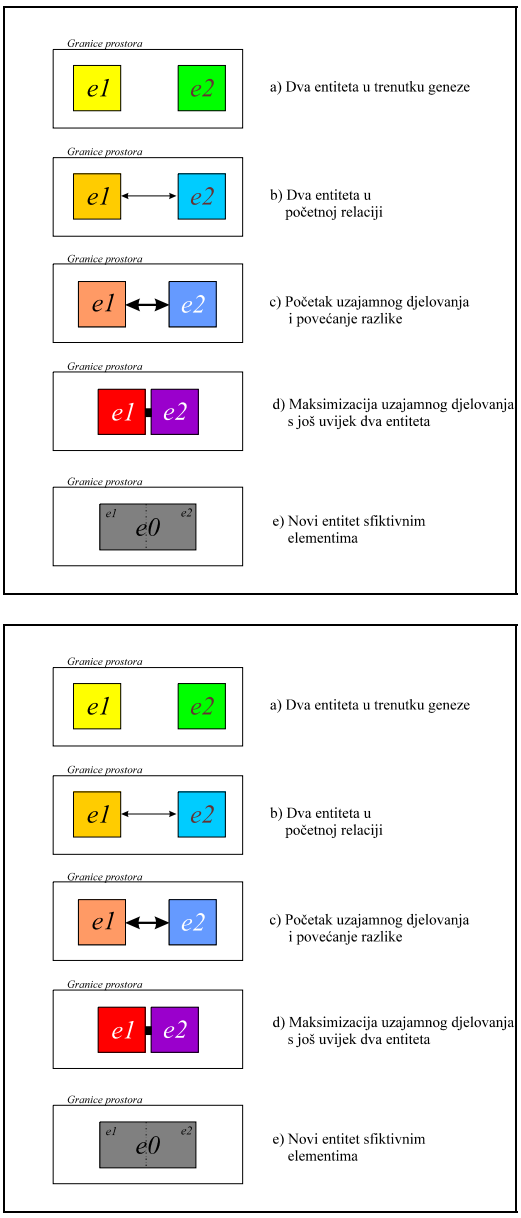
Introduction

A world around us that we are a part of, is determined and universal, with repeating phenomena which we discover and respect, as well as our influence which is consistent with these rules There is nothing chaotic in it, but only our personal cognition limitations. Set of variables that describe some sample can have different characteristics, but it is always best to observe such set integrally. The reason is because man's dimensions cannot be separated from his totality really not to compromise the integrity of the essential knowledge. For this reason, changes caused by some process in some time interval, should observe as types of entities, because only like that they can register real cognitions about transformations.

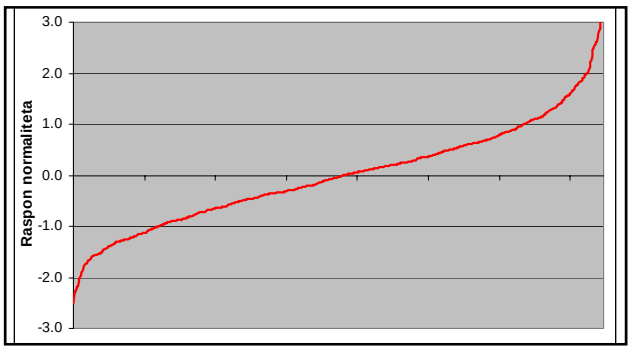
Determining real existing processes is permanent and maybe the most important kinesiology task, because the degree of the knowledge about real process occurrence determines approach of our actions with possible transformation effects and hereby the effects possible to achieve in operational actions. This is extremely important for the fact that a man, like any other biological being, because of his plasticity, is a subject to changes under different influences, but because of genetic predispositions i.e. characteristic stability, this same being keeps a share of characteristics and transmits them through generations, trying to reproduce them in a partially known terms. Between these two complementary advents many local processes occur that are essential for the understanding of all other phenomena but which are still largely characterized by these two characteristics. Genetic predispositions, as we know, represent capital of our knowledge built through millions of years as the accumulation and integration of discoveries that are in some way recognized, interpreted and stored in ourselves.

About identification models

If the processes we register with individual entities are aligned with natural processes, we can mark them as constructive; otherwise we talk about destructive processes (picture 1). Primary task in research of transformation rules and regulations is to determine objects, entities that realy exist in some space. This is not just a simple choice of a sample, but an essential and fundamental problem. Namely, in our environment variable does not exist, only some or any objects that communicate with each other. These objects we try to understand and attach them permanent features as well as reduce them to smaller number of consequent types in order to understand their nature, possibilities of their development and our role in this development. Variables we describe them with, are only artificial shapes of some object reflection registration and enable us to, more or less succesfully, understand these objects we are surrounded with. Analyzing data from the stable models and theri manifestations, we discover laws – laws of existing processes identification. The most important legality we can recognize is: *There are no time series, but only cognitive series.* This has been confirmed with results in many researches. This is especially true in "unstable" development phases, when entities show great diversity in the expression of any, especially morphological and motor manifestations. Therefore, entities will be treated in a way that those who stand high on a representative taxon of that space are superior. We shouldn't deny such theses since it is simply correct. If we don't like it we can differently stretch the space, but the logics will remain same. General taxon of stretched space is representative of this space with the fact that, at that moment it is the only object (type, taxon) in this space and it is obtained with representative description of all included objects in such stretched area (picture 2).



Picture 1. Constructive and destructive processes /Source: Bonacin, D., 2004./



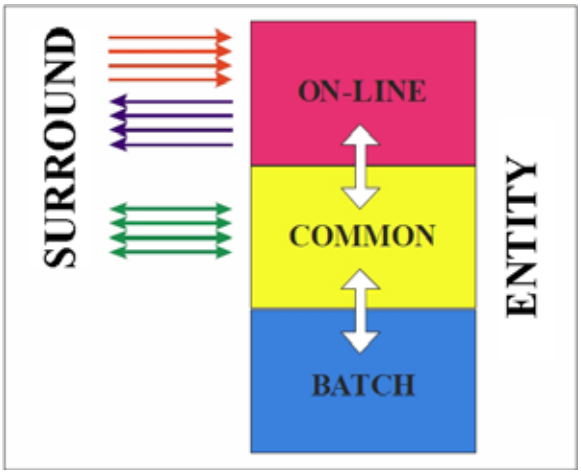
Picture 2. Comprehensive continuum /Source: Bonacin, D., 2005./

There isn't any nor there any more representative then this. All objects of lower order (entities) on such representative have their real positions, from the ones extremely low; through typical all the way to the ones that already overgrew that space.

If global taxon is completely immanent to stretched space, then it is intuitively clear that entities that are so high on such taxon, represent the maximum of development possibility, i.e. cognition in such space in general. Then it is clear that all these entities will tend to and go through all typical phases, which with data standardization, we can express in some comprehensible range. Process identification in kinesiology research has to follow definition of global characteristic parameters, which certainly with generalization, found immanent properties of stretched space. In the series of papers, this was carried out with sorting (with and without cumulative) data from second order taxons and then applying appropriate algorithms, in order to detect subdominants, i.e. locations of entities within development process of cognition according to global taxon since that taxon is also the main consequence of processes in general and it is obvious by natural – logarithmic rule it is a process of cognition. In given conditions and with chosen variables that stretch the space, as it is described, processes (or sub-processes) are identified, which exist for selected entities. Those sub processes are nothing else but development of typical second order entities located in previous phases of data processing. By bringing all the primary entities, and all measurements (virtual locations) in a common area, it is easy to determine, not only where the primary entity is located, how much it is relocated under influence, what's the intensity of eco-sensitiveness, how the groups are formed etc, but also which sub process occurred and what can be expected from selected samples. This certainly means it is possible to recognize the size and the type of impact that can be performed, applying certain stimulus system, certain intensity etc. Under this methodological model it is possible, based on massive project data, to determine what can be done. This means in kinesiology, sport and recreation it is possible to program nonviolent transformation processes, and eventually (after few years) predict what final results we can expect. This also means that there is less speculation, and more cognition and more consistent ones. This methodological frame can be applied easily in any other situation; it is easy to verify compatibility of such obtained cognitions. Except global cognitions and information related to cognitions about bigger entity conglomerations (samples, groups, taxons, types, virtual positions,…) it is extremely easy to input, in such methodological frames, any individual entity and to follow its relocation regardless transformational procedure applied. This is for the reason that model is literally completely arid to character of applied transformations, because it brings entities in mutual space defined only with selection of primary entities and variables that stretch the space. Regardless what transformational procedure we apply, operator and the set of conditions that existed during its application, is not subjective at all, but objectifies certain virtual positions and achievements regardless set of methodical applications. All, except the real position on global operator, is completely invariant for the achievements.

Certainly, some local changes occur in accordance with applied set of stimulus, but this set is essentially irrelevant for object position structuring, whether this set is one of more different or is it the only if its applied for a long time. At the end, it is completely irrelevant what are the samples (i.e. objects) included in process identification. One and sufficient condition to apply noted methodology is that sets of objects are representative to total number according to stratification of population they are extracted from and in accordance with Central limit theorem etc. They don't even have to be the same gender or the same age or to any other characteristics. The only problem occurs is great number of objects that need to be processed, which is more of a logical, technical or informatics problem then methodological. Finally, the issue of process identification is less "a problem" thanks to cognitions of Cognitive continuum, Constructive and destructive processes but also the ones that indicate the existence of three basic processes like Model on-line, common and batch processes, i.e. processes Model Persistency – synergy – development (picture 3).

According to the research it was concluded that each entity has its property of self-preservation. He resists change of actual status or change of environment consistence and at the same time its can be extremely sensitive to the influence and seeks to maintain its identity. This constant object's exposure is called **on-line** state or ***persistency.*** Besides, progress is not possible without interaction with environment so it is easy to identify it as **common process** or ***synergy***. This proces icludes other entities which in any way help entitiy to adopt new cognitions.



Picture 3. On-line, Common and Batch proccesses
/Source: Bonacin & Bonacin, 2005; Bonacin & Blažević, 2006./

Paralely with previous processes, the third process is noticable, which describes object progress in sence of realization of own cognitions into wider space that surounds it while it extremely increases its activity towards environment. It is obviously object development. This system accumulation is **batch** or ***developmental*** activities. When we are aware of all previously mentioned, we can inevitably conclude, we have to program transformational procedures according to previously noted discoveries. This means that specific procedures must include incorporated and the above discoveries. From this aspect, we could say that applied transformational procedures, in terms of volume, intensity and duration effects are becoming familiar and verifiable.

Conclusion

Based on conducted researches, global process on quality supported models, were identified. Presented models were sustainable in different researches, different entities, described with different variables, treatment features and different conditions, yet all of them gave the same process knowledge. Radical revision of curriculum, programs, contents and staff on all levels of education in kinesiology is suggested in order to change the state and make a step further in sport science and enable appropriate influence to act on different tendencies in all spheres of education in kinesiology.

It seems this problem should be approached extremely seriously, what is dominantly the task of kinesiologists who are the only ones competent to plan, program and performance and valorization of transformational process, but it is also expected to include a wider consultative dimensions of society, since this problem is generally not solvable from the position of any immediate profession, particularly at the present time. It is also suggested to review status of sportsmen, selected beginners in sport and amateurs in order to define beginning conditions for strategic planning and programming of treatment. Plans and programs of personnel schools should be urgently reviewed since we could expect serious changes in four major affiliations kinesiology is based on: 1. anthropology, 2. in methodic, 3. in transformational processes and 4. in treatment procedure evaluation. Everything else can be considered as additional content dependable on these four sets of knowledge that will certainly, sooner or later, be affected with fundamental reorganization conditioned with the newest discoveries of identification process.

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IDENTIFIKACIJA PROCESA JE TEMELJ BEZ KOJEGA NIJE MOGUĆE NAPRAVITI DALJNJI ISKORAK U SPORTSKOJ ZNANOSTI

Sažetak
Identifikacija procesa u kineziologiji je krajnje ozbiljna zadaća i treba joj pristupati sa četiri temeljna aspekta: antropološkog, metodičkog, transformacijskog i evaluacijskog. U članku se iznose najnovija saznanja eksperimentalnih istraživanja usmjerna prema prepoznavanju stvarnih prirodnih procesa koji se odigravaju za vrijeme primjene kineziološkim operatora u edukaciji, sportu, rekreaciji... Predlaže se ozbiljno preispitivanje planova, programa i sadržaja na svim razinama, od predškole do kadrovskih škola najviše razine, kako bi se spoznaje identifikacije procesa integrirale kao sistemski instrument u svakodnevni operativni praktični rad s ciljem unaprijeđenja efikasnosti tretmana u pravcu prirodnih procesa. Drži se da je bez takve aplikacije, daljnji iskorak u kineziologiji (sportskoj znanosti) teško moguć, uz uvažavanje drugih, ali ipak partikularnih saznanja pojedinih područja.

Ključne riječi: *sportska znanost, identifikacija procesa, iskorak*

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Correspondence to:
Asst.Prof.Dobromir Bonacin, PhD
University of Travnik
Faculty of Education
72270 Travnik, Aleja konzula 5, Bosnia & Herzegovina
Tel: 00 387 (0)62 907 430
E-mail: dobromir.bonacin@st.t-com.hr

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