KEY MOVEMENT STRUCTURE PARAMETER SETTINGS IN KINESIOLOGY

Dobromir Bonacin1, Žarko Bilić2 and Aleka Stanković3

1 Faculty of Social sciences dr.M.Brkić, University Hercegovina, Mostar, Bosnia & Herzegovina
2 Faculty of Sciences, University of Mostar, Bosnia & Herzegovina
3 Faculty of Economy, University of Zenica, Bosnia & Herzegovina

Review paper

Abstract
In this paper, it is possible to recognize the new settings phenomenological structure of motion in an unusual and avant-garde way, founded by the four values of structuring movements such as: objective, principles, structures and training. All this within the basic requirements and that is to recognize the process as an indigenous concept of kinesiology in order to achieve results.

Key words: kinesiology, movement, structures, routines, process, transformation, result

Introduction (or: What are not the movement parameters)

As is known (Bonacin et al., 2011), the classification of motion necessarily leads to an analysis of the objective (s) and distributed the tasks that need to be clearly identified. But, before any other action, for adequate planning and Kinesiology, Basic human features must be known (Fig. 1).

![Figure 1. Basic human features](source: Authors)

Only after that we can discuss a possible parameterization, i.e. identification of paradigms in kinesiology science and then setting the goals. For example, notice that 1) victory is by no means any relevant parameter. This is because we can easily bring 100 people (adults, children ...) who have never seen a ball and let them compete. Even if they have no idea what to do, sooner or later someone is going to be a winner. The victory is therefore in the sphere of motifs that act as some other sanctions, but the kinesiology parameter analysis is not. What is all of this 2) money? Since money have mostly stable formations and groupings, and as the only ultimate purpose of the money to create more money, and what are these formations and groupings 100% compatible, quickly comes to being "prudent" investment of these formations can build his score geographic picture of their "successful" sports environment, i.e. more or less - the purchase (athletes, knowledge, experts, ...).

However, what money cannot, it is not change the fact that the iron kilogram heavier than a pound of iron, or the laws of nature. So it is enough that only one individual is not in this system billions of others and this whole futile guarded mastodon collapses like a house of cards. That one individual, no fault of his, destroying for centuries carefully reared broilers that help selling soap in the time-out. So, money is not a serious kinesiology appropriate parameter for analysis. What in this story represents 3) specific knowledge of a sports discipline? Some in the American NBA each team has three to four players of world class which can perform anywhere. Therefore almost 100 athletes of world class in the sport. In those athletes undoubtedly built superior knowledge even 20 to 30 current coach, the knowledge, the publication, "the secret little black book", a specialist physical conditioning, medicine and diagnostics, psychologists, sociologists and other sorts of things. However, the field is only 5 players, not 100. By that math, it is enough that a single environment "created" only 5 players of such class and can start an equal match in which no longer sure who will win out. And what, after all, happened several times. This, of course, "should not have happened" if the specific knowledge of an activity absolute parameter, and from this clearly shows that it is not. Furthermore, let's see how "standing" in all 4) compliance at the level of the world's population? Well, well, first of all, to accept the investment can act; the media, various different parades, rallies, waving medals and different. Then, to ask the question whether the fact that certain consumers close to a billion and million (China), and some other barely 3-4 million (B&H), which then by the amount of "votes" certainly means that it will be the top table tennis activity and for example, playing marbles will not !? Thus, it is clear that the mass acceptance cannot be a relevant parameter in kinesiology, because it is then enough to eg. Some of us to be one billion and two hundred million dealing with say smashing head of cabbage with a hammer so that it becomes important kinesiology.
Still, purely for rounding these findings, few consider the role of government, to see if 5) authority relevant parameter for kinesiology analysis? Let there therefore there is some power (before we saw that this is a kinesiology uneducated mediocrities) and let the government supports the idea of a kinesiology “super-important” setting. Unfortunately, the mere fact that it is a mediocre disqualified entirely this setup and makes it impossible to herself entirely contradictory, which is perfectly draws on previously explained a total failure of the very concept of government. We still need to examine and 6) procedures for establishing the importance of the possible parameters. Procedures are, as is well known, an important link to prove at in science in general and serve for the possible control of actions implemented or processes. Yes, but at the same time and the perfect tool for metrization and control everything that is to be monitored, although it clear that too often an empty blather and the absence of any science-based rules. In one textbook high school literally writes: “... the problem cannot be solved unless knows ...” (do you really woe to us?!). This formulation, in addition to the above ejection of truth and its replacement “value-courts”, all seasoned with a blind submission to procedures, catapults the man a few dozen centuries ago, so it is obvious that neither the procedures cannot be relevant kinesiology, nor any serious scientific parameters. What to many "scientists" the world should know is that the scientific methodology is the discovery of new procedures and not obeying until then, some “authority” established, applied to known procedures. Because, you will known procedures to give as a result, but it is already known, and it was not a science but a joke and a farce, if not something worse. You need a variety of approaches vary, and one very important setting, and it is the one that talks about the identification 7) states. The state is dogmatized, nonexistent category, that is described, is a key to understanding the phenomena in kinesiology, and thus that kinesiologic analysis should be busy analyzing the situation of athletes or other participants in the movement and exercise.

Balance of an individual or group is, unfortunately, only apparent option is very questionable to recognize some of their features assuming zero time and is derived from a completely wrong assumption about the stability of man as identity. Even a superficial analysis clearly indicates that all but one in particular, is subject to change, no matter how small they are, and that it is by no means a state, but 8) process. So in kinesiology emphatically articulate - the transformation process, realistically assuming that changes in kinesiology take place at a more or less known and prepared form that has the purpose to intentionally modify some features of particular individuals or groups. At the same time, it should be, which is very rarely the case, that such processes are incorporated to recognize natural processes and is intentional transformation process only support both natural and should be monitored.

Special story of quite a number of failures parameterization 9) cyber science orientation. In its basic idea, Cybernetics (General System Theory, Information theory, system theory, ...) is a discipline concerned with the management and systems of any kind (detailed in Bonacin, 2008). But it is essentially positioned low and as such, there cannot have affirmative and development scientific component as it constantly, and it is at its essence, directs the management. But it was enough for her departure from knowing and that is what makes it one of the tools for a closed set of information, and 10), since the technology is trying to do something familiar (therefore applicable), and 11) science is just the opposite oriented and tries to deal with unknown (ie investigate) because the unknown cannot be applied, and it is known not to investigate.

Comprehensive continuum as the foundation (or: Where to start from!)

Based on all mentioned above, parameterized and thus naturally and analyze, we can only process a dynamic category, while everything else is either ignorance or deception and ignorance therefore in any case. According to the existing methods of analysis of the process, a treatment was carried out, whereby the 'parameterized' at least two states (usually the initial - final and initial - final between the interstices of the potential), and is based on the difference between the sheet completes on how the process is carried out. This is the ultimate proof that the complete model for evaluation in kinesiology total failure, because the nature of this procedure is a contradiction that breaks any meaningfulness of this whole bunch of hastily stuffed ideas. In fact, if we know what kind of process we conduct, then we (all that analysis and meaningful) evaluation is not required. If, however, we do not know what kind of process we conduct, is not to ask why we spend it at all !? Not to say that we are in kinesiology confronted with irreversible processes, and return "to the old" after eg. 10 years or not. Of course, it is obvious that “for now” we do not know and cannot know everything, so we are 'forced' to apply and what we are not absolutely sure that it is known. In this way become clear reasons why spoil televisions and computers, why vaccines are often unusable, and why athletes suffer, children running away from school physical exercise and so on, because in the minds of those who 'run' for the application of incomplete knowledge of chaos and needs General proof ad hoc, and familiarity eventually recognizes a posteriori while the rest comes down to 'manage'. Allocate therefore the position of incomplete knowledge in the application as a permanent substracts poorly educated group of overzealous individuals who are chasing the 'result', to the pressure of ignorance were forced to constant intervention, ie. Management. In addition, the definition of the relevant parameters should be determined primarily on the system criteria which these parameters are based, in order to give adequate parameters credibility.
Such criteria can be found in the very essence of man as kinesiology, and thus anthropological beings, and it is again, all integrated into the life of a unique derivation of the world and ultimately intertwined minimum composite transcendence and matter of which we ourselves are inextricably drawn. All this as a natural, God or Universal Laws, which is in the logic of understanding of the foundations of the existence of one and the same. The laws of nature, therefore, no transitional rules that are changing the way certain idea is being supported by certain secular and transient holders of these ideas, but they are timeless categories that are valid always and everywhere. Only such rules may serve to define the criteria by which to determine the parameters of kinesiology.

As mentioned in the matter above, from the very foundations of the human teleological articulation can recognize only a single permanent and continuous conceptual direction, one is - knowledge. It is not just a superficial concepts immediate material world but also the totality of all that man (and everything else) at all makes. There are also thoughts, emotions, inexhaustible source of art, principles of the past, hope and knowledge, spirituality, and even the knowledge that is usually described as the technology. In a word - EVERYTHING. And anything less than that. Of course that our knowledge in general are not and need not be absolute, and of course to change, grow, and is continually being updated. However, the concept of universal continuum (Figure 2) within which any entity (including man) cognitive progress remains the only reference that allows understanding of the promotion, structuring and its overall impact, and quality and position each entity precisely to the position on the specific cognitive range has.

![Figure 2: Comprehensive continuum](Source: Bonacin, D., 2005)

This concept remains intact in the passing forms of wandering and looking for some 'updating' of the truth as to be reified in terms shorter than ever and change the way you are changing the operational know-how contrived speculations. Only such a concept has the strength criteria for the differentiation of the parameters which can be physical phenomena in kinesiology (and not only there).

Strong integrative character of this concept prevents dissolution knowledge no matter the direction you any activity on the theory, application, synergy or any other form of associative stratification and approaching some limited and "own" quasi-affirmative-operative forms of limited cognitive organizations of any matter. This concept is certainly a huge step forward and will have to be respected. After all, from the point of cognitive thought, for those who do not know what to do with it, we must state that there are only two solutions. Or that concept is not true, in which case they will be safely rejected cognitive (to date this has not happened!). Or is true, in which case it will remain as a permanent value and richness of human and humanistic value postulates. In general is of no importance whether the current accepted and where "big stage", because anyway the "big stage" mediocre food that is not only difficult to understand what was really going on, but if something and realize, all the forces pushing it on margins for the reasons described at the beginning of this matter, and it certainly addresses the inability of their address. The concept of the Knowledge Continuum features multiple strong cognitive links to the soulful, transcendent, but as well as the material and utilitarian components of the composite that is, by then, with the greatest credibility can be represented as a guide, but also as a criterion for the redefinition of incomplete models, for recalculation of unsafe settings, and of course, as a basis for study and research the unknown.

**Parameter elements (or: Logical lines!)

From this position of view, the key structures of movement are not certain, either as specific individual movements or some damn way certain groups of motion. On the contrary, the goal in certain activities completely determines how the movement will be. If, for example, the goal of aesthetic realization of the music, as is the case in dance, you then surely in such activities will not be running the 500 meters. Just like hitting your head or jumping off the tower into the water. Although it is not for everyone and immediately visible at first glance, the whole structure of movement and composition of movement are completely certain and that such goals. So: 1) The goal - of course that is potentially of such activities, and therefore the motion and structure of motion almost infinite number, but it still does not mean that the objectives of the infinite, and that the intermediate stages that stretch between the target and actual performance are not logically well known . In this range is defined by a specific group performance (eg. A waltz, jive ...), as well as specific processes (transformation processes, training ...) which allows the achievement of the goals. This is valid for any activity, any sport event, the utility of which was, however, and any human activity in general. 2) The legality of the rules - the fact is that the basket in basketball at 304.8 cm in height, that has a diameter of 51 cm, and the ball is leather, elastic of about 650 grams, a playing field about 26 x 15
m on it by 5 players into two teams. The ball may be added, roll, run, throw ... In these conditions, virtually all the default. Here's the proof! One cannot run across the field for a second, but takes 5-6 or more (if faulty) and in addition to the water and passes the ball. The ball cannot (except accidentally, that is, rarely) center the basket in such a distance that is greater than 7-8 meters. According to current data, the average cross in all leagues, for example, about 70-75% (for free throws) 55-60% (for the half-distance), about 40-45% (for distance) and 20-30% (three points ). One cannot jump 8 meters in height to the ceiling and cannot change the direction of movement of 0.00001 seconds. 3) The structure of motion then, will advance unconditionally determined to meet the target in accordance with the rules and principles!

The structures of motion may not be fully known to us, but for a man with two arms, two legs, height between 180 and 220 cm, weighing 70 to 130 kg, with a reflection of 45-90 cm and the like, all structures are certain movements. What they do not know does not mean that they are not !!!! 4) Training - From this it further follows that the entire system of training will be focused on learning and the satisfaction of such specific parameters that will let the team exercise, but also impede an opponent, including energy preparation, tactics, to the setting, jumps on rejected ball, realization of counter-attack and everything else. These parameters are interactive motion structure of the team members. Finally, although the portion of the substance of good workmanship in the textbook 'Introduction to Anthropological Analysis' (Bonacin, Bilic and Bonacin, 2008), when discussing the structure of motion, be sure to specify that it is sometimes very important thing in understanding Kinesiology analysis that is part of the transfer. 5) the effects of sport on anthropological characteristics. In doing so, usually recognize the following situations: 1) apriroristic analysis of the effects of sport on anthropological characteristics, ie. The definition of pre-definable effects due to the nature of kinesiology as such, and is targeted transfer then often subject to structural subjective assessments; 2) quantitative criteria analysis of the effects of sport on anthropological characteristics, ie. Definitions definable effects in accordance with the definition of a stable and clearly defined, usually 'score criteria of a particular sports activities; 3) classification criteria analysis of the effects of sport on anthropological characteristics, ie. Definitions definable differential effects due to the possible effects registerable for a small number of clearly defined entity types; 4) implicit model to verify the contents of the sports field on the anthropological characteristics, ie. Superior, the expected and not necessarily experimentally proven transfer content "implied" from the so-called. sports practice; and 5) an explicit model of determining the effects of the content of the sports field on the anthropological characteristics, ie. scientifically established and proven transfer the contents of the sports field on the anthropological characteristics.

The subject of these approaches is therefore always alone sports, ie. In the broader context of an action, and here usually kinesiology, is introduced through the transfer of content in anthropological assemblies’ of man. For example, it is obvious that the transfer of the contents of disciplines and gymnastics in the morphologic / physical circuits huge because these activities almost entirely so (though different) changing athlete, while the transfer of the contents of sports games like basketball in morphologically complex slightly lower because of the structure these activities included a series of anthropological and properties essential for the result but that are not visible at first glance do not seem crucial (sociological, cognitive, ...). As can be seen, the transfer can be made and executed through the integration of all determinants, ie. Anthropologic assemblies, only the question of the extent to which. It can be said that the determination of the effects of kinesiology in anthropological circuits one of the first tasks of Kinesiology analysis and determined in the primary definition of the sports industry. Of course, this task should be periodically repeated at intervals of 5 or 10 years (or whatever needs) because of the changes in the activities of the stochastic and systematically introduced to dynamic, interesting, development and other reasons.

Memorized movement knowledge (or: What is it anyway !?)

However, as can be seen, reflection on the fundamental structures of motion inevitably lead us to the conclusion that what we learn (motor skills or specific techniques) have a background usually in motor programs that are stored at various levels of the nervous system (and also in other systems in a specific way ). For example, according to the classification of specific applications, stored knowledge can be: 1) Natural forms of movement, ie. Those motions which are learned because they were needed for the everyday life through the development of human technology when the share was relatively small (walking, running, jumping, creep, threading, ...). That part of the knowledge and the motion today for example, used for elementary children and their development dimension, as well as possibly in recreation to preserve function in adults and their "return" nature, which means that these motions relatively the most durable character, al ii them is generally not need to practice at all if the individual is in the natural environment (which is rare today, and even less frequent case); then 2) Working forms of movement, which will then occur naturally due to the distribution business, segmentation workspaces that man generally around articulated and hierarchical (and others) the division of labor. This motor skills also have a wide range of complexity, from the simplest through to rope handling very complex, and is characteristic in that it often appear and disappear according to the technology that man has generally come and you really applied, though of course, some permanently become long-term repertoire of man in general.
In general it can be said that this motion on the level of training and skills that are not and do not have to be globally an inherently to all people, but a number of the number who qualify for a profession. Then there are 3) Other forms of movement, so to speak, in turn, turned the utilitarian nature of the natural environment, and it can not be said to learning skills for work (if you do not consider themselves sports work in the narrow sense) but satisfying sport or competition target, which means that the following needs standardization in which a kinesiology executed, certainly move away from natural causes, but will at the same time strive to design.

The actual maximum level, which will be for him to "pull" and complete the organized preparation, ie a controlled transformation process - training; and finally 4) The entertainment forms of movement, ie. all those motions which have no purpose development in the strict sense, nor work, nor competition, are fun and make our lives more comfortable, but also open up new possibilities and sometimes represent motor research at the individual level and its motor articulations. Of course, it is probably specialy interesting classification of movement made by Bonacin 2010 (figure 3).

Figure 3. The Universal movement classification

Source: Bonacin, D., 2010

Routines (or: Engine knowledge and the hierarchical relations!)

All these movements, here classified by purpose and orientation obviously require a certain degree of learning and memorizing a sequence that will take turns in performing the activity of the musculoskeletal system, as well as the integration and coordination of the various muscle groups, action organ systems, lever and innervations, management and the like. The whole complex system memorizes the motor (and other) knowledge at different levels of the nervous (and other) systems, and largely in conformity with the team and with different bands. We can say also that any activity, any more complex motion, if you really need a long-term, regardless of the reasons for it, must be better learned. And it is best learned when it can possibly be used without faults, which means that it must be automated.

Of course, this refers to those movements that can really be automated, but if we assume that even those most complex have an algorithmic character (and have only their some parameters open!), Then the goal is just to practice automation. This literally means that all motion, all movements can (and must) be seen as routines that are stored and executed as needed. For those who do not perform well or not automated, we are going to have not yet sufficiently well learned. Therefore - knowledge, or routines or need more practice. In this logic we distinguish the following routines: a) reflex, including sucking reflex, posture, reflex patellar reflex movement away etc., So it is easy to notice that this routine with which man is born and are available at the very beginning of life after birth. The development of man obviously was passed to newborn individuals those routines that have had a high value to survive under the current conditions, and these are exactly the routines that correspond eg. Infant; b) elementary, including crawling, walking, running, jumping, pulling through, ie. those that were of utmost importance for motor development after birth and initial survival was absolved. Of these routines depended whether to continue the development of the individual and will be able to participate in the natural environment (meadows, forests, streams, ...), and that dispenses and reduces the threat to their own security, so obviously routines developed by a small child; c) synergies, which are responsible for more complex concepts and development of motor skills and motor dimensions. Of these routines generally does not have to be every single naturally available to everyone, but their logic is uniform and represent a further development of preschool children. Today, these routines are shaped in the form of kinetic activities in kinesiology education, but their logic is primarily a development even in the sports (swimming, cycling, skiing, elements of athletics, fighting, ...). Next d) specific routines whose specificity particularly reflected in the special conditions of execution and the easiest way to say it is a sports initial preparation (if the sport in question) or some form of elemental upgrades synergy routines (in the case of physical education at school ). It is obvious that these are movements that are inherent to children of 7-10 years. These are the elements of ball games, martial arts elements, elements of rhythmic structure of the music, elements of technical movements, etc. Under elements understood here assembles motor information, which are already linked into smaller units that can already be specifically used, but it is not a complex units that would represent any kind of sport or activity kinesiology; e) control routines, and such well-learned movement which already represent a whole or for the development of the necessary skills at a high level or for further specialization in one sport. This corresponds to the cadet age athletes or children in middle school and high school. For these routines is characterized by a period of several years (roughly from 9 or 10 to 15 or 16 years of a child) is performed (or attempts) procedure that will later lead to perfectionism in performance.
At this age, you learn so. sports techniques and sports specific motor movements, which are basically: a) the movement of the object, b) the movement of the opponent, c) the movement of the music, d) simultaneous movement, e) management agent, f) other movements. In the final stage (junior age from 16 to 18 years) integrate the energy parameters in only a learned movement and so the whole process is rounded regardless of whether it is sports or education or recreation; and finally 6) sophisticated routines, ie, motions which have some serious rules and include the goal of working with the subject, the goal of the opponents, the expression in the aesthetic components, team’s cooperation if it comes to that, the purpose of action on the means and the like. It is evident that in such a highly complex movement expects a high level of development of all organ systems, and which corresponds to the age of 19 and over, ie. It is clearly the senior age. Everything is visible on figures 4-8 ("X" mark designates decision points).

**Transformations and result (or: Purpose as Conclusion)**

According to all the above, it is clear that the serious and long-planned transformation processes need to know: a) the properties of the entities to be subjected to the process, b) knowledge of motor skills, c) control over events and d) result. The properties of the entities we have dealt with in the textbook Introduction to Anthropological Analysis (Bonacin et al., 2008). In this section, so far we have dealt with motor skills. Even the remaining control and result. Although the terms supervision and result can not be directly called motor skills, it is clear that since this is a process of acquiring knowledge and other resources, there must be a system of control and verification achieved, and these concepts are introduced in the context of the parameters of the transformation process, not specific kinesiology, taxonomized group entities or particularly capable individuals. That is precisely why these terms are associated with the key structures of motion. CONTROL can therefore generally be: a) operational, and includes 1) general preparation, 2) immediate action ie. The activity, and 3) the analysis performed.
This type of control is responsible for the short-term effects of that transformation. E.g. in the sport for micro cycles whose duration is up to several months maximum. Then may be b) tactical. It includes 1) transient intention, 2) sustained action, and 3) synthesis performed. This type of control is responsible for the important effects of the transformation in mesocycle ie. About a year ago and in courses for one year; and finally 3) strategy, and includes 1) the final purpose, 2) continued operation, and 3) finding performed. In this way presented, finally becomes clear that control as a concept therefore is not and can not be in the domain of internal parameters of the transformation process, education in school or training in sports, but in the domain of management procedures to ensure the necessary conditions and resources required for the implementation of the transformation process as well as the necessary information for subsequent multiple scientific evaluation in order to realize that the general was and how to improve as a transformational process that will be in the following time intervals implemented. RESULT however, in the context of kinesiology analysis, we look at: a) the consequent transformation articulator of all previous actions that we call programmed b) any action that had the deliberate intention to change transformation parameters, ie. The obvious articulator subsequent intentional variation regardless of the reasons for their introduction and c) effects of unknown factors, which could be positive or negative in relation to the target achievement.

The result, as such, therefore, can be: a) hypothetical, which appears in three forms as 1) planning, 2) probabilistic, and 3) stochastic, which then obviously depends on how much of the actual knowledge in this result that a hypothetical activated in a controlled transformation process; then b) the initial, which appears as 1) unknown, 2) estimated, and 3) measured. It is obvious that in this case the key thing degree of credibility of the initial data, knowledge of the initial conditions and the knowledge of the initial values of the entity; then c) transitive, ie. a transitional result of which are associated with the current achievements and accomplishments, but very rarely and as that we want to reach the final, which, of course, depends on the system of competition, the event calendar and other, mostly organizational factors in sports or organized training. Transitive result can be 1) random, 2) directed, and 3) strictly designed. Obviously, this is a stage opportunities in directing our action on the score, however the result looked; followed by d) a control, which may occur as 1) simulated, 2) strict laboratory, and 3) site. This is about the extent to which we can direct knowledge and energy, as well as other necessary resources, targeted to requirements that we accurately speak on the condition that the individual (or team) which follow.

It is evident that the control result is the concept of transitive because the transitive what interests us as a transient value in terms of the projection of the final achievement and it was recorded, and the control is aimed at the achievement of the current default and corresponds to the current default target, usually given as a dichotomous yes / no recorded acutely biased achievement; and finally we are left with e) the final result, which of course, can only be realized as 1) premium, 2) rational, and 3) shortfall. It is obvious that this is a target achievement and that kind of results in this logic depends only on the set goals at the beginning of the transformation process in sport or education or anywhere else. As can be clearly seen, as a result of the term is not a mystical and irrational construct which can be manipulated at will. No, this is a very tangible and clearly stated expected range. Note for all.

References


KLJUČNE POSTAVKE PARAMETARA STRUKTURE GIBANJA U KINEZIOLOGIJI

Sažetak
U ovom radu moguće je prepoznati nove fenomenološke postavke struktura gibanja koje se neobično i na avangardni način utemeljuju uz četiri stvarne vrijednosti strukturiranja gibanja a to su: cilj, zakonitosti, strukture i trening. Sve to unutar temeljnog zahtjeva u kineziologiji a to je da se prepozna proces kao autohtoni pojam kineziologije s ciljem postizanja rezultata.

Ključne riječi: kineziologija, gibanje, strukture, rutine, proces, transformacije, rezultat