

Professional paper

LAWFUL PRINCIPLES IN SPORT

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Radomir Kostić

Faculty of physical education, University of Niš, Serbia and Montenegro

Abstract. *Research on lawful principles in sport is an indispensable content of the theory and philosophy of sport. Which part of that theory is going to deal with those principles is insignificant.*

Philosophy of sport should emphasise some characteristics of the philosophic cognitive process.

Philosophy of sport in relation to the exactness of the science in sport plays a role of the predecessor. Philosophy is able to create possible images of sport which science and experience - practice with their methodology confirm or reject. A power of prediction is not granted to the philosophy, it is sought for from other sciences. Images of sport created by the philosophy of sport represent metaphysical categories and they have nothing to do or at least not apparent obligatory connections to the realistic – exact categories of sport.

Lawful principles in sport show at the same time a unity of form and inner-spiritually shaped being which belongs to sport as a distinct anthropological discipline. Philosophy and theory of sport do not take over the competence of the other science disciplines by dealing with general lawful principles and categories of the overall cognition.

Global principles of cognition and cognition in sport indicate typical relation of cognition in general and specific (sports) cognition and bring about respectful shaping of factual knowledge in sport.

This paper attempts to classify the lawful principles in sport into the principles of synthesis, differentiation, sports development, elementary causalities, shaping of the cognition and transformation of the lower laws into higher ones.

Key words: *Philosophy of sport, theory of sport, cognition, classification of laws*

1. INTRODUCTION

Presence of lawful principles in sport can not be recognized in the existing laws in the same way as the natural substance can not be recognized in the defined laws of nature. Sport, training session and sports acts exist and it is quite logical in that reality to ascertain that there are lawful principles which regulate the existence of the sports act. Complexity of the sports act (at least body and soul) points out that it is differentiated in advance. Prior to the world record achievement the sportsman has already possessed materiality, spirituality, philosophic possibilities etc. It is not sport which has by its lawful principles revealed that differentiation. The original differentiation of sport comes to the natural, principled deliniation of the existence and action of the substance permanence. Cognition of this is never absolute, as the nature is not absolute but in contrast, it is in permanent flaw and gives opportunity that in one point of sports development certain principle is applied. There is a variety of forms for the action of the laws in sport (nature, soul and society). In such a situation coincidence in sport is not excluded, on the contrary, it is quite common because of the limited abilities of the body, society and spirit. The development of sport is based on the fact that it is not random. Nevertheless it is regulated by the existence of the sports lawful principles.

Many of the single basic lawful principles i.e. in biomechanics, or biochemistry act in their own right and always in some special surroundings in which other elementary laws apply.

Sports anthropomotorics represents a quality of the sportsmen which appears as the application of anthropomotoric principles whose action can be understood only through the knowledge of the application of elementary laws, i.e. hystologic, mechanical, cognitive etc. In human body single laws do not apply separately and purely, for example breathing is not separated from the functioning of the nervous system. In training session (sport) the wholeness of the sportsman is developed by the interwoven action of lots of simple laws. However, in some of the sports disciplines, especially in extreme sports, the rotation of this principle is observed. Thus the sportsman as a whole is developed mainly in one ability or in the special raw of abilities (for example, a marathone sportsman is developed on the raw of abilities predominated by endurance).

2. PROBLEM AND AIM

Lawful principles in sport are in continuous endosmosys and egosmosys with all the laws of the environment in which sports take place.

Components of sport (training session, sports act, anthropomotorics) are just a part of the culture matrix which is inseparable from the material. Despite the fact that sport has a close system of causality new elements from the surroundings through senses and feedback introduce new content in sport and they still can not be anticipated and controlled by the advance in science.

Application of single laws in sport, for example in mechanics, does not exclude enforcement of other laws, for example in psychy. Application of all laws is constant. A question is raised in which area in sport the laws apply and would encompass the action of single laws in different areas that make sport a complex phenomenon. Due to the variance in the conduct of sports training sessions, i.e. application of training facilities and

the complexity of sports act content it is essential to define laws for all the differences in training process and sports resources to make it predictable. (1)

3. THEORETICAL ASPECTS OF THE PROBLEM

For the practice of cognition in sport (2) there stands out a unity of the action of single laws. Single laws keep their differentiability in the wholeness of sport. However, in a situation where the theory of sport can not explain with sufficient arguments the action of single laws then the science in sport is taken as an interior limitation which hinders further cognition. To acquire some further knowledge it is necessary to have science dealing with those single laws. Therefore in sport one can notice the necessity of application of other scientific disciplines so much so that sport is thought of as a multi – disciplinary phenomenon. That phenomenon *contradictio in adjecto* in the laws in sport is a relative one, and is not enough to meet all the demands set by the completion of the sports act. This contradiction is sharpened even more when the specificity of sciences in sport such as psychology, physiology, sociology, physics, anthropology etc. is emphasised.

Limits of the application of laws in sport are set by man's life in nature, society, i.e. his surroundings. It follows that natural, social, spiritual, cosmic and other laws are exerting limiting influence on the application of laws in sport. By defined natural laws it can be shown that in sport there are natural elements, and the existence of social laws points to the existence of social elements etc. By the presence of laws in sport it can be proved and defined the existence of the sports act, sport, training process or anthropomotrics.

3.1. Role of laws in the creation of the images of sport in reality

For the creation and existence of the images of sport in reality besides the existence of the natural, social, spiritual and other laws it is necessary to have facts about sport, training process and sports act. In order to make the laws become constructive elements of the images of sport and part of the reality in life of man they should have at least three important characteristics (3).

a) Characteristics of validity. Laws in sport should be valid no matter if they appear just once or very often. After the appearance of A there should follow the appearance of B. However, the appearance of B does not assume the appearance of A.

b) Characteristics of the alternative. All contents in sport, in cognition, are related to some kind of alternative: in relation to their content, the form they have, the purpose they fulfil etc.

c) Reaching the essence of the laws. The laws exist and that fact is undisputable but they don't always show the gist of what they mean.

The content of the laws can be supported by the facts or show up in our mind as the form of reality.

For the theoretical – cognitive process it is important to define the relations between laws and facts in sport. The image of the reality of sport is not made of the laws without facts. Sport is based on the chain of the facts of different structures (anthropomotrics, psychology, biochemistry etc), which are grouped in the sports act as the unique facts of sport. The way to reveal laws in sport is well known, first many different facts were

found out and on their basis followed the laws. Facts in sport appear as the phenomena which are in the area between cognition and laws. Thus sport is based on the reality of the facts but at the same time on the cognitive processes by which laws are revealed. It would be erroneous to build the image of sport just on one basis. It would be false as well to build the notion of the science of sport just on known laws and not to take into account the significance of the facts. (4).

Cognition of sport is still rudimentary.(5) Lifting of the barriers of cognition does not depend just on the content and the quantity of the discrete components of the sports act. For the natural components there are more set laws and for the cognitive components there are less set laws. It is certain that the knowledge for the latter will rely more on compensatory facts on intelligence, volition, motives, emotions etc.

Knowledge of sport is principally threefold:

1. The factual body of knowledge on real components of sport
2. Knowledge on laws which regulate relations between thought components and
3. Intuitive knowledge.

On the basis of this threefold modality of knowledge cognition is expanded by the existence of differences in the scope of the subject of research in sport: (a) as the separate form of cognition and (b) as the cognition of the laws in sport. The difference in research springs from the fact that knowledge refers to the real states and the reality of sport, and the laws apply with no temporal and spatial limitations (for jumps in any sport the law of gravitation applies in every corner of the globe and at any time).

The existence of global laws in sport (which comprise all energies generated in the field of sport) and the existence of the specific laws referring to the components of sport (the first relates to sport as a whole, and the second relates to the constituent elements: basketball and basketball anthropometrics, psychy, social surroundings etc.) direct cognition to a continuous flaw between them. In the same way cognition must go between cognition in sport and cognition of the laws.

There is no possible content of sport as a reality, as a multidimensional phenomenon which within that multidimensional structure does not take into account and recognize inner laws of the separate components (anthropometrics, psychy, techniques etc.). It is a different question how much these laws stemming from sport come from the reality of sport. Likewise one can raise the question of the origin of the components of sport. Therefore experience in sport is more than experience (Kant) because it besides experience in sport (for example in volleyball) contains a priori forms drawn from physics, biology, and other anthropologic disciplines which in their own right mean more than they mean in sport.

Anyway sport is a part human reality and that reality can be known by defining the laws relating to natural, social, intelligent, logical being and maybe religious, although religion does not recognize the existence of these forms of being. In all components of the being of sport it is necessary to differentiate the action of laws from the much simpler defining of the sequence of facts. Cognition goes just into one direction. The fact that something is proclaimed a law in sport maybe just a coincidental combination of some laws which are not known. The real laws are "under the surface" and are still unknown. The reality of sport is such that it can not be mirrored just by natural or social laws. Science is still very uncertain and is in continuous research if under present basic laws (for example diffusion of liquid through the cell membrane) there are some "deeper" hidden

laws. It is as well sure that sport is not the most complicated real phenomenon in human life, but by defining the laws one can enlighten at least that side which is formed on the basis of the creation of the sports act as one characteristic image of reality.

3.2 Possible classification (typology) of the laws in sport

Although sport is a real special content of the separate "more simple" components it is not simply a sum of these. Cognitive processes in sport demand special and separated cognitive process, interest, which is to reveal originality and the connection of the components of sport in one sports act. Sports act occur as special synthesis and unities and not as separate sequences even though one can not deny the existence of the sequences. As special unity of sports content the sports act of the basketball players of the Federal Republic of Yugoslavia (world champions in 2002) does not call for further decomposing. "World champions for 2002" represents the eternal and irrepeatable unity of the basketball players, training process and sports act. Laws in sport according to the markedness of finity of the sports act differ from the laws in natural, social and spiritual spheres.

Apriori characteristics of the laws in sport represent their possibilities, strengths by which prescientific matters of the sports reality transform into the possibility of reaching cognition in sport thus making it part of the total matrix of the knowledge of man in general. Such knowledge should make it possible for the equality of sports knowledge with the knowledge in other anthropologic disciplines.

1. *Laws of synthesis*

Understanding of the sports act "World basketball champions in 2002" demands understanding of the objectivity of basketball in FR of Yugoslavia, of anthropomotrics, selection process, psychy, of nourishment, knowledge, experience and other components of the basketball players' sports act. Besides, it is necessary to grasp the performance of each individual basketball player as well as the team characteristics of the Yugoslav players which of course are unevenly distributed within each person ("collective individual", Sartr (6); "spirit of sport", D.Tomic (7)). In this process of cognition, essential for basketball, it is necessary to have corresponding *action of the characteristic laws of synthesis* which are typical for basketball. These laws should prevent atomization of basketball as the sports act into the constituent components (technique, tactics, psychy, anthropomotrics, economy, politics etc.), or into the individual and collective. Those synthesis defined as laws of action of the constituent components draw their force from the parts and create a unique sports act of basketball which as a sports form can be defined as the lawful phenomenon, surely not only in the sense of natural or natural – scientific ideals but in the sense of social or social – scientific ideals.

2. *Laws of differentiation*

Laws of differentiation represent defining norms of sport. In sport there are basic athropomotoric abilities which appear individually and differently in each person or sportsman. With regard to the abundance of dirrerences in abilities and individuality there is the abundance of sports. Within the realm of sport and sports acts bodyly component, psychy, anthropomotrics, technique, tactics etc., stand out by their originality. Among sportsmen talented and genius ones appear. All actions of the mentioned differences permeate their performances and can be attributed a notion of differentiation. This notion encompasses everything which has certain power which in turn can be expressed by laws.

Those distinct powers can not be classified under one common form of the power representing a unique source of power which creates a sports act. Notions of synthesis and differentiation are not "pure" notions, and therefore they do not have completely pure symbols for their designation.

3. *Laws of sports development*

Each sport as unity, each sportsman, each sports act develop through stages which can be clearly or less clearly distinguished. Those stages are defined as: birth, youth, maturity, getting old and death. Regardless of the fact that definition of the content (especially material one) is hard to establish in these development phases certain true laws can be recognized.

4. *Laws of elementary causalities*

causa materialis, causa formalis, causa finalis and causa efficiens (8)

Separate changes in some constituent element of sport (for example psychology) are changes regarding elementary causalities. Some new knowledge in one element of sport can substantially influence the change of the sports act. Evident consequences in one segment of sport, for example the use of dope can reflect on the change of quality and quantity of the sports act. The significance of recreation in the resting time of employees "shaped" the process of production in many a big factory. In sport and work one needs special knowledge of the objectivity of phenomena and of the elementary laws which are the cause of the occurrence of those phenomena. By the aid of their content and form bodies of knowledge have to provide the creation of specific truth, for example the truth of the effects of dope on the nervous system, and then to reveal that by the use of that dope sports results or trainability can be upgraded.

5. *Laws of the shaping of cognition*

It is well known that cognition processes follow the set and for the time being scientifically verified paths of cognition. Those fixed paths of cognition are applied in sport as well. That is how a lot of confusion has been created in the most abstract notions for example working – training, sport – art, profession - amateur, sports act – product etc. Remoteness of these notions has as a consequence relatively pure products which can not be mixed. But in default of the laws on cognition in sport, the truth of sport has not been purified yet, so much so that some theoreticians of sport in the truth of sport recognize partially the truth of work, art, politics, religion ideology and others.

6. *The rule of transformation of lower laws into higher laws (sublimation)*

If the number of those who go in for sport increase this means that there are favourable conditions to use the law of the great numbers and figures. *such a law reflects the factual state of affairs but it does not show the cause of that phenomenon.* In this case it does not matter if the cause is real one, truthful or false one.

It would be wrong to conclude that from such a number and according to the necessity of the results (of those who are not in sports) there follows the same derivation of the certainty as for the sportsmen. Statistical structure comes as something merely external in regard to direct causalities of the constituent elements in sport, training and sports act. That external does not have a possibility to express that which is internal, or to express that causalities of quality or essence appear as external manifestations.

Significance of statistical coefficients (parameters) should replace the quality and "power" which the phenomenon contains and out of which the sequence of figures is

made. Figures (entities in sequence) are just appearance shapes and in no way single occurrences containing the qualities that one wishes to research. Statistical ways reflect relationships generated by the scientific synthesis, which is defined by figures and which are summed up in the unity of one group. When establishing muscular explosive power certain number of subjects is used but nobody is asked about the energy through which explosive power is exerted as a quality of each and single entity. In that way a unity of the group of subjects with explosive power is established within the bigger group which is strong. In all statistical studies of the relation of quality one starts with certain number of subjects which are classified into sequences and one holds to the relations of those sequences and the individual causes under superficial forms of sequences are not researched. Thus on the basis of surface occurrences in sport, anthropometrics and sports act one assumes about relations which are "under" the surface and should point to the genesis of the occurrence to be researched.

According to the law of great numbers it follows that in sport as a big unity inner strengths, actually depending on the size of figures, are developed. On the basis of "big figures" one can scratch two rough assumptions: firstly, a great number of sportsmen create competition, so one can expect sportsmen on both ends of the extremes continuum and secondly, in such a vast number of participants there has to appear, in some defined relation, sportsmen with some expected qualities. Therefore in statistical studies there are at the same time two parallel sequences of occurrences: one is on the surface, external one, expressed by figures and the other is more profound, and it is expressed by the relations of causalities.

Thanks to the abstract categories statistics is used to make conclusions about the energy which is to cause the occurrence of quality. Running speed at 30 meters does not give answers about the essence of speed as the quality of organic processes in the body of the sportsman.

To make it possible for the theory of cognition to define cognition in sport as one complex unity and to make such knowledge comprehensible this theory has to separate methodology of cognition carefully and consistently (according to the surface and deep sequences which reveal forces pulling together the unity of sport) from the other unities in the real world and scientific disciplines. Of course, some forms of knowledge appear more often than others, some methods are not consistently consequential, such as for example, consistency of natural laws is.

It is obvious that sports factual state and the structures of these facts represent special forms of cognition. The image of the sports act is made up of surface, apparent forms which someone in the surroundings perceives as the phenomenon, an event, (a goal, smetch, etc.) and at the same time does not consider real forces which create that image, and which are under that surface image (processes in the central nervous system, in the muscular tissue, in the inner of the body). That surface appearance never goes into the essence of some deep element, for example, never separates the influence of the explosive muscular power of legs in the pole jump, but it only uses interrelations with other qualities.

Surface (external) viewpoint of sport systemizes sport according to the other irrelevant categories such as types, different notions or numerical (statistical) relations etc. These categories are based on abstract knowledge and real causalities or the quality of the phenomena are put in the focus of attention (9). But cognition of sports always relates to

the individual, to the sportsman as the individual because the cognition of sport is directed to the individual - sportsman or non-sportsman as well.

4. CONCLUSION

Finding and researching laws in sport is the necessity of the theory and philosophy of sport. Philosophy of sport emphasis general and special features of the cognitive process and the cognition. Cognition is the basic precondition for the creation of image of sport in philosophy. Creation of the image of sport in philosophy renders scientific methodology able to use its means and methods in order to accept or reject those metaphysical images.

Theory of sport has up to now dealt mainly with general and specific facts of sport. However, it is certain that facts are somewhere between laws and cognition.

In sport there are limited general laws which encompass specific and elementary laws on lots of contents of sport. Elementary laws represent forces enabling the appearance of global laws.

Laws in sport can be applied in each area and at any time.

Laws in sport can be classified as laws of synthesis, differentiation, sports development, elementary causalities, shapability of cognition and transformation of the lower rank laws into the higher rank ones.

Laws in sport show the unity of apparent, (surface given) forms and within the being of sport which acts under the surface (appearance forms) and which defines the quality of sport.

By dealing with general categories of cognition, general and elementary laws theory and philosophy of sport do not take over competence of the other scientific disciplines but on the contrary, they emphasise their contribution to and the significance for the essence of sport.

Finding out and exploring laws in sport is not a special and separate aim of the theory and philosophy which is abolished once a certain socio – economic system (and even a system in transition) fulfills its interest, but it represents a stable feature of the theory and practice.

Laws in sport are immanent contents which permanently exist in it so they can not be excluded as utilisable aims, especially not as ideological ones, as was the case in physical education.

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5. In philosophy logic is a part which studies laws of thinking and especially principles of thinking which were formulated by Aristotel, (principle of identity - truthful, principle of contradictory - wrong, and the principle of the exclusion of the third - possible) and Leibnitz (the principle of sufficient reason).

6. Sartr, J.P. (1983). Kritika dijalektičkog uma II (A critique of the dialectic mind. II). Beograd: Nolit.
7. Tomić, D. (1990). Naukovanje u sportu (Science talk in sport). Beograd: SIA, p.194.
8. "For centuries philosophy proposes the existence of the four causes: 1. causa materialis, material, matter out of which for example, a silver bowl is made; 2. causa formalis, a form, shape that material takes on; 3. causa finalis, purpose, for example, ceremony in the act of sacrificing according to which the said bowl is defined to its form and matter; 4. causa efficiens, the one that brings about completion, finished, real bowl: a goldsmith". Heidegger, M. (1955). Šta je to filozofija (What is it - philosophy). Zagreb: Biblioteka centra (bc), p. 94.
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ZAKONITOSTI U SPORTU

Radimir Kostić

Proučavanje zakonitosti u sportu je neophodan sadržaj teorije i filozofije sporta. Koji će se deo teorije baviti zakonitostima od drugorazrednog je značaja.

Filozofija sporta treba da istakne neke osobenosti filozofskog saznavnog procesa. Filozofija sporta prema egzaktnosti nauke u sportu ima ulogu prethodnice. Filozofija ima mogućnost da stvara moguće saznavne slike sporta, koje nauka i iskustvo - praksa svojom metodologijom potvrđuje ili odbacuje. Moć predviđanja filozofija ne dobija sama po sebi, već je crpe iz moći drugih nauka. Slike sporta koje iscrta filozofija sporta su metafizičke kategorije i nemaju nikakve ili bar ne nužne veze sa realističko-egzaktnim kategorijama sporta.

Zakonitosti u sportu pokazuju istovremeno jedinstvo forme i unutar-duhovno oblikovano biće koje pripada sportu, kao posebnoj antropološkoj disciplini. Filozofija i teorija sporta ne preuzimaju kompetencije drugih naučnih disciplina time što se bave opštim zakonitostima i kategorijama opšteg saznavanja. Opšte zakonitosti saznavanja i saznavanja u sportu izražavaju tipičnost odnosa saznavanja u opštim i specijalnim (sportskim) saznavanjima i izazivaju odgovarajuće oblikovanje činjenične građe u sportu.

Ovim radom učinjen je pokušaj klasifikovanja zakonitosti u sportu na zakonitosti sinteze, diferencijacije, sportskog razvoja, elementarnih kauzaliteta, oblikovnosti saznavanja i preobražavanja nižih zakona u više.

Ključne reči: filozofija sporta, teorija sporta, saznavanje, klasifikacija zakona.