



COMPREHENSION OF THE PHENOMEN OF STATE AND LAW THROUGH THE APPLICATION OF A SYNERGETIC APPROACH

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Summary

The legal system is examined; the structure of the state is given; synergetics is analysed; the thesis describes the synergetic approach; the work illustrates synergetics as a science; the state structure is explained; synergistic perception of size and quality changes within the state structure is served; the influence of the constituent elements of the legal system on its further functioning is investigated; the future development of each legal system in a synergistic view of forecasts regarding is formulated; the main methods of the connection between the theory of state and law methodology and principles of Synergetics are investigated.

Key words: legal system, state structure, synergetics, synergetic approach, self-organization, theory of state and law.

Аннотация

Рассматривается правовая система; анализируется структура государства; рассказывается о синергетике; описывается использование синергетического подхода в теории государства и права; освещается синергетика как наука, которая теоретически разъясняет процес самоорганизации государственной структуры; изображается государственная структура; подается синергетическое восприятие величины и качества изменений в рамках государственной структуры; исследуется влияние составляющих элементов правовой системы на ее дальнейшее функционирование; формулируется синергетический взгляд на осуществление прогнозов относительно будущего развития каждой правовой системы; исследуются способы сочетания методологии теории государства и права с принципами синергетики.

Ключевые слова: правовая система, государственная структура, синергетика, синергетический подход, самоорганизация, теория государства и права.

Problem statement. State structure is an actively interacting with the external environment totality of principles and interrelated elements that form a stable reality. The structure of the legal system appears as a result of appearance in a certain way of communication among the elements that act according to the adopted in the legal system set of norms and values. Synergetics reveals the principles of formation of state structure from the components. Combining of the sciences of «Synergetics» and «The theory of state and law» has already occurred.

The state of the research. A significant contribution to defining the basic concepts of the theory of state and law and to the synergetic analysis has been made by such scholars as: R. David, K. Tsvayhert, R.G. Barantsev, V.E. Voitsekhovitch, Damirli Mehman Alisha ogly, I.S. Krivtsov, I.R. Prigozhin, H. Haken and others.

The purpose of this research paper is to reasonably prove that in fact, it is possible to overcome the existing problems within each state structure through the application of principles of synergetic approach in the theory of state and law.

The presentation of the basic provisions. The State is an open and nonlinear system that is capable of self-organization. The system openness means the presence of channels for regular

exchange of information, substance and legal energy with the external and surrounding environment, i.e. with the society as a whole [1, p. 11]. When the matter concerns the channels in the material sense, it refers to the point, localized courses. As to the State legal self-organizing systems, volumetric channels situated at each point of the mentioned systems should be taken into account. Exchange processes occur not only between the self-organizing systems, through their borders, but also at each point of a particular system.

The activities of the State are controlled by the community of all state-organized individuals, that is by the civil society [2, p. 270, 537, 360; 3, p. 63]. The Law guarantees the free choice of economic life to every person, asserts the primacy of human rights and guarantees the liberty of conscience. The human activity based on self-organization and carried out through the use of a synergistic approach to the theory of State and Law is a driving force for the civil society development [4, pp. 406, 489]. The human mind operates in a self-organized way.

In fact the application of a synergistic approach ensures the study of means and conditions for self-organization of the legal system elements as a single whole [5, p. 31]. The limits of the legal system functioning, the mechanisms of interaction between its constituent

elements, the nature of relationship between the individual links of the legal structure and the required consideration of the environmental influence on the legal system development are determined by the totality of ideas and principles, i.e. by the concept of the legal system existence [6, p. 134]. All actions in the legal system are interrelated.

Let us consider in detail the phenomenon of the legal system self-organization. Each component responds to the impact of the information coming into the legal system both from inside and outside. The structure is arranged within the legal system due to internal factors without specific external influence. Only the linear system operates due to the influence of external factors [7, p. 280]. The legal system is capable of independent, internally caused activity towards the development of organization in the accompanying negative atmosphere of existence. The legal system components interact with each other and with a single whole formed from them. The legal system naturally acquires its own structure and inherent functions without any outside influence. In other words, we are talking about the self-organization, which includes human groups and certain other legal resources. The self-organization is a combination of planning and management [8, p. 119; 9, p. 301]. At the moment of self-organization the state of elements



is being changed. The transition from a stable state to another stable state usually occurs through chaos, the highest point of which is called bifurcation. The constituent elements choose their further actions of own free will, carry them out together and at the same time contribute to the success of the whole formed through their unity [10, p. 44]. Changes in external conditions stimulate the emergence of qualitatively new phenomena [11, p. 29]. The synergetic analysis is used to carry out a thorough scientific review of complex phenomena occurring in the legal system in a self-organized way as a unity of the constituent elements connected by their common function [12, p. 69]. The processes of legal regulation within the legal system are realized by each its element being the simplest indivisible part of the legal system that performs certain functions and is not subject to further division. The contact of the legal system element with the external environment is simulated through the coverage of inputs and outputs of that element. It feels the influence of environment through its inputs and affects the environment itself through its outputs. The number of inputs and outputs determines its degree of tension. When analyzing and predicting the legal system condition we should take into account the relationship between the inputs and outputs of the element. The concept of indivisibility is arbitrary and is determined by the specific tasks. The elements of the legal system are united by their common goal and objectives. Not being homogeneous and identical, having the required properties, they perform certain functions [9, pp. 12-15; 13]. The legal system elements are subject to be ordered or arranged in a certain specified way. The reliability of each system element depends on its position in the system structure. The elements do not include legal concepts and jurisprudence in general. The legal regulation of the behavior of legal environment components is the criterion for selection of elements in the legal system. Such elements as constituent links determine the future behavior of the legal system, and the latter manages them simultaneously [2, p. 270, 482; 14, p. 200]. The constituent elements of the legal system are endowed with certain properties, between which there is some relationship [9, p. 9; 15, p. 485]. Each element and subsystem

as an aggregate makes a component of the legal system. The system division into individual elements and subsystems is ambiguous [16]. The legal system components combine together to achieve some objectives, a set of links is established between them, there appears an interaction and stable ordering, so they constitute an integral unit forming the structure of the legal system. The ties between the structure elements are natural and regular [17]. They are relatively independent from the elements themselves [16; 18, p. 313]. A number of interrelated legal elements form a stable reality having certain integrative features and internal regularities and cause the phenomena of legal reality. This totality of interrelated and interconnected legal actions is used to regulate relations between the people unified by their common living conditions. Such legal arrangement requires successful combining interrelated legal means to achieve a condition when physical and mental, legitimate and natural components make mutually agreed indissoluble unity [2, p. 483; 19, p. 64]. The complex legal system consists of regulations and institutions combined in a certain sequence. The legal system is multilevel. The legal system includes all that is necessary for the normal process of legal regulation: legal propositions, legal relations, jural facts, legal acts (normative and individual), lawfulness, legal awareness (sense of justice), legal culture, juridical personality, law enforcement measures etc. [2, p. 482-483; 20, p. 90; 21, p. 560]. Therefore, the legal system is an integrated set of the following components: the system of law; the system of legislation; legal institutions and legal establishments; legal concepts, principles and symbols; legal policy, ideology and culture; legal practice. Let us divide the legal system into some component parts to determine the relationships between the system elements. We must detect the most sensitive elements of the system, eliminate insignificant and focus on the most important aspects of the given problem. The degree of division depends on the assigned goal which is derived from the nature of the problem being solved. At the same time we should consider the self-organized change of the subsystem and element characteristics and take into account the self-formed regularities of legal problem solving.

Statistical research methods are very useful at the stage of determining the interdependencies between the system elements: application of complex methods and techniques to process a large data set of general or selective observation. Based on the content of the science of «Synergetics» submitted by Hermann Haken we assert that the legal system as a holistic formation including interactive elements creates some new properties [12, p. 74, 76; 15, p. 5; 22, p. 5]. The legal system is able to be changed «in space and time». Such activity is carried out in order to regulate social relations [20, p. 90]. The legal system of the State is seen as a complex system in which the parts of the whole are located at different degrees in a specific order: from the highest to the lowest and vice versa [9, p. 245]. It is safe to say that the legal system develops only if there is a change of the system status over time [23, p. 200]. The time factor should be taken into account while determining any legal actions.

After entering the legal system the partially ordered set of elements creates a legal framework [5, p. 17]. Each element of the legal system purposefully implements all actions aimed at preserving and maintaining it in good condition: the self-preservation of the legal system takes place [24, c. 500; 25, p. 17]. Systems with strange attractors are considered to be unstable. The strange attractors determine the system motion to the decreased level of order or to chaos [26, p. 13]. Synergetics demonstrates the diversity of chaos. Random movements within the system identify its instability [27, p. 197]. The instable state means that the system is susceptible to small fluctuations. Small fluctuations are always observed in the real internal processes of the State functioning [28, p. 25]. There are always some noticeable deviations from complete stability.

An open nonlinear legal system is far from equilibrium state. Such system is nonequilibrium due to dissipation of energy received from the outside. The self-organization on such systems can result in formation of stable structures existing on condition of permanent loss of system energy. The nonequilibrium structure continuously exchanges substance and energy with the environment in which it has been born and which provides its structural stability. With the advent of



complex ordered structure we observe the increase of the system internal indeterminacy, disorder and instability, which is compensated by the negative flow of outside disorder and chaos. [8, p. 44; 17; 24, p. 403]. Under the above conditions there is a change in value of binding energy bringing together different parts of any system, i.e. entropy exists. It remains invariable if there is a series of sequential actions leading to inverse interdependence of several interconnected system elements: the transformation of one element causes the transformation of another one with the opposite result. And when the interdependence of elements is not inverse, the increase of entropy is observed. The augmentation of the specific energy is a primary means used to cross the entropic barrier. The entropy of the legal system in the Universe, as a measure of internal disorder, will continue to grow constantly threatening its collapse: the increasing degree of disorder inside the legal system lowers its resistance [2, p. 5]. It is known that the energy in nature can pass from a warmer body to a colder one, but never in the opposite direction [29, p. 188]. So disintegration of a single whole to complementary components takes place. Their reverse integration requires large energy expenditures. Establishment of the correlation between the entropy and the potential efficacy of the legal system would be erroneous [8, p. 48]. Entropy often appears due to the behavior of individual system components. When choosing protection means against entropy we should take into account the effects of a new system division into components [29, p. 221]. The growth of entropy leads to ordering the legal system status [8, p. 46]. Changes during the legal system development are very slow in the time range, and the system structure remains unchanged [30, c. 22]. Therefore, its condition does not undergo any changes.

The State structure in aggregate consists of government and public institutions [28, p. 20]. The complex state structure is a holistic formation where all system elements interact with each other. Although systems can be diverse, they cannot be arbitrarily combined into a complex structure. We should consider the degree of their relationship, taking into account the stage of their development. Creation of the unified

stable State structure requires careful selection from among the available simple structures. The impact on State structure is caused by the nonequilibrium and openness of the legal system, by the existence of energy flows passing through it, by the fact that the system is built into the outer world, i.e. interacts with it. The structures are developing due to the nonlinear energy sources [31, p. 89]. Each structure is developing slowly during rather long period of time. Nonlinearity can cause making several qualitatively different decisions on future legal system changes [28, pp. 17, 25; 32, p. 34]. Subject to qualitative changes in the internal environment of the State structure we may expect the emergence of its new possibilities: new components, new attractors, new bifurcation points and new ways of evolution. The further development of the legal system is determined by a single moment – the bifurcation point. Actually this is a point through which the transition is made to one or another order of legal system regulations, to the attractor. At the moment of bifurcation the system elements are presented the right to determine independently their preferences for the further development of the legal system [33, p. 162]. If there is transference to a condition where the elements of the old legal system may form a new order, a new structure, then the phase transition takes place [16]. At the same time various substructures appear in the State environment. Social parameters remain unchanged. The constituent elements of the State structure independently determine the internal conditions of its institution and functioning [34, p. 139]. The State performs its own functions under different circumstances. When small changes in external factors correspond to small changes in initial parameters or properties of the structure, the condition of the State structure is stable [18, p. 312]. Small disturbance taking place in its internal environment dramatically increases due to nonlinear positive feedback, or such small perturbation decays due to the same feedback. Therefore, the created complex State structure is only relatively stable. It exists stably being remote from the moment of sharpening. But around the time of sharpening it tends to spontaneously disintegrate, because it becomes sensitive to small fluctuations, disturbances. The

influence of small perturbations depends not only on the stage of the legal system development, but also on the location of the State, as well as on the degree of the State structure complexity. If a small perturbation enters the center of the State structure during the allegedly stable stage of the State development, it is immaterial: it only slightly changes the time of sharpening. Such disturbance is not felt at all for a considerably long time, because the State structure is changing slowly at this stage. Small perturbations do not play any role if they get not into the center, but into the outskirts of the State structure. However when there is a significant increase in the perturbation size within the State structure, or the perturbation occurs extremely vividly, then the structure begins to develop rapidly causing sharpening [28, p. 24]. The matter concerns the internal activity of the structure.

Conclusions. Synergetics rebuilds our worldview. Already today the future and the past are present in some parts of complex State structures. The use of a synergistic approach makes it possible to predict the future through: a) analysis of the processes of movement towards the chosen goals – attractors; b) investigation of the State structure as a holistic formation, taking into account the direction of its components development, and c) the determination of an ideal sought by every person in particular and by the society in general. The way to perfection of the complex State structure, i.e. the process of its development is a way to new structures with high nonlinearity and new properties with more complicated range of shapes and substructures.

The study of chaotic processes occurring in complex nonlinear systems includes the analysis of a number of issues related to the formulation of the optimal model of the State functioning. Synergistic models bring new ideas, new outlook; they suggest potential trends in the development of complex legal systems and possible ways to effectively achieve the goal. According to the principles of synergetics the goal is achieved when the perfect symmetrical whole, the State structure is successfully constructed. The dynamics of the complex State structure development requires the coordinated development of different aged substructures inside of it.



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