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Елена Николаевна Максимова
[Elena N. Maksimova]

К вопросу о применимости
синергетического подхода в
политических исследованиях

On the applicability of the synergetic
approach in political research

Севастопольский государственный университет, г. Севастополь, Россия /
Sevastopol State University, Sevastopol, Russia, astarta_05@mail.ru

Аннотация. В статье обобщаются некоторые положения синергетики и оценивается возможность их применения к объектам политической науки. Автор предполагает, что синергетический подход применим к исследованию политических процессов и динамических состояний политических систем. Уточняются особенности политических систем с точки зрения синергетики: сочетание организационных и саморганизационных начал; открытость и динамичность; нелинейность и многоуровневость. Делается вывод о применимости синергетического подхода в исследованиях стабильных и нестабильных состояний политических систем, а также о перспективности использования адаптированных положений синергетики в объяснении кризисных явлений и переходных процессов в политике.

Ключевые слова: синергетика, синергетический подход, политическая система, динамика политической системы, методы политологии

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Abstract. The article summarizes some provisions of synergetics and assesses the possibility of their application to the objects of political science. The author suggests that the synergetic approach is applicable to the study of political processes and dynamic states of political systems. The features of political systems from the point of view of synergetics are clarified: a combination of organizational and self-organizational principles; openness and dynamism; nonlinearity and multilevelness. The conclusion is made about the applicability of the synergetic approach in studies of stable and unstable states of political systems, as well as about the prospects of using adapted provisions of synergetics in explaining crisis phenomena and transitional processes in politics.

Key words: synergetics, synergetic approach, political system, dynamics of the political system, methods of political science

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One of the key aspects of scientific research, regardless of the scientific direction, is the choice of research methods. As a rule, the construction of the research methodology is carried out on the basis of the essence and nature of the object under study. In political sciences, when studying fairly stable structures and institutions, comparative, systemic, historical and a number of other general scientific methods are actively used. The situation is different with the choice of methodology for the study of political processes. The diversity and variability of political processes,

the flow of which is characterized by contradictions at various levels, make it difficult to choose methods for their study. Many traditional methods do not allow fixing political dynamics; therefore, it becomes necessary to supplement them with a set of other methods that make it possible to take into account the variability of political processes and the various stages of their development. This circumstance actualizes the search for new research methods, usually related to other scientific areas. In this regard, the synergetic approach and the possibilities of its use in relation to the objects of political science are of interest. Thus, the purpose of the article is to analyze the main provisions of synergetics and evaluate their applicability to explain the dynamics of political systems.

Involving a synergetic approach as a methodological tool for explaining social and political processes is a relatively new practice. Synergetics as a science took shape in the 70s. XX century, its founder is the German physicist G. Haken. In his opinion, synergetics is the science of self-organization, the theory of “the joint action of many subsystems, which results in a (new) structure and corresponding functioning at the macroscopic level” [11, p.7]. Along with the theory of G. Haken, there are other conceptual developments in the science of self-organization, in particular, the theory of dissipative structures by the Belgian scientist of Russian origin I. Prigogine and the theory of dynamic chaos by the American researcher M. Feigenbaum.

The listed concepts are united by the understanding of the development process as a successive change of stable states of the system by unstable periods of chaotic behavior, as a result of which there is a transition to a new stable state (attractor). The choice of one or another development path occurs at the bifurcation point, depending on the characteristics of the fluctuations of the system itself. On this occasion, Academician N. N. Moiseev wrote that the development of any complex system occurs in some attractor, that is, in some limited "area of attraction" of one of the stable or quasi-stable states of the system. Complex nonlinear systems can have a large number of attractors. Due to a number of circumstances, the situation may one day change qualitatively, and the system relatively quickly passes into a new attractor (in other words, into a new channel of evolution). Such a restructuring of the system is called bifurcation. It is essential that the post-bifurcation state of the system is practically unpredictable, it makes sense to talk only about possible scenarios or general trends of further development based on the general laws of the material world. Thus, the evolution of any complex system consists of a series of calm (“Darwinian”, evolutionary) periods with periods of rapid catastrophic rearrangements [6, p. 123-124].

Synergetics uses a mathematical terminological language that is universal for many sciences. Characterizing synergetics as a science, physicist Yu. A. Danilov notes its features. Unlike traditional areas of scientific knowledge, synergetics is interested in the general patterns of evolution of systems of any nature. Abstracting from the specific nature of systems, synergetics acquires the ability to describe their evolution in a generalized language, establishing a kind of isomorphism of two phenomena studied by means of two different sciences, but reduced to a common model. The discovery of the unity of the model allows synergetics to make the property of one field of science accessible to the understanding of representatives of a completely different field. Yu. A. Danilov emphasizes that synergetics is by no means one of the frontier sciences (such as physical chemistry or mathematical biology) that arise at the junction of two sciences. According to G. Haken, synergetics is called upon to play the role of a kind of metascience, noticing and studying the general nature of those patterns and dependencies that some sciences considered “their own” [4].

Thus, the natural sciences and synergetics are correlated, while the question of the degree of applicability of synergetics to the explanation of those phenomena that are the subject of study of social sciences remains open. Among social scientists, synergetics has a large number of apologists and no less number of critics. Corresponding member of the Russian Academy of Sciences, M. N. Rutkevich, arguing on the pages of the *Sotsis* magazine with supporters of the use of natural science methodology in the humanities (P. Sztompka[12] and L. M. Semashko [10]), here we are talking about sociology, writes that “... attempts to transfer individual concepts and theoretical ideas based on them that were created in one field of science to another, and, in particular, from natural science

to the social sciences, from nature to society, are not new. Since there were many of them, phenomena of this kind, in his opinion, can be considered as a special direction of research in the history of science, as its side "dead end" [9, p.13].

A different position is taken by V. Pantin and V. Lapkin. For them, the question of the degree of applicability in humanitarian studies of the approaches and methods of individual natural disciplines (assuming the existence of a certain way established measure and - on this basis - a strict quantitative description of all phenomena considered by this discipline) seems to be one of the general methodological problems that are relevant not only for political sciences, but also for other social sciences. Scientists are convinced that this problem should be solved not by literally borrowing by political science the corresponding conceptual apparatus of a particular field of natural sciences, but primarily by adapting and rethinking the most important ideas and principles put forward within a specific natural science concept [7, p. 10].

Supporting the above point of view, we note that already today there are strong arguments in favor of using certain methods of the natural sciences in political research. First of all, this is due to the increase in the pace of development of social, economic and political processes, as well as the variety of forms of their manifestation. To implement research tasks, it is necessary to fix certain stages of the development of processes, while the traditional methods of the humanities do not allow you to fully get answers to questions of interest. Secondly, under the influence of globalization processes, not only the world economic structure has changed, but political systems have also undergone changes. In modern conditions, the circulation of resources, both at the global level and within a separate social system, is characterized by a high rate, which, in turn, cannot but complicate the system of production, management and distribution of resources. Therefore, the study of multilevel systems, taking into account the totality of their relationships, requires special tools. Thirdly, classical models of political systems (D. Easton, G. Almond, K. Deutsch) reflect the stable (equilibrium) aspect of the functioning of the system, while political crises and other manifestations of system instability cannot be explained in these models. Therefore, it is necessary to create such models of political systems that would take into account and explain the behavior of the system in non-equilibrium states. A synergetic approach can solve some aspects of this problem.

When using natural science methodology, in particular, a synergistic approach in the study of political processes, it must be taken into account that the patterns of development and functioning of natural systems cannot be fully transferred to the field of social sciences. In addition, it is necessary to be aware of another aspect of the use of synergetics within the framework of political science. Synergetics with its special vision of the ratio of "necessary" and "accidental" can contribute to the absolutization of the latter in politics, and thus become an excuse for the political mistakes of political elites or individual political leaders. In this case, synergetics can turn from a scientific tool into an ideological resource of power. It is advisable to use a synergistic approach to study only individual political phenomena. In our opinion, the political system, its development and evolution, is the scientific object to which synergetics can be applied.

In political science, attempts have already been made to use synergetics to study political objects. In particular, L. AND. Borodkin notes that with the help of non-linear models, modern authors are asking the question of which world - bipolar or tripolar - is more prone to war. At the same time, a no less traditional question is asked about the greater or lesser propensity for wars of democratic and autocratic states. Finally, the problem of the military threat is raised: when is it higher - in the system of dynamic alliances or in the presence of a set of disparate "lonely countries"? In addition, L. I. Borodkin points out that in the United States a synergetic approach is applied to the study of electoral campaigns. With the help of chaos theory, they study the dynamics of public opinion in campaigns for the nomination of candidates for the US presidency. American specialists are persistently accumulating data on long time series, which periodically "break off" into chaotic states. The value of this work is that over time it will allow creating a powerful base of texture and primary generalizations, which will enable the science of predicting chaotic situations and managing them to "grow" in the future [2].

Also, synergetic models were used in the field of political psychology to study the dynamics of the political mentality of Russian society (A. V. Mitina, V. F. Petrenko). The units of analysis were the political attitudes of individuals, expressed in the support of certain political parties. The construction of the operational model was based on semantic spaces, which were built according to the results of the "scaling" of political parties that carry certain political guidelines. Further, generalized factors were determined, with the help of which the coordinate axes of the semantic space were set. In turn, the objects of analysis - political parties - were set as coordinate points within the resulting space, and the value of the projection of objects on the semantic axes showed the degree of agreement of the political party with the content specified by this factor. And, finally, to reflect the dynamics of space, an additional time axis was introduced.

There is experience in applying a synergistic approach in the framework of political research on the example of the analysis of political-power interaction in territorial communities, reflected in the dissertation of L. IN. Boyko-Boychuk. Continuing the development of the synergetic conceptual apparatus, the researcher proposed a new concept of "phase (zone) of bifurcation" and developed a classification of phases with such types as "intended" ("planned") and "unpredictable" bifurcation phase, as well as "soft" and "hard" ; deepened the concept of the socio-political "attractor" as a group of factors that keep the system in a stable state, and singled out such components of the socio-political "attractor" as an idea, leader, organization, order parameters; revealed the essence and meaning of the concept of "strange attractor" for socio-political practice and introduced the concept of the point of initiation of self-disorganization [1, p. 6].

As you can see, the synergetic approach is applied to the study of a wide variety of political objects, in this case systemic objects are no exception. At least some features of political (social) systems can be described from the point of view of the science of self-organization. Firstly, it is a combination of self-organizing and organizational principles within the political system. G. AND. Ruzavin writes about this: "The fundamental difference between social systems and natural systems lies, first of all, in the fact that in them self-organization is supplemented by organization, since people endowed with consciousness act in society, setting themselves certain goals, guided by the motives of their behavior and value orientations. Therefore, the interaction of organization and self-organization, random and necessary, forms the basis for the development of social systems" [8, p. 63]. Moreover, political systems carry a significant organizational potential, due to the fact that in politics, in comparison with other areas of society, the function of achieving goals is realized. The possibility of achieving the set goal within the framework of the political system is potentially higher due to its substantive basis - power.

Second, political systems are open and dynamic. The characterization of a political system as a dynamic formation suggests that the system is under the influence of various external forces, as a result of which it changes over time. In general, the dynamic states of systems are opposed to the states of relative equilibrium. We can say that the unstable states of the system are a special case of the manifestation of system dynamics. The openness of a political system means that the system, in the course of its functioning, interacts with other political systems: it perceives the influence of systems and / or itself has the ability to influence the functioning of other systems. Interaction is carried out through the exchange of energy (information, resources). Modern political systems are open, with the exception of only political systems with a totalitarian, or rigidly authoritarian regime of functioning; but even these systems can be called closed only conditionally.

Third, political systems are non-linear systems. Unlike linear systems, when under an external action the response of the system turns out to be generally proportional to this action, the quality of nonlinearity suggests that the system's response to an external action is not proportional to this action, and also the system will behave at different times under the same external influence on it. under various laws. On this occasion, A. V. Mitina and V. F. Petrenko write that "a nonlinear system has stable and unstable stationary states. Moreover, the same stationary state of such a system can be stable under certain conditions, and unstable under others. Stable stationary states are characteristic of the system itself, while unstable ones characterize the moments of actual changes in it. Changing nonlinear systems are distinguished by the multiplicity of stationary states, the unity

of their stability and instability. This creates a phenomenon of complex and diverse behavior that does not fit into a single theoretical scheme and, possibly, unpredictable in certain periods of time [5, p. 338].

Characteristics of elements (subsystems) of linear and nonlinear systems are different. In linear systems, subsystems weakly interact with each other, while the whole system can be reduced to the sum of its parts, while the subsystems of nonlinear systems are in complex relationships with each other. In a linear system, for example, such is any complex technical system, an element can be replaced by a new one, while the nature of the relationship between the elements of the system, as well as the nature of the functioning of the system itself, will not undergo significant changes. The situation is different with social systems, including political ones. Here it is impossible by installing the necessary element to make the system function more efficiently. For example, it is impossible to replace an inefficient form of government with a new one without affecting other elements of the system. It is impossible to replace one element and get the original quality of the political system; moreover, non-linear systems, especially in unstable states, react disproportionately even to small actions. As a result of adding the elements of the system, its quality will acquire a completely different character, that is, with respect to a nonlinear system, the statement is true: the system as a whole is not equal to the sum of its elements.

Fourthly, political systems are complex multilevel formations. A. Vengerov, in connection with this property of political systems, writes: "... synergistic "management" of politics should, first of all, include an understanding of the political system as a multi-level one. This means that in order to solve any problems, it is not enough to act only at one level, for example, at the macro level, believing that the changes that will occur at the macro level can rebuild the entire political system. Further, politics as a multi-level system turns out to be very susceptible to resonant phenomena. Resonances in politics are, as a rule, the imposition of one crisis on another (economic on political, legal on political), intensification of their intensity, combination of unidirectional political processes, attraction to social attractors of various political parties, social forces [3, p. 67].

Thus, the synergetic approach has certain prospects in the study of political objects, in particular, political systems. This approach is applicable to explaining the functioning of political systems, describing their stable and unstable states. At the same time, there are some limitations in using the synergistic approach. First of all, they are associated with the complexity and high formalization of the methodology of synergetics, which cannot be used in political research without adaptation. Nevertheless, the terminology of synergetics seems to be quite promising for studying crisis phenomena in politics, understanding transitional processes and other transformations of political objects.

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ОБ АВТОРЕ / ABOUT THE AUTHOR

Максимова Елена Николаевна, доктор политических наук, профессор, профессор кафедры «Востоковедение и африканистика», Севастопольский государственный университет, тел.: +79788242324, astarta_05@mail.ru

Maksimova Elena Nikolaevna, Doctor of Political Sciences, Professor, Professor of the Department of Oriental and African Studies, Sevastopol State University, tel.: +79788242324, astarta_05@mail.ru

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