

Expansion of Synergetic Approach to Economic Science and Management

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Abstract: The problem of introduction of synergetic approach in economy and management is staticized. Results of research on a problem of an assessment of synergetic efficiency are presented. The judgment about reference of "economic synergetics" and "synergetic management" to the direction veiled and not to the scientific is put forward.

Key words: Synergetic management • Economic synergetics • Abstractness • Assessment of efficiency and Synergetic effect

INTRODUCTION

The decision-making process or process management is undergoing today, as the entire economic science, the crisis of the imperfection of their methodologies and instruments in solving problems of economic entities, the systems of national economy and the world economy as a whole. Bright example is crisis endured by all world economy which aggravated existing problems and created the new. But, unfortunately, in parallel with science «new» instruments of a get-out, including from crisis are created, the «scientific» directions not untwisted on full capacity which don't have any connection with system of objective knowledge of reality develop. Modern economic and management literature has a large number of the veiled information «filled» with beautiful words and methods, «capable» to solve management and economy problems at various level. The main difference is that these «scientific» directions «parasitizing on a science body» [1] don't give to society, to people of anything useful and , on the contrary, create new problems. These directions apply specific terminology using scientific terminology to solve problems, but apart from the words and ineffective instruments creates a «rating's mechanism» to attract attention for yourself.

This work is directed on updating of an existing methodological problem of management and economic science. One of the trendy, but not effective, in our view, is the direction of the «economic synergy» and «synergistic management». These directions in their

research methodology based on the long-developed theory, methodology, methods, models, independently existing at a given time, as well as the principle of self-organization systems. These theories include: general systems theory (A.A.Bogdanov's universal organizational science), Landau theory of phase transitions, fuzzy set theory, the theory of fractals, neural network modeling, catastrophe theory, pattern recognition theory, etc. Synergists (representatives of this trend) everything that is connected with studying of nonlinear, nonequilibrium, irreversible systems and developed earlier, than there was a term «synergetics» (on Herman Haken in 1973), carry to the «synergetics» direction, including to appendices in economy and management. In the preface to «Introduction to the economic synergy» Professor notices that sinergetizm «... «recently discovered», analyzed by Marx in «Capital» (1867 edition!) as a new force, «which arises from the confluence of many forces into one total force... ». The same phenomenon is in detail investigated by A.A.Bogdanov in his book «Tectology: (Universal organizational science)» [2, p.5] in 1917. The history of science confirms that the phenomenon of «synergy» (coordinated, joint action), put forward as new, isn't that, that it took place in science.

RESULTS AND DISCUSSION

We have studied the conceptual apparatus «synergy's» directions, namely, logical analysis underwent the following concepts: «self-organization», «self-

regulation», «economic synergetics», «synergetic economy» [3, 4]. As a result of this research it was established that *the principle of self-organization* on which the directions of «economic synergetics» [2] and «synergetic management» [5] are based as *theories of self-organization* has under itself no scientific rationale. *Independently* (without exterior help, without third-party participation) and *involuntarily* (in itself, automatically) in the course of the organization and regulation, without interaction with the external environment anything can't happen. In books [2, 5] there is no accurately described mechanism of this property. In our view, in developing systems there can be only *the organization of system* directed on creation of other, qualitatively excellent structure, on change of a trajectory of development, on «jump» (breakthrough effect or significant effect). A *self-organizing* system is to be understood that it «organizes itself» and under *self-regulation*-«regulates itself» («itself»-an orientation on itself and only) [6]. It doesn't mean that the system does it independently (without exterior help) and involuntarily (automatically). That is, the system (the business entity) in the course of interaction with environment organizes or regulates itself not without third-party participation (help) and not spontaneously. It directs at a question: than the synergetics direction differs from «universal organizational science» of A. A. Bogdanov or from «the general systems theory» of Ludwig von Bertalanfi in the absence of the self-organization mechanism. From our point of view, does not differ. At best, it is a development of the knowledge area called «the general systems theory». But, any new theories under the name «economic synergetics» and «synergetic management» is out of the question.

About exaggeration in the intentions, praise of (synergists), substitution of concepts was told well in the bulletin of the commission on fight against a pseudo science and falsification of RAS scientific researches (the Russian Academy of Sciences): «... formal and superficial «the appeal to synergetics», becoming for obvious reasons mass, had to generate and generated a whole, quite independent and even separate, mutually satisfied community, supporting each other and nobody criticized person engaged in scholastic pseudoscience» [7].

Synergists, embodying the ideas, likes to attach the word «synergetic» to long ago known provisions and to call them suitably. For example, terms «synergetic effect» and «synergetic efficiency».

The word «*synergetikos*» means «joint», «acting in concert» [8]. Synergists in this word put sense: «of itself»,

«automatically», «independent», «without assistance». According to G.Haken, the self-organizing system is formed *from organizing system artificially*. In his opinion as the author of the book writes [2], «...to describe the organization it means to establish connection between effect of any action and its reason depending on time. According to G. Haken when such equation is established, it is necessary to exclude external forces. From the mathematical point of view, it is simpler to expand system so that external forces included in system of the equations became internal, then for new expanded system the equation of the organization becomes the self-organization equation» [2, p.106]. I.e., transferring external forces to the category of internal forces system, we receive self-organization model (independent model, without organization assistance!) thus eliminating the external environment (in modeling). But in reality the system isn't isolated from environment and its power sources. *According synergists, open system is converted into a closed, external forces are transferred to the category of internal order that would introduce a new term in a systematic approach-«self-organization», thereby hiding truth, instead of open it.*

«According to synergetics provisions, activation and an intensification of system forming connections in the complex (heterogeneous) systems can lead to coherent (coordinated in time and space), cooperative effects in which the effect of heterogeneous nature of the forces can cause qualitative transitions at which the efficiency of the system increases external influences inadequately. For example, on an entrance inadequate «leaving the system» by efficiency-*result* can answer a small signal» [9, p. 122]. So «the synergetic effect» at founders of «economic synergetics» is defined.

I.e., from a position of synergists, the synergetic effect is that it was possible to call a *colossal effect, breakthrough, saltatory* at positive change of system quality or *explosive, catastrophic, avalanchine* effect at negative change of system quality. The effect is a saltatory or avalanchine change of any absolute criterion, for example, profits. Thus such change is caused by a small change in input signal to the system (small change on amplitude, a small deviation, fluctuation).

The similar phenomenon in the nature, leading to saltatory effect is called «resonance». The resonant phenomenon is described in books 1959 and 1964 editions [10, 11]. Resonance phenomenon arises in linear systems (the system parameters are not dependent on the system status) and it is the simplest case and in nonlinear

systems (system parameters are dependent on the status of the system) that is more complex (fractional, multiple, combination resonance, the amplitude curves which are sharply asymmetric). I.e. earlier it was described everything, that presents as a novelty today. Today synergists make «discoveries» of earlier known provisions.

Process of emergence of saltatory effect is transferred to economic and social systems, political, ecological and other systems at which a subject of studying are human relations. Here is an example from the area of human relations (persons). *Revolution* (from the Latin. *revolutio*) is a radical qualitative change, sharp saltatory transition from one qualitative state to another, from old to new, regularity of natural phenomena development, society and knowledge [12]. Revolution as a phenomenon is known since the emergence of statehood, long before than there was a term «synergetics» in 1973. Adherents of synergetics present this phenomenon as synergetic and its result as synergetic effect.

What has changed in science that *the resonance* and *the revolution* were presented in «new» descriptive models? Speak and describe it in the language of systems theory which founder is A.A. Bogdanov, who presented his theory called «Universal organizational science» still in 1917. From our point of view, for science as a whole and for economic science in particular, there are no positive changes, there are no new results, there is no increment, but there is a so-called «new» veiled explanation of that is known in other interpretation for a long time.

Analysis of some research [9, 13] on this subject was published in the article [14]. The conclusion is drawn that when forming synergetic efficiency of corporation and calculation of synergetic effect in analyzed researches *subjective, unreasonable, relative and apologetic approaches* are looked through.

Abstractness, inaccuracy and impossibility to calculate some of the key parameters (for example, r) are defined in determining synergetic efficiency of the corporate development [2], what makes the model of calculation unsuitable.

Misunderstanding of simplest mathematics elements is revealed when developing assessment models of synergetic efficiency industrial policy of the territory, what nullifies the offered model as suitable for calculation, but makes it attractive and veiling [15].

It is established that in the developed formula of synergetic efficiency of corporation [13] there is no self-organization, irreversibility and the deviations leading to

bifurcation, that are, according synergists, the integral components of the synergetic approach. All synergetic effect is reduced to effect from realization of innovations that is not new in economic science.

CONCLUSION

As a result, it is possible to make judgment that declared, as a panacea for solving complex nonlinear problems of being, «economic synergetics» and «synergetic management» do not have in its arsenal the new clear conceptual apparatus (general logical forms of thinking) not in them principles, unrepugnant each other and distinct from guidelines of *the general systems theory*, existing from the beginning twentieth century. It promotes development of sciolism and veiling of complex science problems and practice of management.

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