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THE ESSENCE OF THE CATEGORY «MODALITY» IN THE RESEARCH OF THE FINANCIAL POTENTIAL OF ECONOMIC SYSTEMS

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Abstract

The article deals with the issues of elucidation of the essence of the category «modality» and determination of its role in the research of the economic systems' financial potential. The necessity of the use of this category within the framework of a new science – potentiology is substantiated. Specification of the classification features the managing system's modality within the framework of the science of potentiology is given. The process of origin of the modal circulation effect at the study of the financial potential of the economic systems is grounded.

Keywords: financial potential; modality; potentiology; potency; alternative; possibility; economic system

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СУЩНОСТЬ КАТЕГОРИИ «МОДАЛЬНОСТЬ» В ИССЛЕДОВАНИИ ФИНАНСОВОГО ПОТЕНЦИАЛА ХОЗЯЙСТВУЮЩИХ СИСТЕМ

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Аннотация

Статья посвящена вопросам раскрытия сущности категории «модальность» и определения ее роли в исследовании финансового потенциала хозяйствующих систем. Обосновывается необходимость использования данной категории в рамках новой науки – потенциологии. Дана характеристика классификационным признакам модальности хозяйствующей системы в рамках науки потенциологии. Обоснован процесс возникновения эффекта модального круговорота при изучении финансового потенциала хозяйствующих систем.

Ключевые слова: финансовый потенциал, модальность, потенциология, потенция, универсалия, альтернатива, возможность, хозяйствующая система.

Introduction. Potential of financial and economic development of the countries, republics, regions, enterprises is one of the hottest topics for discussion on international scientific and practical platforms. Today, when the economy of many countries, under the influence of world political crisis, gradually slopes down into a deep depression, questions of additional financing sources search taking into account modality of relations between participants of this process became especially timely. In this regard, matters of financial potential research of managing subjects are staticized. The problematic research issues of the managing system potential development which are brought up in article (resource, personnel, investment, innovative, etc.) are considered in works of the leading economists of Russia, Ukraine and the CIS countries, such as: I. Repina, A. Oleksyuk, A. Korenkov, V. Kotlova, L. Revutsky. Questions of the potential general theory forming were brought up in works of. Kleynera,

I. Otenko, E. Lapina, N. Krasnokutskoy and many others. We raised this problem in the context of studying economic systems capacity in [10]. In [12] need of new potentiology science emergence which can become the base for different types research of the enterprise potential development was proved. The fundamentals of this science are made by the modal relations of managing subjects. That is, change of managing systems modality is the basis in research of its potential within potentiology science. This approach still remains relevant, especially considering financial capacity of the enterprise (in our case of an economic entity). The above updates a problem of profound essence studying for the category "modality" in the context of managing systems financial capacity research.

The significant contribution to essence research of the category "modality" from a position of philosophy, logic, psychology, linguistics was introduced by such scientists as: Aristotle [2], O. Ahmanova [1], S. Bully

[3], V. Vinogradov [13], Y. Gadzhevskaya [7], V. Gorpynich [9], M. Epstein [5], etc. At the same time, questions of essence disclosure of the category "modality" within potentiology science in researching financial capacity of the managing systems remain insufficiently studied.

The objective of this research consists in systematization and synthesis of theoretical ideas on the category "modality" essence in researching manning systems financial capacity. The logic of reasonings resulted in need of the following tasks solution: to carry out theoretical analysis of the category "modality" essence and to develop its author's definition; to estimate degree of the category "modality" use problem solution in researching financial capacity of manning systems; to define unresolved problems and to plan prospects of their realization in the future.

The category "modality" allows to consider multiple, "indistinct" modes of life and judgment: possible and impossible, necessary and casual, all of it cannot be reduced to judgments of truth and lie or to the description of facts, examples, certificates [10, p. 27]. Information provided in [4, 5, 8-14] allows to draw a conclusion that the essence of category "modality" is beyond philosophy and has continuation in psychology, logic, linguistics, etc. In economic sciences this category practically does not find the application so far, despite [5]. Addressing history of economic thought development, we will note that Aristotle in [3] allocated three modal concepts: need, opportunity and reality. A. Ahmanova defines modality as the relation of the statement essence towards reality and assessment of this relation by the one who speaks [4]. Similar definition of this category we see in works of V. Vinogradov, Y. Gadzhevskoy and V. Gorpynich in [5, 7, 13]; they claim that modal value expresses the subject's attitude towards reality. S. Bully for the first time regarded modality as on object of the linguistic description [3]. Within studying this problem the most attractive work belongs to M. Epstein who generalizes approaches to modalities definition in different spheres of humanitarian thinking and builds the theory of the possible, leaning on the main modalities of life: reality, possible and necessary. As the most powerful is allocated by a "possible" modality [3].

That is, if we speak about the financial capacity of manning systems from a modality position, extent of its realization can be necessary, possible and real, or valid and necessary in approach [15].

According to [14] modality is a set of relations and actions logically described with a predicate "can" inclusion. Any conjunction "can be" with predicates and

a negative particle "no" does not allow to characterize variety of known modalities and their ratio.

In Webster's dictionary modality is a "qualification of logical judgments according to which they differ as the claiming or disputable opportunity, impossibility, accident or need of the contents" [5]. This definition is tautological as it contains logical circulation as the possible and the necessary are often treated as modality.

M.N. Epstein in [5] provides own his definition: "modality" is defined as: (1) such means of judgment which (2) are characterized by predicate "can", or in connections with predicates "to be" (3) in an independent form and "no", (4) can be expressed both as positive, and as negative (with particle "not"). In other words, the code on which all variety of modal messages is built, consists from: "can", "be", "no" and "not".

The above allowed to come up with the author's definition of the category "modality" as means of the subject judgment (the owner, the management, the independent expert, the analyst, the auditor, etc.) about necessary, real or possible realization extent of managing system financial capacity.

Results and Discussion. Considering the fact that the managing system functions on the basis of environmental science laws as it was already proved in the previous researches [12], the following, more profound definition of this category is also possible.

The modality of manning systems is means of judgment of the subject (the owner, the management, the independent expert, the analyst, the auditor, etc.) about action quality of environmental science laws (general, interacting processes and functional) in the course of its possible potential development research.

In other words, change of the managing system modality will give the answer about the necessary, real or possible potential of its development. In this case there is one more problem, namely interrelation between judgments of the subject and condition of research object. This interrelation belongs to category of modality and is defined in so-called modal judgments [4]. Modal judgments not simply object to something or approve it, they provide an assessment of the managing system objects condition and estimate its interrelation with environment. That is, it is possible to say about the managing system that it has a certain property (modal judgment). So, it is possible to say about modality of the managing system financial capacity that its state is currently: necessary, real or possible. In this case we receive modal judgments of different types subjects due to so-called modal operators. The concept "modal operators" belongs to modal logic in which there are such sections: epistemology, deontic logic, logic of action, logician of decision-making, logician of the decision rejection, logician of granting advantage and so

forth. – in each of those there are modalities. This fact shows that modality has classification. On classification of modalities see works of O. D. Getmanova [8, p. 65 – 83] where the following are allocated: logical; ontologic; epistemological; deontic; axiological and temporary types of modalities. As the author notes, each group of modalities includes three basic modal concepts: necessary, casual and impossible. The second is called the weak characteristic, the first and third, respectively, strong positive and strong negative characteristics. Sometimes as addition the fourth modal concept of possible which can be used for definition of association strong positive and neutral is entered.

More capaciously modality of the managing system is possible to consider through a prism of the classification signs discovered by M.N. Epstein in philosophy of the possible. Its classification considers all structural compound of the modality code: "can", "be", "no" and "not".

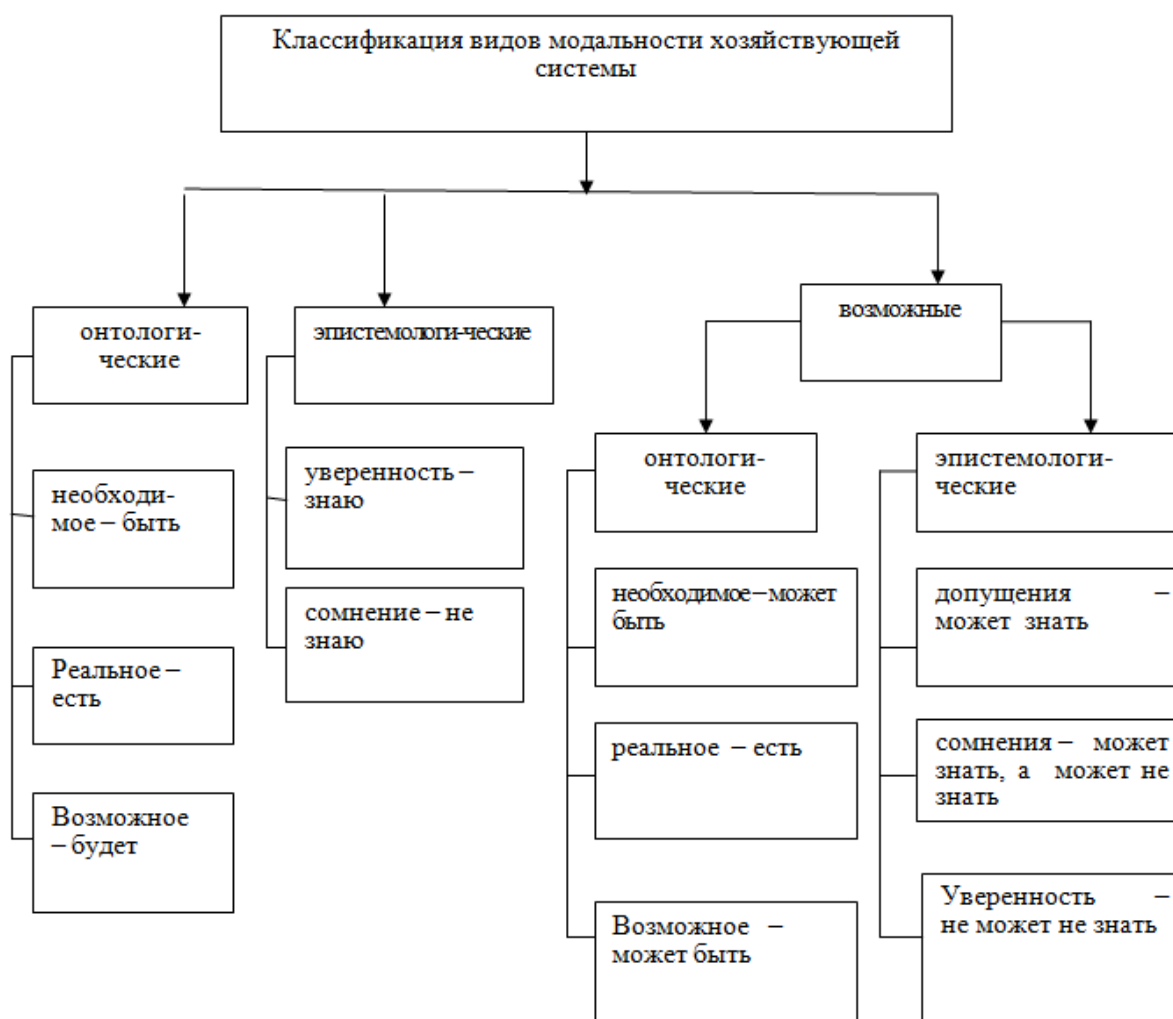
The author "claims the concept "can" to be the general element of such modal categories as: possible, necessary and casual (ontologic modalities)

and assumption, confidence and doubt (epistemological modalities)" [6].

Being guided by the intrinsic content of the offered category "modality" definition the managing system were distinguished by us from ontologic modalities: necessary, real or possible extent of financial potential realization, and partially epistemological modalities were allocated funds of subject judgment. Such approach allowed to modify classification signs of modalities with emphasis on financial capacity of the managing systems (fig. 1).

So, the consecutive combination of modal categories from all possible predicate connections of "can", "be", "no" and "not" allow:

- 1) to define specific property of the managing system modality in quite capacious and at the same time restrictive terms;
- 2) to correlate all modal categories of the managing system by the minimum divergences principle;
- 3) to accurately outline a circle of the managing system modalities.



Under Fig:

Classification of the managing system modality types			
ontological	epistemological	possible	
Necessary - "to be"	Sureness - "I know"	ontological	epistemological
Real - "is"	Doubt - "I do not know"	Necessary - "can be"	Assumption - "may know or may not know"
Possible - "will be"		Real - "is"	Doubt - "may know or may not know"
		Possible - "can be"	Sureness - "cannot know"

Fig. 1. Classification of the modality types of the managing system in the study of its potential

Рис. 1. Классификация видов модальности хозяйствующей системы при рассмотрении ее потенциала

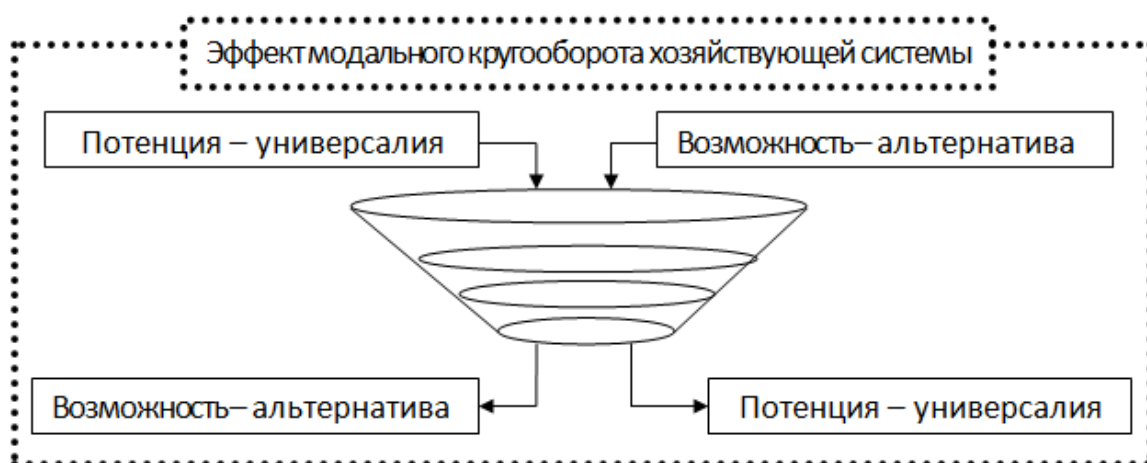
Besides, application of modality category considering financial capacity of the managing system gives opportunity to define not only prospects of its growth, but also its decrease. Thus, a certain modality may reveal:

- potentially, taking into account features of certain subject actions and object behavior;
- possibly – as the external circumstances characteristic, a case measure, quantitative chance of implementation.

It is usually supposed that to one necessary condition of the managing system a real state or the much possible one corresponds.

But, there is also the return ratio: one opportunity can be realized by different means, in different elements of the managing system. So, many managing systems (enterprises) can be profitable, or, in other words, possibility of receiving profit on is realized in various ways in each managing system. Such inclusive opportunity which is realized in a set the real managing systems, is called "universal".

Along with "universal" there are alternative or exclusive opportunities when only one of opportunities can be realized. These opportunities cut possibility of any other opportunities realization. Alternative opportunity assumes reduction of realities in comparison with many opportunities of the managing system whereas the potency-universal provides enhancement of realities in comparison with one opportunity. Such approach grants the right to claim the existence of "extending" and "narrowed" ways from possible to reality. Let us note that development of the managing system is time-to-time series of universal and alternative opportunities, that is reduction of many opportunities to one reality and increase in one opportunity in many realities. It is possible to call such series of opportunities the effect of the managing system modal circulation, passing through which opportunities are rarefied or condensed and yield more or less relevance (fig. 2).



Under Fig:

Effect of the modal circulation of the managing system	
Potency - Universal	Possibility - Alternative
Possibility - Alternative	Potency - Universal

Fig. 2. Effect of the modal circulation of the managing system

Рис. 2. Эффект модального кругооборота хозяйствующей системы

So, the effect of modal circulation of the managing system shows that change of modalities is interfaced with quantitative transition: one opportunity (universal) is realized variously, and from a set of opportunities (alternatives) only one is realized. Universal and alternative make two main vectors of the managing system existence: condition of objects and relation of subjects.

In [5, p. 208] attention is focused on the fact that change of modalities is a basis of potency and is carried out by potentsiation or "be-possibiliance".

Conclusion. Thus, disclosure of the category "modality" essence in researching capacity of the managing systems allowed to draw certain conclusions and to receive results which are as follows:

1) Consideration of the managing systems financial capacity from position of modality gives opportunity to accurately differentiate necessary, real or possible extent of its realization;

2) It is proved that change of modalities, or effect of modal circulation which is carried out by potentsiation or "be-possibiliance", is fundamentals of potentiology science and is the cornerstone of the managing systems financial capacity development.

Prospects of further researches in this direction is profound studying of the categories "potentsiation" and "be-possibiliance" as main driving forces of the managing system modalities change.

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