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SISTEMINGUMAS KAIP GNOSEOLOGINĖ RIBA KARTOJIMO KATEGORIJS TYRIMUOSE

Systematicity as Gnoseological Framework of Category of Repetition

SUMMARY

The article concentrates on the methodological approaches for the investigation of the category of repetition, which is considered to be an interdisciplinary phenomenon. Special attention is paid to methodological principles that appeared in the second half of the XX century and enriched scientific world with fruitful ideas. Types of systems as an ordered integrity of elements are given: 1) material – contains two types of objects: organic nature (living) and inorganic nature (non-living); 2) abstract – combines the results of human thinking, recorded by linguistic, logical, semiotic, etc. The language system is represented, and a category of repetition is considered in it. The use of the methodological principles of Prigogine and Haken in the study of repetitions is characterized. The systematic nature of repetition in the light of synergetics is analysed.

SANTRAUKA

Straipsnis skirtas metodologinių priėjų aptarimui, tiriant kartojimo kategoriją kaip tarpdisciplininį fenomeną. Straipsnyje akcentuojami XX amžiaus antroje pusėje susiformavę ir mokslą naujomis idėjomis praturtinę metodologiniai principai. Tyrime apibūdinamos dvių tipų sistemos: materialioji, kuri apima dvių rūšių objektus (gyvus ir negyvus) ir abstrakčioji, kuri apima lingvistikos, logikos, semiotikos ir t. t. fiksuojamus žmogaus mąstymo rezultatus. Atliekant analizę pagrindinis dėmesys skiriamas kalbų sistemai, o kartojimo kategorija nagrinėjama atsižvelgiant į I. Prigozino ir G. Hakeno pateiktus metodologinius principus. Straipsnyje taip pat analizuojamos kartojimo sistemingumo sąsajos su sinergetika.

RAKTAŽODŽIAI: sistemingumas, gnoseologija, metodiniai požiūriai, savireguliacija, sinergija.

KEY WORDS: systematicity, epistemics, methodological approach, self-organization, synergism.

INTRODUCTION

The material world is an integral and interconnected system that is in constant motion, change and development. At the same time, each person is aware of the existence of systems; and it is enough to say “Copernican system” so that the theory of planetary motion around the Sun runs through someone’s brain. The meaning, well known to an educated person, is assigned to such terms as the periodic system of chemical elements of Mendeleev, the system of higher nervous activity of Pavlov or the theatre system of Grotowski.

In connection with the study of systems in various branches of science, scientists faced the problem of defining a concept. The founder of the general theory of systems, Ludwig von Bertalanffy, understood the system as an interacting complex of elements (Bertalanffy 1968: 33). This definition entailed attempts by representatives of various sciences to determine the system taking into account their own subject of study. It should be noted that this concept has not yet found a single, generally accepted definition. Many philosophers, among them Yu. Surmin (Сурмин 2003: 25) and V. Kanke (Канке 2008: 30), pointed out Bertalanffy’s significant lack of understanding of the general theory of systems, since the researcher declared it to be one that replaces philosophy. Nevertheless, the world-famous scientist played a huge role in the establishment and popularization of the systems approach.

In the last quarter of the 20th century, together with the outstanding successes of systematicity, crisis processes caused by innovations began to appear. As a

result, a continuous change in systems took place in society. Such society needed a fundamental update of the system methodology that was due to the formation of the 1977 Nobel Prize winner in chemistry I. Prigogine’s concept of chaos and transmission processes (Пригожин 2001). The essence of the scientist’s theoretical development can be reduced to the following points: a new science – the physics of non-equilibrium processes was born, the development of which led to the genesis of new concepts such as self-organization and dissipative structures (Пригожин 2001: 10). Self-organization is understood as the choice of one of the solutions that arises at the bifurcation point. Dissipative structures are spatio-temporal patterns that arise under highly non-equilibrium conditions.

Further development of the idea of systematicity led to the origin of the principle of synergy of H. Haken (Хакен 1980), which was formed before the 80s of the 20th century, when the first crises shook the system. The principle of synergy, or the animated approach, was isolated from the systemic one and was highlighted among other methodological principles because the scientific and technological revolution and social transformations required the study of the problem of efficiency. Due to these discoveries, consistency was able to explain transient, unsteady processes, which ensured overcoming its crisis.

Based on such premises, the author of this article is faced with the task of determining the basic methodological principles for studying of the category of repetition.

TYPES OF SYSTEMS AS ORDERED INTEGRITY OF ELEMENTS

The objects of the actual reality are in relationships with each other, and they form certain integrities, unities, that is, systems that can be either material or abstract according to the nature of elements. The first type of systems – material – contains two types of objects: organic nature (living) and inorganic nature (non-living). Physical, geological, chemical, etc. are considered the objects of inorganic nature; biological, social, etc. to living objects.

The second type of systems – abstract – combines the results of human thinking, recorded by linguistic, logical, semiotic, etc. objects. In the interpretation of semiotics from the second half of the 20th century, they distinguish between the European direction, at the source of which stands Ferdinand de Saussure (Ferdinand de Saussure 1916), and American, the founder of which is Charles Morris (Morris 1946). Complex information systems, which contain technical, economic, bio-cybernetic, humane systems, are considered to be of this type.

Two types of systems are closely interconnected: the material system had led to the existence of an abstract system. In the middle of the 20th century, the science of systematology arose, engaged in the study of various types of systems.

The relative indivisibility of the system elements is manifested in the fact that its elements are indivisible only from the point of view of this system. However, they can be separated and be the part of other systems. The hierarchy of the system consists in the ability to distinguish other systems or subsystems

in it, as well as the entry of this system into a wider system. The structural nature of the system is associated with the way of organizing its elements, the relationships that arise between them.

G. Khaburgaev identified four elements of the mental-speech system: thinking, consideration, language, speech, and proposed a scheme for the correlation of their elements (Хабургаев 1967: 296). The researcher concluded that thinking is in the direct relation to reasoning and language, and only with their help – with speech. The consideration associated with thinking is formed based on speech experience and has no direct connection with the language. Consideration is associated with language through thinking and speech. The same connections exist in language that is a system parallel to reasoning. (Хабургаев 1967: 296–297).

Language, being an abstract system, contains heterogeneous elements that form subsystems of homogeneous elements interacting with elements of other systems. In addition, language is an open system, as new elements can be added to it. Such a character of the language provides the influence of the surrounding world on its building, structure, functions.

Similar to the objects of the material system, “the same as in nature the underlying principle of structural organization is recreated in language” (Москальчук 2003: 17). At the same time, the main source of construction processes are not replacements of single letters, but recombination – movements and new connections of individual fragments. Recombi-

nation plays an “outstanding role in the processes of building of a new” (Саларник 1988: 13). The speech manifests the principle of recombination as the main device of nature and human activity.

By the nature of the elements that make up the system, it is customary to distinguish homogeneous and heterogeneous systems. Homogeneous systems consist of homogeneous elements, which are determined by opposing each other and the arrangement. Heterogeneous systems consist of heterogeneous elements that form subsystems of homogeneous elements and interact with elements of other systems. Such systems include language, consisting of several homogeneous subsystems, which are called layers or levels.

The language system interacts with the environment of cognitive activity of humankind, which leads to the need to study its external and internal connections. The attitude to language as a material substance endowed with reason is known in many ethno-cultures. The Slavs believe that the word can be spoken in good or evil time. From ancient times in Ukraine, they used to say: “Do not say at night” (“Не проти ночі кажучи”).

At a certain stage of the language study, it became necessary to combine everything that was previously achieved during the study of phonetics, morphemics, word formation, morphology, vocabulary, syntax in order to comprehend the language in its integrity, in all its functional diversity, and present it in the form of a system.

The term “system” is widely used in linguistics, since it is used when speaking of a system of vowels and consonants, parts of speech, endings, inflec-

tion, conjugations of a certain part of speech; types of systems (phonetic, phonological, graphic, lexical, semantic, etc.).

The concept of “system” in linguistics is most often associated with the concept of “structure”. Structure is a diagram of the relations between the elements of the entire. The system contains both elements (substance) and relations between them (structure). Numerous and often contradictory explanations of these concepts are traced in the article by A. Melnychuk (Мельничук 1970).

In modern linguistics, the allocation in the language system of its individual spheres (subsystems) is based on the so-called stratification principle. In accordance with this principle, the language system consists of subsystems that seem to be layered one on top of the other, located one above the other in a clearly regulated order. Separate systems stand out vertically and are different levels of the hierarchy of systemically organized language units.

In linguistics, interest in system description has largely manifested itself in the last decades of the 20th century, when the question of the essence of the linguistic system, the hierarchy of levels and units of the language, the relationship between the individual and the general in the language, and the system relationships in related and multi-structural languages began to develop.

In 1987, an American linguist Robert de Beaugrande made a keynote address in which he presented his vision of language as a complex nonlinear system, the nature and functions of which can be revealed through thermodynamics, quantum theory, and molecular biology. According to the theory of the research-

er, native speakers perceive speech in its various forms as constant vibrations, fluctuations that cause the radiation of amplifying or decreasing energy (Beaugrande 1987: 360–362).

In the 21st century, the evolution of a systematic approach to language contin-

ues, which comes against the backdrop of the rejection of the reductionist approach and the turn of science towards holistic views. The founder of modern holism was Jan Smuts, who established integrity as the highest philosophical concept (Smuts: 1926).

THE USE OF METHODOLOGICAL PRINCIPLES OF SECOND HALF OF THE 20TH CENTURY IN THE STUDY OF REPEATITIONS

Repetition is the general name of the process of reproducing various forms of being. At all levels of organization of the material world, repetition occurs as a factor in the structure formation of natural objects. Physics describes the reproduction of the periodic motion of waves, gravity; biology is engaged in physical and chemical reproduction through the emergence of new generations. Fluctuations in the states of a natural object determine the functional modes of existence of all living and non-living. Reiterations with recombination reveal the deep essence of the structure formation of biological and physical objects.

In living objects, in particular, the biological system, a repetition of elements is observed at regular intervals, since “the human unconscious contains archives or matrix, the activation of which leads to the re-living of biological birth and a serious confrontation with death” (Гроф 1993: 56).

Periodically repeated changes in the intensity and nature of biological processes and phenomena – biological rhythms – are noted at all levels of organization: from intracellular processes to population and biosphere. They arise as a reaction to periodic changes in the

environment or are generated by the body itself. The ability to such changes in life is inherited and manifests itself in all living organisms.

Biorhythms are divided into physiological and environmental. Physiological rhythms have periods from a split second to several minutes (breathing rhythms, heartbeats, and blood pressure). Ecological rhythms in duration coincide with any natural rhythm of the environment. These include daily, seasonal, tidal and month rhythms. Ecological rhythms serve the body as a biological clock. The main earthly rhythm is the daily rhythm, due to the rotation of the Earth around its axis, which is why all processes in a living organism have a daily periodicity.

In the bowels of philosophical problems, which were reformulated and discussed at the next stage of the development of science, synergetics arose – an interdisciplinary scientific field. One of the questions that is in the circle of synergetic problems is what is new, does it arise, or is any event a *déjà vu*, a repetition of an event that took place earlier.

The results obtained by synergetics are of undoubted interest for our re-

search. As then, it summarizes data of repeating phenomena in various fields of knowledge and proves that, “despite the qualitative differences, there is a fundamental unity between mechanical processes, flora and fauna, the thinking man and human society” (Тарасова 1997: 155).

The basis of the synergetic paradigm is the System Theory by Von Bertalanffy, which combines natural and social phenomena. Synergetics provides a description of self-organization, in other words it analyses the processes and categories that are associated with the concept of development (evolution). Moreover, the basic concept that characterizes the new understanding of development processes inherent in synergetics is instability, which is considered as a guarantee and symptom of development. The source of self-development and the condition for the appearing of new features are internal contradictions. According to the law of the unity and conflict of opposites, there is a bifurcation of the ensemble – the so-called bifurcation. It is understood as the point at which “branching of the evolutionary paths of the system begins, that is, the appearing of variants (differentiation). Near a bifurcation point, a certain number of fluctuations usually rises, due to which the development process is always accompanied” (Тарасова 1997: 156).

However, it must be noted that synergetics did not receive unanimous positive reviews. In particular, we’d like to quote the opinion of I. Danilevsky: “Synergetics itself in its worldview aspects is most commonly based on a substitution of concepts, therefore it is either platitude or a lie interspersed with truth, due to which the effect of its plausibility is created” (Данилевский 2005: 309).

By all means, synergetics is a fashionable theory in linguistics. (Пиотровский: 2006). To what extent it will turn to be vital, time will tell, but we recognize the need to transfer transdisciplinary models and cognitive schemes of synergetics from one disciplinary field to another in order to carry out cross-disciplinary dialogue.

The idea of self-organization – a new type of scientific rationality in modern scientific methodology – is associated with the theory of I. Prigogine’s dissipative systems, since it reflects, in fact, the stable results of self-organization.

The theory of self-organization is used in a complex non-equilibrium system of poetic language, where it reveals “fundamental heterogeneity, the union of subsystems of the second, third and other levels, which is associated with the internal diversity of the system, its flexibility and dynamism, and therefore the historicism of system formations” (Семенич 2004: 307).

SYSTEM OF REPETITION IN THE LIGHT OF SYNERGETICS

Repetition plays a significant role in abstract systems, because it leads to a very important result – it organizes many separate elements into a coherent whole, thus reducing the load on mem-

ory. In addition, repetition in the language system reflects a connection with the reality, which leads to the need to study its external and internal connections.

The category of repetition as a linguistic phenomenon is based on the psychological phenomenon of the reproduction of knowledge and experience (Pakholok 2019). While researching the features of the reflection of the category of repetition in a language, we are faced not only with language problems, but also with problems of thinking and cognition. Therefore, the problem of repetition reflection by language means is considered taking into account the philosophical approach.

The category of repetition has a wide repertoire of language devices for its expression. Such means are multilevel units of the language system: phoneme, syllable, morpheme, word, phrase and sentence. They can enter into paradigmatic and syntagmatic relations with units of the same language level: phonemes are combined only with phonemes, syllables with syllables, morphemes with morphemes, words with words. Repetition units are connected with units of other levels by hierarchical relations: phonemes fall within syllables, syllables fall within morphemes, morphemes fall within words, words fall within sentences; in addition, sentences consist of words, words of morphemes, morphemes of syllables, syllables of phonemes, so they repeat and form new words, variants of words, phraseological units.

The category of repetition permeates all layers and levels of oral and written speech. In colloquial speech, it is used unconsciously, automatically – both in appeals and in constructing of dialogue lines and monologue utterances. Inattention to the problem of repetitions, a low level of proofreading leads to errors that can develop into a trend of systemic use.

In the study of repetitions in a language, we consider as productive an approach that encompasses the use of semantically related, synonymous, identical words, as well as all existing varieties of repetition. This general theoretical approach is facilitated by the logic of the relationship between partial and general.

The essence of the repetition system can be described in two dimensions: ontological (Pakholok 2019) and epistemological. In ontology, the state of the elements, their place in the system, and the relationships that bind them are independent of the researcher, because they are characteristics of the object, due to which it remains itself and is separated from other similar objects. From the epistemological point of view (Korolyov 2019), the components of the system and their relationships can be identified and included in the description by the researcher himself, while acting within the goal of analysis and the reasoning of conformity with the presentation of the goal results” (ШЕХТМАН 1977: 5–6).

Paraphrasing the words of Ludwig von Bertalanffy, we can say: “Repetition is everywhere.” As a systemic phenomenon, repetition consists of imitation, periodicity, cyclicity, rhythm that should be considered in diachrony and synchrony, in ontogenesis and phyto-geny.

The repetition system is a software shell based on which the speech and language repetition system can be configured, while explaining the nature of the phenomenon.

The systematic nature of the relatively different types of repetitions consists in considering them as a single unit, as well as a subsystem of other higher levels; when the elements of the lower level

are subordinate to the elements of the higher level, being within a specific organizational structure and being described using different models; with one element has the properties of the entire system.

This research is an attempt of coherent description of the inherent content of the meaning of repetition, differentiation of this meaning and analysis of lexical means that explicate various types of semantics of repetition. The described fea-

tures of the functioning of the category of repetition provide the opportunity to characterize it as a unique substance in various subsystems of the language.

In the study of repetitions in a language, we encounter not only language problems, but also problems of thinking and cognition. That is why the problem of repetition reflection by language means is considered while taking into account the philosophical aspect.

CONCLUSIONS

In the capacity of methodological principles of the category of repetition study, the theoretical insights of I. Prigogine and G. Hagen were used, which made it possible to show the relevance of this phenomenon in the general extra-linguistic space against the background of a general theoretical and applied character of various sciences. The extra-linguistic essence of repetition is derived from the nature of this phenomenon that permeates the objects of material and abstract systems.

The consideration of repetition in two types of systems does not contradict the main provisions that represent the system as a complex of elements that are in relationship with each other and create unity.

Systematicity allows us to describe such a complex and multidimensional phenomenon in a language as repetition, which is a mega-concept and reflects the integrity of the universe.

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