

Rhythm: Types, Hierarchy and Language Diversity

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ABSTRACT

This article deals with the factors which cause the emergence of rhythm, its types, hierarchy and the relation of rhythm to life and the human language diversity. According to Aristotle “all types of rhythm are measured by certain movements”. So all events and processes connected with rhythm are rhythmical in nature. Rhythm is a regular reiteration of identical cases, processes and events within the boundaries of time and space. Rhythm is the form of regular motion. However, rhythm is not the result of motion. It is just the movement itself. All types of rhythm or movement, to our mind, are based on energy the absence of which excludes movements, rhythms, accordingly then life, human language, as well as language diversity. Thus, studying rhythm, its types and systemic hierarchy, to our mind, enables us to reveal the mechanism of transition from inanimate nature to animate one, on the one hand, and creation of the studying diversity principle of nature, as well as language diversity, on the other hand. The main task of a linguistic scholar, as defined by David Crystal, is great interest. To this linguist “the main task of the linguistic scholar is not to improve the language teaching situation ... etc., his task is basically to study and understand the general principles upon which all languages are built. What are the “design features” of human language? What are the differences between languages? How can we describe and classify this? How far are they fundamental? What concepts do we have before we can begin to talk about language at all” (D.Crystal, 1997). Our aim, accordingly, is to make an attempt to study the types of rhythm, its systemic hierarchy and the relation of rhythm to emergence of life and language diversity.

Keywords: rhythm, universal, property, systemic approach, hierarchy, system, structure, energy or heat, isomorphism, unequal, distribution, matter, natural factors, variation, crystal cage, generate, relation, geographical areas, unconsciousness, transition, form, measure, movement, regular, harmony, inherent

INTRODUCTION

The theoretical background of the article concerning the notion of rhythm is based on some considerations underlined in the philosophical teachings of Democritus, Plato, Aristotle, Herodotus (E.Benvenist, 1974), as well as in some dictionaries and the works of other scholars. As for the theoretical background of the article concerning the human language diversity, it is based on some considerations underlined in the works of distinguished linguists, such as J.Herder, V von Humboldt, W.D.Whitney, H.Steintal, W.Wundt, E.Sapir, etc. F.de Saussure’s dichotomic (language and speech), as well as systemic and structural approach to language, gave rise to the investigation of language in relation to other sciences, such as biology, geology, etc. In this respect, the problem of isomorphism between language and genetic code has remained in the interest of Jacobson for a long time (R.Jacobson, 1970).

The connection of language and geology was underlined by the participants of the conference dedicated to the problem of "Language and Earth" held in Bad Homburg, (Germany) in 1989. (Newman. et al., 1992). It was revealed that there is structural isomorphism between the structure of crystals and the ornaments of ancient artifacts (Mammadov Kh., 1981).

Furthermore, it was revealed that there is structural isomorphism and functional similarity between language and crystals (F.Zeynalov 1999).

Having assumed the above-mentioned considerations, concerning rhythm and its forms, as well as the connection of language with geology, crystals and genetic code, as a basis we can say that different forms of rhythm and structural isomorphism between crystals, genetic and linguistic codes, as well as diversity of human language, occur in the form of unconscious way not depending on the will or wish of human beings.

RESEARCH METHODOLOGY

In the article we have used direct observation, structural isomorphism, systemic analysis, comparative linguistic description, transformation, logical-heuristic methods.

The comprehension of interrelation of the types of rhythm is of paramount importance from theoretical and methodological points of view, because the systemic approach to the types of rhythm and study of their interrelation, origin and manifestation forms allow to reveal which of these types of rhythm gave birth to life, i.e. factors causing the transition from inanimate nature to animate one, on the one hand, and the factors causing human language to be diverse, on the other hand.

SCOPE OF STUDY

Rhythm (rhythmos) is a word of Greek origin, which has derived from the verb "to run", "to flow".

The word "rhythm" historically has been used in different meanings, enriched with new shades of meanings in historical development and became a notion expressing the general properties of the universe. In the texts written by the Greek authors and in their teachings the word "rhythm" was used in the meaning of "form".

In the philosophical teaching of Democritus "rhythm" is explained as different forms of atoms, and it occupies an important place in his philosophical notion playing the role of a key. According to Democritus, water and air differ in the form of their atoms. Then he uses it in the meaning of the form of the state.

In the teaching of Democritus, "form" (rhythm) is understood in the meaning of a distinguishing feature, the regular order of pieces which represent the whole (E.Benvenist, 1974).

The exact definition or interpretation of the notion of "rhythm" was given by Plato. He added such shades of meaning as "rhythm", "harmony", "movement of the body", "form of action". Plato explains the notion of "rhythm" as a regular, consecutive, slow and swift movement; in consistence with it, harmony is the alternation of high and low tones. Moreover, Plato looks

upon “rhythm” as the relation of accessibility, relativity between “richness and poverty”. Boisaq understands “rhythm” as equal movements of the wave”.

The content, etymology and the process of historical development of “rhythm” were disclosed in detail by E.Benvenist, who proceeded from the dictionary of Liddell- Scott-Jones (E.Benvenist, 1974).

In its present meaning “rhythm” is interpreted as “a form of regular action” based on regular action process. As a comprehensive notion it is applied to the form and structure of things, to their measures, dance figures, walk and posture, modulation of the voice, singing and song, poetry, language and speech phenomena, works of art, types of art; in other words, to phenomena and processes taking part in the composition of living and inanimate objects and in different spheres of the human life.

Rhythm is one of the global features of the universe. This universal feature is a hereditary component coming from the Sun to the Earth. It is conditioned by such a fact that all the living and inanimate objects have emerged, moved, lived and developed due to the energy and heat of the Sun. In the womb of the Sun, a motion, a harmonious rhythm is being observed; it is throbbing, opening and closing like the human heart. This motion and harmonious rhythm are transferred into the living and lifeless realm born under influence of the warmth of the energy of the Sun like “a hereditary” sign. Because of it there is a universal rhythm inherent in nature (universe) which is regulated by the energy of the Sun. Any type of rhythm originates from movement. Where there is movement, there is rhythm.

This general definition of rhythm can be referred to all kinds of rhythm. When learning the environment, penetrating into the essence of different events and processes, it becomes clear that there is nothing in nature, which is absolutely motionless, unchanged. It seems so at first sight, yet there is motion in everything, beginning with elementary particles, atoms, molecules to the greatest planets. In this respect, rhythm is inherent in whole living and lifeless nature, wholly to the universe; it characterizes the dynamics of actions and processes on-going in them. Thus, rhythm exists objectively in nature and society, including different spheres of human life. So, rhythm may be explained from mechanical, physical, chemical, biological, physiological, social, linguistic, literary-aesthetic and other points of view (F.Zeynalov, 1999).

The investigation of the linguistic literature indicates that there are various approaches to theories on the origin of human language, on the one hand, and the diversity of human language, on the other hand. Among them, J.Herder’s considerations, who accepted the Cartesian rationalist position, seem to be convincing. According to Herder, language ability is innate and is an essential part of human nature. It was neither invented nor handed down as a gift. He drew on the universality of all human languages as an argument to justify a monogenetic theory of the origin of human language. He put forth the monogenetic theory to explain why languages, despite their diversity, have universal common properties (Fromkin, Rodman, 1988). Though the monogenetic theory was not widely accepted at that time and in contemporary linguistics American linguists, however, on the basis of experiments have recently asserted that all the languages of the world originate from one root [17, 113 (7)].

It should be noted that beliefs in the diversity of human language are found not only in the Tower of Babel legend, in the myths of other peoples, in monogenetic and poligenetic (Democritus) theories but in the work of distinguished linguists, as well. According to V. von Humboldt the diversity of human language is closely connected with a people's soul or spirit. W.D. Whitney related the diversity of languages to the manner of thinking or mental properties of a people. J. Herder related the diversity of languages with the people's customs and tradition. Other scholars, such as H. Steintal, W. Wundt and E. Sapir, reasoned their cases, i.e. diversity of human languages, as the psychological properties of a people. Among these approaches V. von Humboldt's view was widely accepted as "language is the soul of a people". To P. Farb, man lives with the world about him, principally, indeed exclusively, as language presents it. No two languages are ever sufficiently similar to be constructed as representing the same social reality (P. Farb, 1977).

To Ch. Hockett, at some earlier time, the diverse languages showing the resemblances were all one language, the differences having come about through later vicissitudes (Ch. Hockett, 1965). So, the origin of the human language is related to the evolutionary development of the human species on the basis of monogenetic theory.

TYPES OF RHYTHM

Mechanical motion is connected with the replacement of bodies in the space. The replacement of atoms, molecules, macroscopic and cosmic bodies refer to the form of mechanical movements. The type of the mechanical rhythm is observed in technics, mechanisms, in clocks and watches, in weaving machine tools and others. The mechanical rhythm is characteristic with its isochronous action and measure equality. Mechanical type of rhythm excludes arrhythmia.

One type of the rhythm emerges as a result of physical actions and chemical reactions. Spread of heat, sound, light and electro-magnetic waves, crystallization, changes of atoms and molecules of matter, geological processes and others are of rhythmic nature. In that way, sound, light, atom (its small pieces-electron, proton, neutron) move in their orbits rhythmically. The most striking example of physical rhythm may be observed in the examples of crystals. The atoms, molecules and ions, which form the regular structure of these or other crystal-like matter, are repeated in crystal cage form periodically and a rhythmic process takes place generating its ownself. Depending on environmental factors, including heat, climate, meteorological and other conditions, the physico-chemical rhythms change and acquire a number of varieties.

One of the main forms of action is biological action i.e., biological type of rhythm. The material bearers of the biological rhythm consist of mono- and multi- cell organisms. Biological rhythm comprises living systems; both the biological processes on-going inside the living organisms (endogen) and in over systems (families, species, biosensors, etc.). The biorhythm of the living organism begins exchanging a matter and energy, recreates its own structure and function. The exchange of matter leads to the renewal of tissues in living organisms, composition of cells and to its own self-renewal. The biorhythm of the living organism is in interrelation with the rhythm of the external environment; this interrelation always undergoes changes and regulation. Depending on the factors of external environment, the living organisms have gained the cycles of speedy growth, development, augmentation, preparation for season change and other annual

habits. Transfer of hereditariness in the formation in the living beings is also rhythmical in nature. In biological rhythm there is no serious isomorphism. So, the intervals of the rhythm of the heart, breath, cells and others are variational and change depending on the environment.

One more type of rhythm is the social type of rhythm connected with the forms of social movement. Social rhythms are connected with the periodicity of the purposeful activity of the people and periodicity of the social life. Rhythm is characteristic for all social changes beginning with the people and the society. Action is inherent in human brain (Noosphere), the sphere of human's intellectual activity. Rhythm is inherent in the human brain and to the processes ongoing in the sphere of his mentality. So that, the physiologists have come to a conclusion that in the brain of the human being there are biological rhythm types like α – rhythms, β – rhythms, γ – rhythms, δ – rhythms, θ – rhythms having different hertz.

The process of reflection of the reality in the human thinking includes the social rhythm as a type of rhythm, too. Development of man's consciousness, thinking and sense as the reflection of the reality have given an incentive to the phenomena of language and speech, including literary activity as one of the highest forms of creative activity of man.

The structure of all types of art is rhythmical in nature, which is the product of the literary activity of language and speech as a phenomenon.

In poetic and linguistic texts, particularly in lyric verses, rhythm and harmony are more conspicuous. The artistic type of rhythm is inherent in the works of art (music, dance, painting, architecture, decorative applied art and others) and certain rhythmic variations, harmonies, accents, sketches usually accompany their structures.

The artistic rhythm displays itself conspicuously in folk music, dance tunes, poetry, crystal-like ornaments.

HIERARCHY OF THE TYPES OF RHYTHM

As other natural systems, all the types of rhythm form a certain system. All the rhythms are interrelated as all the regulated elements of a system. The types of rhythm are built on hierarchic relations from below up to the top and one rhythm gives birth to another and acquires a new form and quality.

It should be noted that without physical processes, the birth of chemical and biological rhythmic processes cannot exist, on the other hand, without biological rhythmic processes the formation of socio-public relations is impossible. Then without the interrelation of physico-chemical and biological rhythms psychological processes and consciousness, thinking of man, including the phenomenon of language and speech and rhythmic pieces of art, which are the products of the creative activity of man, cannot exist. The human organism functions under the mutual harmony and influence of the types of physico-chemical and biological rhythm and the man begins to be recognized as a personality, who is the bearer of the type of social rhythm on the account of interrelation of the types of rhythm. On the other hand, the process of development of anything in the thinking of the man, including the phenomenon of language and speech, art and its types, which are the expression of the social rhythm, and all this is based on the synthesis of physico-chemical and biological rhythmic processes in the human brain.

Thus, the comprehension of interrelation of the types of rhythm is important from theoretical and methodological points of view, because the systemic approach to the types of rhythm, study of their interrelations, and origin of different rhythm structures allows to reveal their interrelations, the origin of different rhythmic structures and their development features. On the other hand, it is impossible to clarify the reasons of why these rhythms have different structures, without studying the social language-speech and origin of the types of artistic rhythm, the reasons of differences in the structure of rhythms in different nations and peoples. Systemic approach to the problem implies the consideration of all the encountered factors in the solution of a certain issue.

All the types of rhythm fulfil mainly identical functions. As the types of rhythm are processes created by energy, they are regular actions, which participate in combining, in organizing, in renewal and development. The transition of simple forms of action (mechanical, physical, chemical) to compound forms of action (biological socio-public, language, thinking, speech) has been possible due to the dynamic nature, constant renewal, organizing ability, ability of uniting the parts of a whole, regulating ability, ability of having a function. One of the characteristic features of the system is its function. Function is an action inherent in the system and directs it towards achieving a certain result and serves a certain purpose. As it was noted, mechanical rhythm means spatial replacement. The earth is characteristic with two mechanical rhythms. The revolution of the earth round its axis leads to the rotation of the day and night, as well as to the replacement of light and darkness. Revolution of the earth round the sun leads to the change of seasons of the year, cold and heat. The periodic revolution of the Earth and the Moon round the Sun combines the spaces of time, months to years, years to centuries, etc., creating the imagination of unlimited space of time. On the other hand, the rhythms of the Sun, the Earth and the Moon have their impact on the seas, seasons, plants, animals and human beings and on their social life. Revolution of the Moon round the Sun, the fall of the heat of the Sun on the Earth differs in different seasons. In summer the rays of the Sun fall on the earth perpendicularly, therefore it is hot in summer, but in winter the rays of the Sun fall on the earth under a small angle, therefore it is cold.

The rhythm used in technical equipment, machinery, including the work principle of weaving looms, spinning machines and others, also refers to mechanical type of rhythm. The clock, technical equipment, machinery work because they possess a certain system-structure shape and fulfill certain functions.

The function of mechanical rhythm cannot be limited by their isochronous working principle, because each of these mechanisms and machinery is a system and they have been directed towards fulfilling a definite function in conformity with the expedient activity of the people. Therefore, the isochronous, periodic rhythm of the spun and woven materials, as well as the ornaments on textile and carpets, have been aimed at creating certain relations among those ornaments, unity of their parts; it fulfils a combining and organizing function.

The sphere of biological rhythm cannot be limited only by the rhythm of the heart and breathing and to look at it as the piece of time between the life and the death of organism. It should be looked at it as the repetition and transition of the genetic and hereditary peculiarities of generations, i.e. the alternation of generation periodically.

Biological rhythm has developed on the basis of physico-chemical rhythm types, which have existed before it and given an incentive to the evolution and development of social type of rhythm. Transition from physico-chemical types of rhythm to biological and geological processes led to the evolution of living beings and to the division of living and lifeless bodies.

The living nature developed from mono-cellular to multi-cellular and gave an incentive to its "second" evolution, that is, to formation and development of biological and social beings. Irritation, growth, development, self-derivation, self-recreation of its function and structure, transfer of its hereditary characteristics and other biological processes are repeated. So, these features inherent in living organisms become implemented into life owing to their functions able to organize, recreate, combine, renew and organize the whole. As it was noted, man, who is the bearer of social-biological rhythm, is periodically repeated in generations, peoples and nations. There is a self-creation, recreation, transfer of hereditary features within families, tribes and nations. All these processes take place owing to the interrelation and functions of biological and social rhythms.

The language-speech rhythm like other types of rhythm has a particular structure and features inherent in it. But the combination of the elements internally, their periodic repetition and ability to provide the wholeness of the system create an identity between the language-speech rhythm and other types of rhythm. Nevertheless, the rhythmic structure of different languages, measures of rhythm, their types and features are different.

FORMS OF MANIFESTATION OF RHYTHM

Different types of rhythms existing in the nature emerge in different forms. It should be noted that there are rhythms in nature, which are visible, invisible, which are heard or not heard, which are felt or not felt. For instance, with an ordinary eye it is impossible to see the molecules moving in liquids and gasses, electromagnetic waves moving in the air. But it is possible to measure their rhythmic actions as it is done by scholars, who determine them and make them visible. The alternation of cold and heat in the air is felt, it is possible to see and hear the rhythmic actions of waves. The types of rhythms are manifest in visual and acoustic forms. Language-speech, music and dance, which are the forms of art, are manifest in acoustic form, but other forms of art (painting, architecture, decorative applied art) are manifest in visual form.

Mechanical rhythms (revolution of the Earth and the Moon round the Sun) are manifest visually and acoustically (sounds of the clock and machinery, etc.).

Biological rhythms emerge visually. One can observe rhythmical arrangement of leaves in plants, and rhythmical structure of leaves themselves. The ancient Roman philosopher K.Lukretius linked the arrangement of the atoms within the matter with the arrangement of leaves in trees. The heart throbs manifest acoustically and the repetition of hereditary features non-visually. On the other hand, it is possible to visualize and see the rhythm of the heart, head and brain muscles and the rhythm of neurons in special apparatus (α – rhythms, β – rhythms, γ – rhythms, δ – rhythms, θ – rhythms).

The types of physico-chemical rhythms are manifest in the structure of different lifeless and living beings. For instance, the rhythmic order of molecules in the structure of aromatic

carbohydrogens, that is, the regular order and succession of molecules, is manifest in the rhythmic structure of honeycombs of bees. So, the structure of aromatic carbohydrogens and honeycombs of bees and their succession is in the form of hexagonal geometrical figures. A spider spins its cobweb in the shape of geometrical figures. In the crystals, which are solid bodies and have atom-molecule structure, the atoms and molecules are not detected by human eyes. But the regular order of atoms and molecules, their rhythmic structure emerge differently. It has been discovered that the rhythmic structure of crystals in the form of crystal cages are repeated periodically and are identical with the ornaments created by the ancient craftsmen. To put it another way, the ancient craftsmen arranged their ornaments on plane in the same manner as nature arranges molecules in crystal matter (Kh.Mammedov, 1981).

There is a similarity between the number and forms of petals of flowers and the structure of chemical elements. So, different number of petals in flowers may be regarded as the form of manifestation of the identical number and structure of atoms and molecules in chemical elements, the structure of chemical elements mainly being in the form of triangular, quadrangular, pentagonal, hexagonal geometrical figures. The majority of flowers have three, four, five or six petals we encounter in their buds. Flowers formally having six petals in their buds are often encountered. We think that it can be conditioned by such a fact that the composition of plants consists of cellulose and starch and the chemical structure of these matters are of a hexagonal geometrical form. But as for the multi-petal flowers (roses, dog-roses, etc.) the number of petals in them coincide with the linear structure of high molecular combinations.

High molecular combinations consist of a big number of repeated monomer parts (rings), which form a similarity with the number of petals of multi-petal flowers. The linear structure of multi-petal flowers, in which petals lie on each other, is also characteristic for the chemical structure of natural cellulose and starch.

This similarity between the quantity of petals of flowers and the structure of matter allows make such an inference that the petals of flowers are moulded identical to the structure of chemical elements as if they manifest the rhythmic processes on-going within the chemical elements, as F.S.Shelling says. "Rhythm deposits very queer secrets of the nature and art".

Thus, the forms of manifestation of rhythm and its types in nature are different. So, the rhythmic processes on-going in nature secretly and in hidden form emerge in this or another material form and appear in ways unknown to man without any inquiry. From this point of view, it is possible to say that the rhythm of the language of any nation, and of its music is not visible as the rhythm of the air, the scent of flowers in nature, for they are the forms of manifestation of some natural processes and emerge "without any interrogation" in different acoustic sound forms, sound combinations (phonotactics), phonorhythmomelodic sound stream not depending on man.

The systemic analysis of an object implies studying the property of the object according to components of its property. It should be noted that the systemic approach to objects should meet several requirements: 1) the system must consist of lower or undersystems; 2) the lower or undersystem must help the aim of the research as a whole system; 3) there must be a property which determines interrelation of undersystems; 4) the system must be a component

of supersystem. In this respect, the system of rhythm contains its lower or undersystems. To our mind, the supersystem of the types of rhythm on earth is the solar system of the universe.

It is common knowledge that the basis of existence contains four elements. The action of molecules in two of four elements liquid (water) and gases (air) are chaotic, they lack stable structure. The stable structure and harmonious rhythmic action are inherent in the sun, the source and bearer of energy and warmth; unlike the liquids and gases on earth, the action of atoms, molecules is not chaotic in crystals (soil); their regular order has a certain stable structure. The structure of crystal substances is formed on the basis of periodic repetition of the elements which create crystals. Though it sometimes called "aperiodic crystal" [4, p.70], yet the first crystal cage, which consists of a certain geometrical figure, is repeated periodically within the structure of crystal substances serving self-creation, and self-development.

The main distinguishing feature in crystals is their structure. For instance, though the diamond and graphite consist of the same carbon atoms, their properties differ from each other. The diamond is the hardest of the material matters and graphite is the softest one. The difference between them is due to their structure. Though the structure of crystals is built on the same principle, each of them has different structures. The reason of these differences is their environment. The development of elements of the system in different environment, the reaction in different climatic conditions, different rhythmic states lead to formation of different structures, and as a result, numerous kinds of matter with different structures emerge.

As the natural crystallic matters develop in different climatic conditions, in different rhythmic states of nature, in different geographic area, their structures are also different. The main feature of the structure of crystals is the symmetry. Symmetry of different types and measures is one of the descriptive indicators of crystals. Therefore, there are elements of symmetry in each crystal, whose property is the self-repetition of the parts of its whole, the ability of parts to represent adequately the whole. Natural rhythmic processes (mechanical, physio-chemical, biological, language-speech etc.) are mainly governed and realized by the heat and energy of the sun. But what about the crystals, which are seemed to be "dead", inactive, and "inert" at the first sight. Is rhythm inherent in them, too? Having caged atom-molecule structure, hard body matters are crystals. The rhythm in crystals is manifest in the form of geometrical figure of different types of measure in the form of different ornaments and patterns. If the rhythm is patterned, crystallography ornamented then the rhythm is inherent in crystals, as well. The structure of crystals produces itself with certain prosodic repetition and self-development, which takes place within the crystals. Such periodic repetition in crystals create multistrutum, imagination of endlessness. Because of it, crystals have covered the earth, if it is like that, then the crystals like a dynamic aggregate which are in motion all the time and exist with their endlessness rhythm. So, the rhythm is a characteristic feature of crystallic matter. Moreover, there is a harmony in crystal, and there appears something porosity-like electron holes as in subconductors. As crystal is in motion, it breathes and in a certain sense it lives. In what rhythm does crystal breathe? It breathes due to flow of energy and its own endlessness rhythm. What is endlessness? It is the rhythm of the space itself. If living breathes then the rhythm of the space is nothing else, just the rhythm of the life, or vice versa, the rhythm on earth is just the rhythm of space.

It is possible to think that crystal bears fire or energy within itself “fire without ash”. For instance, there is a stone (crystal) which is known as fire bearer in its womb. It was used to obtain fire by means of striking it with a piece of steel and attaching a piece of cotton to that stone. From this point of view, Heraclitus’ opinion on four elements of existence arouses interest. To this philosopher, “everything emerges from the fire and it changes regularly: it turns in water, air, soil and afterwards it turns in fire again”. In this respect, the stable atomic-molecular structure of crystals on earth can be directly related to the solar system. Unlike the water (liquids) and air (gases) the crystal-like matters possess the following specific parameters: 1) stable atomic-molecular structure; 2) structural diversity; 3) periodic rhythmical process (rhythm); 4) self-repetition; 5) self-development; 6) the rhythm of endlessness; 7) solidity; 8) possessing porosity or electron holes; 9) breathing; 10) possessing symmetry elements in the form of geometrical figures; 11) ability of parts representing adequately the whole; 12) bearer of ornaments; 13) bearer of the symmetry (beauty); 14) bearer of the fire or energy within itself.

After the hierarchic analysis of the rhythmic systems it is possible to think that the physical factors is based on emerging of the rhythm on earth, and the other types of rhythm are manifested and developed themselves on the principles of formation of internal structure and parameters of crystals.

The investigation indicates that the above-mentioned parameters like structure, form diversity, heterogeneity, solidity, rhythm, periodicity, self-repetition – ability of representing the whole, self-creation, self-development, acquisition of geometrical figures in the forms of ornaments, elements of symmetry, energy, etc. emerge in all the spheres of biological beings.

For instance, heterogeneity in the form and structure of the nuclear of plants, solidity of the boles of bushes and trees, symmetry order within the structure of leaves itself, the order of the leaves on the branches with rhythmic interval between the leaves, and small branches self-procreation and self-repetition of plants and periodically renewing of their leaves and fruits may serve examples to the above said.

Formal and structural heterogeneity in the world of animals may serve solidity of their skeleton, symmetry elements in the structure of their bodies, similar ornamental elements on their skins and bodies, rhythmic arrangement of feathers in birds’ wings, rhythmic flight and order of birds in the air, multicoloured ornaments on birds’ wings and heads, wings of butterflies, crystal-like ornament on pelvis tortoise and skin of giraffe etc. Rhythmic trample of animals (the race of horses taken rhythmic measure to syllabic matter, the race and march of camels to the Arabic meter of eruz; the run and spring of lynx to syllablo-tonic meter). In animals self-propagation by genetic code is taking place by the way of repetition, etc. Parameters inherent in crystals are manifest in human generation unequivocally, for instance, differences in structure of bodies and faces, symmetry (beauty of form, eyes, brows, lashes) in the structure of the face self-propagation, self-repetition, multiplication, etc. by means of DNA. Parameters inherent in crystals distinctly demonstrate themselves in the system of language and speech as well, structural diversity propagation of its limited units – (units from the limited system of phonemes - words, collocations, sentences, discourse, long texts) derivation, extensions, rhythm, possession of symmetry elements, etc. In connection with it, there arises such a question on the relation of solidity to language-speech of a nation. To put it another way,

does the prototype of solidity inherent in crystals belong to the human language-speech, too? In connection with this question we can say that phonotactic arrangements of segmental phonemes, idioms, phraseological units, proverbs and sayings, metaphors and folklore derived from the life experience, customs, traditions, behaviour and culture of people, and they are most precious “metal stones” of the linguocultural elements of language carved in the memory of history of the people like the hardest and most solid crystals.

By investigation of these “solid crystals” of a language deeply and in detail one can get virtual information about culture, art, music, manner of thinking or mental characteristic features of a people.

Language - speech rhythm is a high level type of rhythm formed on the basis of physico-chemical, biological and social rhythms. The artistic rhythm which has emerged on the basis of language - speech rhythm is its next step. The artistic type of rhythm may interact with other types of rhythm through the mediation of language - speech rhythm. It means that the language-speech and artistic rhythms repeat the features of other rhythms coming before them in this or some other form. To put it another way, the elements of physico-chemical, biological and social rhythms take part in language-speech rhythm directly or indirectly. Language-speech and artistic creative processes, which belong to the sphere of mental ability of man, are based on the synthesis of physico-chemical and biological rhythmic processes on-going in the human brain.

The above-mentioned parameters belonging to crystal matters lead arising such questions: what links the crystal matters with the emergence of life on earth? What factors cause crystal matters to possess ornaments in the forms of geometrical figures? What causes the human language to be diverse?

The first question is related to the appearance of chemical carbon element on earth. Carbon is an important biological element which exists in a pure state as diamond and graphite. Carbon possesses four crystal modifications: graphite, diamond, carbene and lonsdeylite, the latter modification is obtained from the meteorites in artificial way. In this respect, the science looks upon the emergence of life on earth as complex evolutionary process of carbon chain compounds [23]. The outer electron cover configuration of carbon's atom possesses electronegative (-) and electropositive (+) elements. Being an organic element, carbon bears energy within itself, therefore it is found in all living beings. It should be noted that the parameters (structural diversity, periodic self-repetition, self-creation, self-development, possessing symmetry elements, etc.) belonging to crystal modifications of carbon (diamond, graphite, and so on) are traced or imitated in complex carbon compounds. For instance, as the crystal cage is repeated periodically within crystal matters, so the carbon atoms are repeated periodically within the complex carbon compounds. As in crystals symmetry is the main feature of the structure of the complex carbon compounds whose structures consist of basically pentagonal hexagonal geometrical figures. According to Kh.Mammadov the basic distinctive feature in crystals is the structure. If there is a structure then graphite turns in diamond and if there is no structure the graphite remains as graphite. To this scientist, the human being, genes (DNA) are crystals, so their structure are orderly arranged appropriately to the code as in a diamond cage, after all (Kh.Mammadov, 1981).

The factor which causes the formation of ornaments in the form of geometrical figures in crystals is due to the maximum dense placement of molecules within the crystal matters. Thus, the peculiarities which characterise the parameters of crystal matters are observed in all biological beings, as well as in language-speech phenomenon.

LANGUAGE DIVERSITY

There is a number of common features inherent in all languages. The material basis of all languages is the same. All languages use phonetic, lexical, grammatical units and prosodic-intonational means. Rhythm is inherent in all languages. Though all languages originate from the same material basis, same origin and rhythmic harmony, yet the sounds (phonemes) of each language are different from phonetic forms, phonotactic, phonorhythmomelodic points of view. Despite the biological root, emotional and logical cognition of man and the nations on the earth, the rhythm of their speech, culture, character, manner of thinking, etc. differ from each other. In connection with it there arises such a question: how different sound shades with different phonetic forms, phonotactics and word order, speech rhythms, grammatical structures and different linguistic features emerge, if men speak languages with the same anatomic-biological structure, have the same brain, nervous system and organisms, same biological and language roots, same principle of "reflection" of thinking? Though there is only one species of man and they have the same biological root, the same sense and cognition, yet peoples differ in language, speech rhythm, culture, character, manner of thinking, etc. Arrangement of chemical elements in the structure of matter, their order of succession and different structures are not chaotic. Structural differences in chemical combinations, mutual interaction of atoms in certain environments are built in conformity with their valences and as a result they get different structural forms. The structure of languages, including their articulatory-acoustic, phonotactic, phonorhythmomelodic and other features are not a chaotic phenomenon. Here again, to our mind, must be a certain principle and regularity, that is, arrangement of sounds (phonemes) in words from the point of view of their succession, independence of positions, phonotactic limitations, the lining of words, the place of stress, diversity in the peculiarities of speech in different languages is also based on certain principles and regularities.

Languages behave like crystals from the point of view of their structures. Though the structure of crystals is built on the same principle, however, each of them has a different structure. The reason of these differences is their environment. As noted before, the development of elements of the system in different environment, their interaction in different climatic conditions, different rhythmic states lead to the formation of different structures, and as a result, numerous kind of matters with different structures emerge. Diversity of languages imitates the principle formation and structure of crystals depending on environmental factors. Diversity in the structure of languages, we think, is connected with the rhythm of the nature accompanied by the energy of the Sun and its heat. Unequally distribution of the warmth of the Sun in nature leads to the differentiation of rhythmic harmony, order, tempo, and pulsatory dynamics in different natural-geographical territories. So, a natural rhythm for each geographical territory and a rhythm for lifeless and living beings emerges in that territory, which lives and breathes with that rhythm. As the factors of environment adapt to the morphological structure of man (people), to its own features, it also adapts the internal biorhythm of the people living in that natural-geographic area to its own rhythmic features. As the rhythm of the nature in different geographical territories vary, the biorhythms of people living in different territories also differ, the biorhythm of those people develops in conformity with the rhythmic harmony of that

geographical territory. The natural oral speech is comprehended mainly through the ear. There is a relation, coordination between hearing and pronunciation. Therefore, people are able to hear and speak simultaneously. So, the organs of speech act in conformity with the forms of sound images, in fact, the organs of speech “imitate” what is heard. The character of phonation, which the denotants radiate and the association of language sounds take place not on objective phonation, but on subjective phonation, i.e., on comprehension. The internal biorhythm of the people forms the basis of the perspective level of comprehension of what is heard. The phonation comprehended on the basis of different biorhythms forms different speech sounds in the organs of speech with different articulations. Therefore, it is difficult to find absolutely identical phonemes in the phonological system of the world languages, for instance, the bark of the dog is perceived as [ham-ham] in Azerbaijani, [gΔv-gΔv] in Russian, [bau-bau] in English, [gυaυ-gυaυ] in Spanish, [wΔn-wΔn] in Japanese language etc. In this respect, pronunciation of a language is based on biorhythm of people.

This point of view aimed at explanation of the reason of structural differences of languages from phonetic, phonotactic, phonorhythmomelodic, tactic and other points of view may be called a “helio-rhythmic” approach or theory. According to the helio-rhythmic point of view, the basis of structural diversity of languages is founded on the natural rhythm of the nature accompanied by the heat of the energy of the Sun and its variations. The common language structure, pronunciation features, speech rhythm, identical manner of thinking, identical character, national-spiritual and psychological peculiarities, behaviour and culture are indications that they have been the products of the same natural, (physical, chemical, biological) rhythmic environment for thousands of years.

Relations of people and the external environment are regulated by the mechanism of “entrance” and “exit” elements of the system (man). Man gets the air, water, warmth, food, information from the external environment. These are the “entrance” elements of the biological system and each of them has its own natural receiver in man. The emotions, relations, thoughts, actions, behaviour, feelings and others formed in man from “the introductory” elements are “exit” elements. Thus, national-spiritual qualities in man, including emotions, attitudes, behaviour, ideas, biorhythm of organism, rhythm of the colloquial speech and others are exit elements formed from the rhythmic properties of external environment factors, material-spiritual qualities conveyed to the organism of man in the form of food products grown in natural-geographical territory. From this point of view, the rhythm of the colloquial speech depends on the biorhythm of man and on the rhythm of the external environment surrounding him. The harmonious formation of the rhythm of the external environment and internal biorhythm of man, that is, the harmony of exogenic and endogenic rhythms is implemented into life by means of the energy of the Sun directly and by material-spiritual means providing the organism with food products.

It has been discovered that there are common features in different spheres of national cultures [Kh.Mammadov, 1981]. So that, the rhythmic sketches existing in one type of art (for instance, in music) exist in other types of art as well, for instance, in carpets, architecture, painting, embroidery, knitting, etc. This common principle inherent in the national culture is based on the language of the people, on its linguistic and rhythmic-intonational features. Language is taken as a standard to isomorphous structures in the national culture; it indicates that cultures and examples of art are much younger than the languages, which represent them. So, language

forms the embryo of the work of culture and art, filters them before being formed, as if they have derived from the language. From this point of view, it is natural that language and its elements, including its phonorhythmomelodic features, take part in the examples of culture and art in this or other form. It is natural to detect common sketches in the works of art created on the basis of the same language environment and identical biorhythms. The similar process occurs in chemical elements. The chemical elements with identical compositions create crystals of the same form, when they harden. The same process happens in the works created on the basis of the same language where identical rhythmic structures emerge. The researches reveal that there is a relation between the biorhythms of the organism of man and the rhythm of the works of art (music, poetry, dance, architecture, painting) are identical to biorhythms [19]. In this respect, the national colour, idiosyncrasy and semantic, aesthetic information in music, poetry, dance and other examples of artistic and descriptive arts are created and conveyed by biorhythms and the native language.

It should be noted that alongside with the words, the features of phonorhythmomelodic structure of each language are able to bear certain information from the time, spatial memory, and national-spiritual characteristics of the nation. Rhythm also forms a system in the language. Therefore, it is a source of information, it has its memory and physical environment is able to deposit and convey information. The physical environment of the rhythm of each language is in the form of phonorhythmomelodic current of sounds, syllables, words, sentences or utterances, folk songs, etc. Language conveys information from time to time, from space to space, alongside with it, its rhythm like physical environment is able to bear the rhythmic features of certain natural-geographical territory. So that, the rhythmic-melodic harmony of each language is a component coming to the language from the features of biotic and abiotic factors of the natural-geographical territory in which the languages historically existed. In other words, the phonorhythmomelodic sketches, features of each language are being formed from the interaction of exogenous and endogenous rhythms. Therefore, the rhythmic-melodic structure of each language is the bearer of two types of information: information, which bears the rhythmic-melodic features of the natural-geographical territory, and the information, which bears the features of the biorhythms of a people.

In this respect, there must be common features between the phonorhythmomelodic structures of the languages of the peoples living in certain natural-geographical environment and in the rhythmic structure of the art and culture of the peoples populating that natural-geographical territory and such regularity has been discovered (F.Zeynalov, 1999).

Thus, the phonorhythmomelodic structure may be the bearer of certain information from the linguo-paleontological point of view. By studying the phonorhythmomelodic sketches of languages (speech) it is possible to determine to which nation belongs the examples of art and culture. On the other hand, by the graphical description of sketches of phonorhythmomelodic structure of languages it is possible to discover identical and non-identical features of languages on supra-segmental level, at the same time to get information about the rhythmic peculiarities of the language areas.

The principle of commonness indicates that all the kinds of art are of the same root and same origin and they have historically emerged and developed in the same natural-geographical territory. So, it is possible to determine the music, dance, poetry, sewing, knitting, architecture

and other kinds of art through the phonorhythmomelodic sketches of the peoples' language. If the words, utterances, sayings and folk songs originate from motherland, gene, blood, mother's milk, cradle songs, then in this case the rhythmic-melodic vocal harmony, which originated from the stream of words, must contain specific sketches inherent in each nation. It is not accidental, that folk songs, dance music, lyrical verses arouse much more aesthetic and emotional delight in those people whose rhythms (biological) are isomorph in character and structure with the rhythms of their folk songs, dance music and poetry.

The phenomenon of language and speech emerges in acoustic form. The sounds of language, their phonotactic order and phonorhythmomelodic stream are the manifestations of different rhythmic harmony, processes existing in nature. The rhythmic peculiarities of different natural-geographical territories are an essence like thought, air and scent of a flower, which are not visible, but emerge in the form of a sound and sound waves.

It was find out that there is corresponiense between the structure of substances and their properties. The structure often determines the properties of substances and at the same time the property affects the structures, as well. Though the chemical composition of diamond and graphite is the same, their structures are quite different and their properties are different, too. This due to their structure which is conditioned by certain environment. As noted before, in diomond the caborn atoms are placed densely, therefore it is the hardest, but in graphite it is not so, therefore, it is the softest. The structure and property dependence can be observed in the structure of albumous and DNA. It is known fact, that life is the living form of albumous and DNA, as life develops not in straight lines but always falls and rises, i.e. in a spiral shape, therefore, the structural pattern of albumous and DNA is spiral-shaped.

It should be noted that structure, property and environment dependence occur in combinatorics of phonemes in languages which is conditioned by the degree of distribution of the heat of the sun in different geographical areas. To our mind, it is observed in the syllable structure of words of languages, such as, English, Russian, Azerbaijani, etc.

In conformity with the system, environment, structure and dependence on property and isomorph reflection principle, it can said that the rhythmic properties of each natural-geographical territory emerge in phonotactic, phonorhythmomelodic and syntactic structure of the language spoken in that territory. This is based on such regularity that structure has its own material elements and is the bearer of a property, that is, properties, peculiarities cannot exist independently, alone, and they always belong to some material objects. In this way the structure of separate language reflects the properties and rhythmic features of natural-geographical territories. Language emerges in its physical form, in its phonorhythmomelodic structure. On the other hand, if the properties of the matter, regularities of the nature find their expression in the parameters of a certain measure, quantity, that is, if it is possible to measure, to analyse, to compare the physical properties of things and phenomena, and if the expression of the obtained results in mathematical formulas disclose the objective regularity of the nature, in this case, the physical dimensions, quantities, sketches and varieties of phonorhythmomelodic structure of each language are regarded as the rhythmic properties of that natural-geographical territory. Thus, the prototype of the system, structure and rhythmic model of each language exists in nature in material form; we think that the people just make use of these models and structural forms.

The analysis indicates that all the types of rhythms have identical and common features. So, plants and crystals are identical in structure and in the form of rhythm. For instance, as crystallic cages are repeated periodically in the internal structure of the crystal, the initial leaf of any plant is repeated on its branches with the same structure and the same rhythm. The hereditary features inherent in a family or a parent are repeated in the families and parents. Psychological peculiarities and other national-spiritual features inherent in a nation pass from generation to generation and are repeated. Language also behaves like crystals. So, phonemes, which are the initial elements of language, are periodically repeated in structure of the language in different positions, procreate itself repeatedly, as a result, thousands of words, word combinations emerge and in this way a possibility emerges to express any desired idea and its variations.

Symmetry, that is, having the same size or measure, is one of the descriptive indicators of the structure of crystals. As in each crystal, in each leaf of a plant there are elements of symmetry, there are elements of symmetry in each language in natural and stylistic forms. The similarity in the types of rhythm causes such a natural question: Which factors form the basis of similarity between the rhythms of crystals belonging to physical systems and other rhythms? The basis of this similarity is formed by all the rhythms of the same root, same material bases – crystals, which get the energy and heat from the same source, from a common hierarchical structure principle and from the rhythm of nature, which is one of the universal property of the universe. These similarities indicate that in nature everything develops from simple towards the compound, from primary towards the supreme, from non-organic towards the organic world, from organic world towards the social being, then on the basis of it from the human language towards its manifestation. Though these systems emerged in different periods of time, yet they emerged and developed one on the other and inherited the properties of the preceding ones. Evolution developed from the lifeless objects toward the living beings; therefore, in each living being there is a trace, a sign of a lifeless object, that is, the structure, form, rhythm, signs and regularities inherent in lifeless objects are traced in the systems and forms created later.

In this manner, the forms of atoms, molecules, the periodically repeated structures of crystals are traced in the structure of high molecular chemical matters, biological systems (plants, animals, human beings). So that, the nucleic acid, which is the bearer of information of hereditariness in living beings, repeats the code of crystals and language repeats, imitates the information of hereditariness and the structure of the genetic code by an analogical method. In the same way the structural principles existing in biological systems are traced in language, in social systems and in the process of cognition.

As other natural systems all the types of rhythm form a certain system and are built on hierarchic relations. Each type of rhythm is built on the other, emerges and becomes formed. As noted before, without physical and mechanical actions chemical processes cannot take place. Without the interaction of mechanical, biological and chemical processes, consciousness, thinking, which are the developed forms of psychical processes and thinking, which are their developed forms, including the phenomenon of language-speech the rhythm of the works of art cannot emerge. Therefore, the types of rhythm have storeyed nature. The physical, mechanical, physico-chemical rhythms form the lower layer, biological rhythm and the rhythms of language and speech, of the works of art, as well as the rhythms of brain (α – rhythms, β – rhythms, γ – rhythms, δ – rhythms, θ – rhythms) form the upper layer. Rhythm is also “hereditary”, that is,

the rhythm inherent in non-organic world is observed in organic world, as well. The rhythm is inherent in human language, therefore, the exhibits created by man in literature and art are rhythmical in nature. As rhythm is inherent in the nature of man, he regulates the environment in conformity with the rhythm of life. From this point of view, the simplest method of generalization of art and the events of life is rhythm, therefore, rhythm is inherent in man naturally like sense, vision, comprehension and sensation.

If the rhythm is inherent in man naturally, consequently, it is inherent in his speech. The human speech is realized within the structure of the sentences (utterances). The elements of the system usually consists of a certain minority of elements which exclude rhythm taken separately. For instance, the system of phonemes taken separately is non-rhythmic. Language – speech rhythm occur within structures. The structure is the environment where the possibility of the realization of elements of a system takes place. So, to create diversity in order to make economy of elements (parts, atoms, phonemes, etc.) of a system and substitute this minority with the structure is one of the main principles of nature. Structure is the main way of creating diversity from finite number of elements of a system. The principle of creating diversity is observed not only in the system of phonemes, as well as in prosodic-intonational, morphological and syntactical aspects of a language. The principle of diversity create variform of words on the one hand, and economize phonetic forms of words, on the other hand, in order to eliminate the redundancy of sound jam. For instance, several or more than one meanings are placed in one phonetic form (polysemy, homonyms, conversion), the bound morphemes (prefixes, suffixes), shortenings of words, abbreviations, phonotactic limitations and languages of synthetic, inflectional, amorph types, as well as idioms, metaphors, aphorisms, proverbs, sayings in certain contexts may serve elimination of the redundancy of sound jam. In this respect, S.A.Abdullayev's opinion arouses interest. To this scholar, the principle of economy, or redundancy of sound formatives is the rational act of nature. If everything taken separately had been named with a separate and different phonetic forms there would have been sound jam and the language couldn't perform its communicative function (S.A.Abdullayev, 2013).

The economy of sound forms is observed not only in language but also in connected speech in the forms of phonetic phenomena, such as assimilation, elision, loss of plosions, contractions of grammatical words etc. which depend on the influence of adjacent sounds and other phonetic factors. But phonotactic structure and arrangement of phonemes within the words, as well as the place of stress in words do not depend on phonetic factors. In this respect, we may say that speech sounds and their chain in connected speech do not only mutually influence and depend on one other, but also mutually influence and depend on the rhythm of environmental factors, i.e. language is an open system and its elements, and structure derive from nature on the basis of rhythmic factors.

Although the rhythm of nature is not directly observed as the scent of flowers, aroma of fruits, as well as air, gas, the thought but it is felt and heard in the forms of sounds, syllables, words, collocations, sentences (utterances), rhythmic and, intonation groups, verse lines, as a whole, language systems and structures which reflect the elements of nature's rhythm.

Thus, the sounds of language, their combinatorics, rhythmic-melodic peculiarities of speech, as well as morphological properties, syntactic structures of each language are the result of long

historical development and they exist in languages objectively not depending on the will of the members of society.

In this sense, it can be said that language is an open system. It is open to nature on the one hand, and to society, on the other hand. The elements and structural diversity and other linguistic peculiarities of languages are related to nature and the use of languages – to society. The members of society become users or actualizers of the system-structural patterns and other linguistic peculiarities of the languages as main means of communication, on the one hand, and as an extremely perfect and coded system or mechanism is used for the purpose of scientific studying of the miracles and secrets of objective reality and language itself, on the other hand. Language is an extremely perfect and objectively coded natural system in the sense that its system orderly structure, expression and content planes and other linguistic peculiarities impinge on universe.

SUMMARY AND CONCLUSION

This paper investigates the factors causing the emergence of rhythm on earth its types, hierarchy and the relation of rhythm to life and the human language diversity. The systemic approach to the types of rhythm and their hierarchic analysis make possible to think that the physical type of rhythm gave birth to the emergence of life on earth. It can be substantiated by the fact that the basis of existence contains four elements. The molecules in two of four (water, air) are chaotic and lack of stable structure. The stable structures are inherent in the sun (fire) and soil (crystal). In the course of investigation fourteen specific parameters of crystal matter have been revealed and all of them are observed inherently in all animate objects. It was found that the structure of crystal substances is formed on the basis of periodic repetition of the elements which create crystals, i.e. the first cage which consists of a certain geometrical figure, is repeated periodically within the structure of crystals serving self-creation, and self-development. As a crystal is in motion, it breathes and in a certain sense it lives. It breathes due to the flow of energy and its endlessness rhythm. Because of it, crystals have covered the earth. The parameters belonging to crystals arouse such questions: what links crystal matters with the emergence of life on earth? What causes crystal matters to possess ornaments in the form of geometrical figures? The first question is mainly related to the stable structure of crystals, periodic self-repetition of their crystal cages, self-creation, self-development and the appearance of organic carbon element which exists in a pure states as diamond and graphet, as well as other carbon modifications.

Being an important organic element, carbon bears energy within itself, therefore, it is found in all living beings. In this respect, the science looks upon the emergence of life on earth as complex evolutionary process of carbon chain compounds.

As for second question, i.e. the reason for appearance of geometrical figures within crystals, it is due to maximum dense placement of molecules in crystal matters. The geometrical figures different measures, which are inherent in structures of crystals are traced more obvious in the structure of organic carbon compounds whose structures are also in different forms and similar with geometrical figures. The structural and other parameters of crystals include various aspects of life. So, the structural isomorphism and the principle of periodicity are traced in the structure of genetic code (DNA), chemical matters, organic carbon compounds, living organisms and languages. Like crystals each of them possesses material bearers, i.e. crystal-

molecules, genetic code – nucleotides, chemical matters – atoms, carbon compounds – C, H, O, living organism – cells, language – phonemes.

The structural isomorphism among these informational systems is realized by recurrence of their elements in different structures which corresponds to parameters of crystals and these parameters are inherent in plants, animals and human beings.

The symmetry parameters of crystals manifest themselves in the forms of rhythmic structures in living object as the expression of beauty – the bearer of aesthetic information on the one hand, and ability of representing the parts of a whole, on the other hand.

As for geometrical figures of crystals they appear as ornaments which are used in tombs, minarets, carpets, rugs, as well as in design of buildings, rooms and cobbed material of pavements.

Thus, assuming all the above-mentioned considerations it is possible to make such an inference that physical factors form the basis of the emergence of life on earth. It is possible to think that transition from physical type of rhythm to another type of rhythm on earth is conditioned by the parameters of internal structure of crystal matters which are traced in all sphere of biological beings. Consequently, it can be said that molecules of periodic crystal is the bearer of hereditary information from inanimate nature to animate one.

Language – speech rhythm forms the highest ring in the chain of hierarchy of rhythmic system. So, consciousness, thinking, mental ability, artistic type of rhythm and other creative activity of human beings are realized by the language-speech type of rhythm which is based on the synthesis of low rhythmic processes on-going in the human brain.

Though all languages have common peculiarities, yet peoples speak diverse languages. The reason for this is the rhythmic factor of nature. The rhythm of nature varies, as a result, different rhythmical variations form different rhythmical structures.

As the rhythm of nature varies from continent to continent, from country to country, from region to region and even from village to village, as a result, various dialects and accents of one language emerge.

The culture and art examples, as well as the manner of thinking, mental peculiarities of a nation are formed on the basis of rhythmic and climatic peculiarities of the geographical area which are regulated by the mechanism of “entrance” and “exit” elements of the system (man) and harmony of exogenic and endogenic rhythms. So, language-speech peculiarities of a people – both segmental and suprasegmental are formed in accordance with the rhythmical structure of the geographical area where the people settled and lived there historically and all the information belongs to a people’s culture, art (music folk songs dance music etc.) and history are loaded in the process of phylogenetic development in their language and are coded.

It should be noted that alongside with the words of language the rhythmic-melodic structure of a language – the speech mannerism of a people bears an important information about people’s art and culture. According to rhythmic-melodic structure and sketches of people’s speech, as

well as their music, folk songs, dance music etc. it is possible to determine to what people this or that art examples belong.

Furthermore, it is also possible classify languages according to their rhythmic-melodic structure to find differences and similarities in their structure on the basis of tones, degrees of tonality, types and levels of scales (heads), pitch range and register differences etc. At the same time on the ground of rhythmic-melodic or graphical sketches and patterns of languages (speech) it is possible to determine the rhythmical peculiarity, as well as the degree of distribution of heat or energy of a certain geographical area. This view-point is based on matter, environment, structure and property relations and mutual determination in which the structure can be determined by property, at the same time, property cannot exist outside of matter, and it always belongs to objects and their structures are conditioned by certain environment. Secondly, the sounds of languages and their arrangement in words, collocations, sentences, discourse have a member of physical properties which can be measured and analysed and their physical quantities expressed numbers and mathematical formula. The most important relations between physical quantities, characterizing the property of the matter, reflect the laws of nature. In this sense, it can be said that the articulatory-acoustic and pronunciation peculiarities, combinative patterns of phonemes, phonotactic limitations of every language, as well as rhythmic-melodic and syntactic structures and other linguistic features of a language are reflections of the rhythmical structure of certain geographical area.

Language like instatiable sponge that absorbs all information, i.e. all the above-discussed factors, that surrounds humans of our planate, and one of the tasks of linguistic or phonolinguistic investigation is to transform indefinite information into definite one by means of computer experiments and electronic-acoustic analysis.

Everything that is visible and audible is manifested, forming evolutionally out of variation of the rhythmic system. The difference in the degree of distribution of energy in the universe varies the rhythmic system, and the inequality in the degree of distribution of energy is the main factor which forms diversity. Unequal distribution of energy varies the rhythm of geographical areas. This variation of the rhythmic system forms articulatory-acoustic shape of the phonetic elements and the combinatorics of the phonemic system of a human language, grammatical structure, rhythmic and melodic peculiarities of speech.

Thus, the rhythmic system of the universe experts influence on climate factors, and as a result, a peculiar rhythmic system of every geographical area is developed.

The rhythm of climate factors, in some cases, assimilating humans and their psychology, behavior, culture, art, genes etc., develops them in an unconscious way, in accordance with the variety of its rhythmic structure. For this reason, psychology, language and behaviour of nations, phonetic system, combinatorics, rhythmic and melodic peculiarities of their language, the variety of patterns of culture and art are manifested, having formed in different ways.

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