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TOWARDS CONTINUOUS CHANGES THROUGH INTERACTING PROCESSES WITH SYNERGETIC SELF-REGULATION ACCORDING TO THE LAW OF HARMONY

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ABSTRACT

Nature consists of many interconnected complex processes that continuously interact at different levels. These interactions create a harmonious dynamic system of nature. The natural system as complex continuously interacting processes with synergetic self-regulation according to the law of harmony emphasizes the importance of interrelations, synergy and harmony in nature as a whole. Synergetic self-regulation implies changes in interactions between the processes of the system that cannot be explained by simply adding up the properties of individual processes. Interactions can strengthen or weaken each other, which leads to adaptation and a change in the state of the system. The law of harmony in nature implies that a natural changeable system has the ability to self-regulate and harmonize processes. Interacting processes with synergetic self-regulation according to the law of harmony in public life are of current importance in the formation of the international world order.

Keywords: Synergetic Processes, Self-Regulation, Harmonization, Dynamic Equilibrium

1. INTRODUCTION

Nature is constantly changing. Nature's processes interact with each other in ways that their combined effects exceed the simple sum of their individual actions. This occurs in a variety of ways:

1) In ecosystems, species interact with each other (e.g. predators and prey, plants and pollinators) to create complex networks of interdependencies that can change in response to external factors such as climate change or invasive species.

2) In human societies, interactions between individuals and groups lead to the emergence of new social structures and norms that can adapt and change in response to cultural and economic changes.
3) At the level of molecules and atoms, interactions between particles can lead to the emergence of new properties of materials that cannot be obtained from the properties of individual components alone.

Constantly changing nature is a complex system in which various processes are interconnected and continuously interact with each other. Synergetics studies such interactions, as well as the phenomena that arise as a result of this interaction.

In ecosystems, for example, different species of living organisms, as well as abiotic factors (climate, soil, water) work in a single system, where changes in some processes can cause changes in other processes. According to the law of harmony, synergetic self-regulation occurs and a dynamic equilibrium sets in, which supports life and diversity on the planet.

The concept of self-regulation implies that changes in some processes can influence other processes, which leads to the self-organization of ecosystems, social structures and other complex systems as integral units, and the adaptation of nature as a whole.

1.1. SYNERGISTIC SELF-REGULATION CAN TAKE MANY FORMS [1-4], INCLUDING

1) Ecological self-regulation—such as symbiosis, competitive relationships, predation, and parasitism that affect population sizes and ecosystem balance.
2) Physical and chemical self-regulation—such as the cycles of water, carbon, and other substances that support life on Earth.
3) Social and cultural self-regulation—the interactions between people and the environment that affect the quality and maintenance of life.

Understanding the self-regulation of synergetic processes is carried out on the basis of transdisciplinary research in the paradigm of information and space Bryndin (2023). Transdisciplinary research is an approach to scientific study that combines knowledge and methods from various disciplines in order to solve complex, multifaceted problems that cannot be effectively investigated within the framework of one science. This approach emphasizes the importance of interaction between different fields of knowledge.

1.2. KEY ASPECTS OF TRANSDISCIPLINARY RESEARCH:

1) **Knowledge integration:** Involves the synthesis of theoretical and practical knowledge from different fields, which allows for a more complete and holistic understanding of the problem under study.
2) **Problem-oriented approach:** Research focuses on solving specific natural, social, environmental or economic problems, which makes them more relevant and applicable in practice.
3) **Collaboration:** The process requires active collaboration between scientists, practitioners and other stakeholders at all stages of the research - from defining the problem to analyzing the results.

4) **Flexibility:** Transdisciplinary research often requires adaptation of methods and approaches depending on the context and specificity of the problem.
5) **Social responsibility:** The focus is not only on the scientific aspects, but also on the social consequences of the research, which contributes to a more sustainable development of society.

Transdisciplinary research requires an integrated approach and the involvement of diverse experts and stakeholders to achieve effective and sustainable solutions.

2. CHANGING LIVING ORGANISMS, VARIOUS ELEMENTS, INANIMATE OBJECTS OF NATURE ARE PROCESSES

Living organisms, the elements, and inanimate objects of nature can be viewed as processes, since they are constantly in a state of change and interaction with each other. This approach is consistent with the concepts of systems thinking and synergetics, which emphasize dynamic interactions and interdependencies in nature:

1) Living organisms are dynamic systems that grow, develop, reproduce, and adapt to changes in the environment. For example, populations of species can change in response to climate conditions, resource availability, or interactions with other species.
2) The elements of nature (water, air, earth, fire) can also be viewed as processes. Atmospheric phenomena such as wind and rain are the result of complex interactions of elemental processes.
3) Rocks, minerals, water, and the atmosphere also participate in processes such as erosion, sedimentation, and the circulation of substances. These processes contribute to the formation of landscapes and changes in ecosystems.

Окружающая среда также может рассматриваться как процесс, а не просто как статическое пространство, в котором существуют живые организмы. Этот подход включает несколько ключевых аспектов:

1) Окружающая среда постоянно меняется под воздействием различных факторов, таких как климатические изменения, сезонные колебания, взаимодействие между видами и влияние человека. Эти изменения происходят на разных уровнях, от микроскопического до глобального.
2) В окружающей среде происходят непрерывные процессы круговорота воды, углерода, азота и других элементов. Эти круговороты являются ключевыми для поддержания жизни на планете, обеспечивая необходимые ресурсы для живых организмов и влияя на климат и экосистемы.
3) Окружающая среда включает в себя как живые организм, так и неживые элементы, которые взаимодействуют друг с другом. Это взаимодействие может быть как конструктивным, так и деструктивным.
4) Человеческая деятельность также вносит значительные изменения в окружающую среду. Изменение ландшафта, загрязнение, вырубка лесов и изменение климата — все это процессы, которые влияют на экосистемы и их динамику.

3. CONSTANT PROCESSES

There are many processes in nature that can be considered unchangeable or constant over long periods of time. These include:

1) Conservation of energy. Energy cannot be created or destroyed, it only changes from one form to another.
2) Gravity remains constant and controls the movement of all bodies in the Universe.
3) Light processes. Reflection and refraction of light spectra are constant.
4) The process of water circulation in nature, including evaporation, condensation and precipitation, occurs constantly.
5) Biogeochemical cycles ensure the constant rotation of substances in ecosystems.
6) The processes of thermodynamics, mechanics and electromagnetism remain constant and are applicable to all physical systems.
7) Global cycles of the Universe.

4. HARMONIOUS INTERACTION OF SYNERGETIC PROCESSES

The Orthodox view, which is based on science, nature and spirituality, believes that the natural unified system exists according to a single law of harmony of interaction of synergetic processes [Bryndin (2023)-Bryndin (2024)]. GOD is the good basis of harmony. Harmony serves as the basis for deep reflection on the unity of man with nature, and how we can strive for harmonious existence with the surrounding world:

1) The unity of nature suggests that all processes are interconnected and form a single system.
2) Synergetic processes in nature imply that joint interaction can lead to results exceeding the sum of their individual actions. This is manifested in ecosystems, where organisms interact with each other and with the environment, creating stable and harmonious structures.
3) God as the source of harmony unites the spiritual and physical aspects of existence, ensuring harmony in the world.
4) Nature as a single system of synergetic processes, acting according to the laws of harmony, contributes to the creation of more harmonious relationships between people and nature.
5) The divine law of harmony of all existence steadily supports its viability, ensuring the balance of synergetic processes and order.

5. SYNERGETIC PROCESSES ACCORDING TO THE NEW TESTAMENT

Synergetic processes in the New Testament are considered as interactions and mutual influences between people that lead to the creation of harmonious social structures and relationships. Let us list the key aspects of such processes:

1) Community of believers. The New Testament focuses on creating a community where people unite in faith. This community, based on love, support and mutual assistance, is seen as a spiritual synergistic process,

where individual efforts and aspirations lead to the creation of a stronger social structure.

2) The doctrine of love and service. The principles of love for one's neighbor and service to others, set forth in the New Testament (for example, the commandment of love in Matthew 22:37-39), contribute to the formation of relationships based on mutual assistance and support. This creates conditions for synergy, when interaction between people leads to higher moral and spiritual results.
3) Spiritual gifts. The New Testament says that each person has his own gifts and talents that should be used for the good of society (1 Corinthians 12). When people combine their abilities, they can achieve greater results.
4) The principles of forgiveness and reconciliation. Forgiveness helps resolve conflicts and restore relationships between people. This leads to social peace and harmony, which is a synergistic process where the restoration of relationships benefits the entire community.
5) Ethics and Moral Standards. The principles set forth in the New Testament form moral guidelines that contribute to the creation of a just and ethical society. These standards, by influencing people's behavior, cause synergistic positive changes in social relations.
6) Missionary activity. Preaching the Gospel and spreading the values of the New Testament create new social movements and associations, which is also a synergistic process. Uniting people around a common goal and values leads to synergistic processes at the collective level.

Thus, social synergistic processes in the context of the New Testament are manifested through interaction, cooperation and the creation of communities based on love, service and mutual assistance, which in turn leads to favorable changes in society. Synergistic processes lead to the harmonious coexistence of various elements of spiritual life. These processes include:

1) Interaction between people and God. The faith and spiritual development of each person create a collective energy that promotes spiritual growth and general well-being.
2) Spiritual life. Mutual assistance, support and joint prayer strengthen the ties between people, creating a synergistic effect that enhances their spiritual practices and common faith.
3) Moral and ethical standards. Synergy between individual moral choices and social values contributes to the formation of a healthy society based on love, compassion and justice.
4) Spiritual practices and rituals. Joint rituals and traditions, such as prayer, fasting, celebration of religious events, create an atmosphere of unity and mutual understanding, which enhances the spiritual experience of society.
5) Caring for the world. Understanding that everything in the world is interconnected leads to a more responsible attitude towards the environment and towards each other.

Thus, spiritual synergistic processes lead to the integration of various elements of spiritual life, resulting in deeper understanding, unity and harmony.

6. VIOLATION OF SYNERGETIC PROCESSES BY HUMAN ACTIVITY

Disruption of synergistic processes by human activities can have serious consequences for ecosystems and the health of the planet.

1) **Destruction of natural ecosystems:** Human activities such as deforestation, drainage of wetlands, and development in natural areas lead to loss of biodiversity and disruption of interactions between species. For example, deforestation of tropical forests not only destroys habitat for many species, but also disrupts the complex interactions between plants, animals, and microorganisms, which can lead to loss of ecosystem services such as pollination and water purification.
2) **Pollution:** Industrial production, agriculture, and unmanaged waste pollute the air, water, and soil. Pollutants can disrupt the physiological processes of organisms, which affects their interactions and can lead to changes in population dynamics. For example, pesticides can kill not only pests but also beneficial insects such as bees, which disrupts the pollination process of plants.
3) **Climate Change:** Anthropogenic greenhouse gas emissions are changing the climate, which is altering the habitats of many species. This can lead to species migration, changes in plant flowering times, and the emergence of new relationships that did not previously exist. For example, temperature changes can lead to desynchronization between plant flowering peaks and pollinator activity periods.
4) **Invasive Species:** Humans often accidentally or intentionally introduce invasive species into new ecosystems, which can disrupt existing synergistic interactions. Invasive species can compete with native species for resources, alter ecosystem structure, and lead to the extinction of native organisms. A classic example is the Japanese golden catfish introduced to North America (another well-known invasive group are plants such as ragweed), which threatens native species and ecosystems.
5) **Resilience and Restoration:** Despite the destructive effects of human activity, many ecosystems have the ability to recover and self-regulate. Understanding synergistic processes can help develop methods for ecosystem restoration. Species reintroduction projects, forest restoration, and protected area creation can help restore harmony in ecosystems and maintain their sustainability.

The disruption of synergistic processes by human activities highlights the importance of understanding the interrelations in nature and the need for responsible management of the environment. Applying sustainable development and conservation principles can help restore disrupted interactions and maintain healthy ecosystems.

7. MAINTAINING SYNERGETIC PROCESSES THROUGH HARMONIOUS LIFE ACTIVITY

Maintaining synergistic processes in the context of harmonious life involves creating and maintaining conditions under which the interaction of various elements of the system leads to a synergistic effect. This may concern both the

individual level and broader social, economic or ecological systems. The main aspects of supporting synergistic processes:

1) **Interaction and cooperation:**
   - Encouraging teamwork and cooperation between people, groups and organizations.
   - Developing network interaction, where the exchange of knowledge and resources leads to the common good.
2) **Harmony in relationships:**
   - Creating an environment that promotes respect, understanding and support among participants. - Eliminating conflicts and finding compromises.
3) **Innovation and creativity:**
   - Encouraging innovative thinking and a creative approach to problem solving.
   - Providing conditions for experimentation and the implementation of new results.
4) **Systems approach:**
   - Understanding the system as a whole, where each element affects the overall result.
   - Analysis of the interrelations and dependencies between the various components of the system.
5) **Sustainable development:**
   - Taking into account environmental, economic and social factors when making decisions.
   - Striving to balance the interests of different groups and resources.
6) **Training and development:**
   - Investing in the training and development of system participants to improve their competencies and abilities.
   - Creating conditions for continuous self-development and professional growth.
7) **Practical application:**
   - In business: creating joint projects where different departments or companies work together to achieve a common goal.
   - In education: developing interdisciplinary programs that promote the integration of knowledge and skills from different fields.
   - In ecology: projects aimed at the safe use of natural resources.

Maintaining synergistic processes requires the active participation of all participants and awareness of the importance of their contribution to the common cause. This is the path to creating a more harmonious and effective life at all levels. Synergetic processes are important for the formation of world order.

8. SYNERGETIC PROCESSES ACCORDING TO THE LAW OF HARMONY FOR THE FORMATION OF WORLD ORDER

Synergetic processes according to the law of harmony for the formation of world order are considered as the interaction of various social, economic, ecological

and cultural factors that contribute to the creation of a sustainable and balanced system [Bryndin (2024)]. Let us consider the key aspects.

1) Interaction of social systems. Harmony in society is achieved through cooperation between different groups, including government institutions, business, non-governmental organizations and citizens. Synergy in these interactions leads to more effective solutions to social problems.

2) Environmental sustainability. Synergistic processes include human interaction with nature. Sustainable development principles, such as the use of renewable resources and waste minimization, promote harmony between economic growth and environmental protection.

3) Cultural interaction. Harmony in the world order is also achieved through cultural exchange and respect for diversity. Synergy between different cultures creates a richer and more sustainable social environment, where the values and traditions of different peoples complement each other.

4) Economic integration. Economic systems can work more effectively when they are integrated and interconnected. Synergistic processes, such as trade and investment, can contribute to economic growth and sustainable development, creating conditions for a fair distribution of resources.

5) Education and knowledge. Education plays a key role in shaping a harmonious world order. Synergy between different educational systems, knowledge sharing and innovation leads to a more coherent and active society capable of solving complex problems.

6) Peacemaking and conflict resolution. Synergistic processes aimed at conflict resolution and peacebuilding are based on the principles of harmony and cooperation. Synergistic approaches help to find common interests and goals, which allows for the creation of a peaceful and stable order.

Thus, synergistic processes according to the law of harmony can become a powerful tool for the formation of a world order that will be based on mutual respect, cooperation and sustainable development.

9. CONCLUSION

The dynamics of continuous change of living and nonliving physical, social and spiritual nature cannot be fully described in the paradigm of space and physical time [Golubev (2023). Physical time, as a concept, was introduced to measure the duration, speed and acceleration of changes. Accordingly, devices for measuring physical time have been created.

By studying continuously changing nature as a set of interconnected interacting processes in the paradigm of information and space, we can better understand its complexity and dynamics [Bryndin (2023), Knyazeva & Kurdyumov (2014)-Savrukhin (2011)]. This allows us to realize the importance of safe interaction with the environment to preserve life, the need to protect nature and harmonious and effective life at all levels.

The benefits of harmonious and effective living at all levels can manifest themselves in various aspects, including individual, social, economic and environmental.

1) Individual level:

- Harmonious living contributes to increased life satisfaction, reduced stress, improved mental and emotional well-being and improved quality of life:

- Increased personal effectiveness. Effective use of time and resources allows people to achieve their goals, develop skills and gain new knowledge.
- Health and well-being: Sustainable habits and work-life balance contribute to physical and mental health.

2) Social level:

- Strengthening social ties: harmonious interactions between people lead to the creation of strong social networks and communities based on trust and mutual assistance.
- Reduction of conflicts: effective communication and understanding of each other's interests help to reduce conflicts and increase cooperation.
- Social justice: harmony in society contributes to a more equitable distribution of resources and opportunities, which leads to a reduction in inequality.

3) Economic level:

- Sustainable economic growth: efficient and harmonious processes in business and the economy lead to increased productivity, innovation and economic development.
- Job creation: synergies between different sectors of the economy can help create new opportunities for employment and career development.
- Sustainable development: efficient resource management and maintaining ecological balance lead to long-term economic stability.

4) Environmental level:

- Preservation of natural resources: harmonious life activity involves conscious and sustainable use of natural resources, which contributes to their preservation for future generations.
- Improvement of the environmental situation: synergistic approaches in ecology, such as sustainable agriculture and environmental protection, help improve the quality of air, water and soil.
- Reducing the negative impact on nature: efficient technologies and practices can significantly reduce the carbon footprint and other types of pollution.

5) Cultural level:

- Diversity and inclusion: Harmony in society promotes respect and acceptance of cultural diversity, which enriches social life.
- Development of cultural initiatives: Effective interactions can lead to the emergence of new cultural projects and initiatives that promote self-expression and creativity.

Overall, the positive results of harmonious and synergistic living at all levels create the conditions for a more sustainable, balanced and prosperous society in which individuals and communities can thrive.

CONFLICT OF INTERESTS

None.

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REFERENCES

Barbour, J. (2021). The End of Time. Oxford University Press. 371.

Basina G. I., & Basin, M. A. (2016). Synergetics. Universe of Resonances. St. Petersburg: Scientific Center "Synergetics". 140.

Bryndin, E. G. (2022). Accumulation of Experience of Harmonious Civilized Life. Problematic and Noospheric Approaches to the Formation of a Culture of Behavior of a Value-Oriented Personality in Modern Education for the Sustainable Development of Civilization: Proceedings of the XXI Moscow International Conference "Education in the XXI Century - Through the Eyes of Children and Adults". Moscow: Publishing house "Sputnik +", 2022. 87-91

Bryndin, E. (2022). Information Essence of Spiritual Substance and Universe and Man in Cosmology. Journal of Earth and Environmental Science Research, 4 (1). 1-6 https://doi.org/10.47363/JEESR/2022(4)163

Bryndin, E. (2023). Formation of Fair and Safe World Order at the BRICS+ Platform. Journal of Research in Social Science and Humanities, Volume 2 (12). 40-44. https://doi.org/10.56397/JRSSH.2023.12.06

Bryndin, E. (2023). Preservation of Natural and Spiritual Balance - Criterion of Humanity Survival. Journal of Research in Social Science and Humanities, 2 (9). 7-11. 4. https://doi.org/10.56397/JRSSH.2023.09.02

Bryndin, E. (2023). Preservation of Natural and Spiritual Balance - Criterion of Humanity Survival. Journal of Research in Social Science and Humanities, 2 (9). 7-11. https://doi.org/10.56397/JRSSH.2023.09.02

Bryndin, E. (2024). Maintaining of Biosphere Cycles of Matter and Energy by Ecological Economical Life Activity. Advances in Earth and Environmental Science; 5(1):1-5.

Bryndin, E. (2024). UN and BRICS+ in Countering Wars and Conflicts to Eliminate the Energy Crisis. Journal of World Economy, 3 (4). https://doi.org/10.56397/JWE.2024.12.11

Bryndin, E. G. (2023). Synergy of Sectoral Economic Cycles and Uniform Regulation of Consumption - The Basis for Harmonizing the Socio-Economic Structure. Russia: Development Trends and Prospects. Yearbook. Issue 18: Proceedings of the XXII National Scientific Conference with International Participation "Modernization of Russia: Priorities, Problems, Solutions". Part 1 / RAS. INION. - M., Part 1. P. 597-602.

Golubev, V.S. (2023). Fundamentals of Harmonology. URSS Publishing Group. 244.

Knyazeva, E., & Kurdyumov, S. (2014). Foundations of Synergetics. Man, Constructing Himself and his Future. Publisher: Librokom. 264.

Melik-Gaikazyan, I. V. (2007). The Impact of a Changing World as an Information Process // Chelovek. No. 3. 32-43.

Nikolaevich, S.V. (2004). Synergy of Universal Self-Organization of being. Certificate of Publication No. 224020801387

Pukhov N. M., Markov V. N., Polyakova I. P. et al. (2015). Synergy in Nature and Society /St. Petersburg, Publishing House of the Russian State Pedagogical Univ. 274.

Savrukhin, A. (2011). The Origins of Natural Harmony. Lambert Academic Publishing. 108.