

Studying the self-organization of things at different levels of the world's structural organization

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Abstract: The central question of the methodology for studying the self-organization of things in the world is the coordination of the world's nonlinearity, conditioned by its ubiquitous nonequilibrium states and processes, with its extraordinary stability and optimality. This is possible by focusing on the interactions of the equilibrium boundaries of a specific thing with three areas: the environment, the level of the world's structural equilibrium, and the domain of rhythms. This approach also allows these things to connect with their limit equilibria, the totality of which, arising in the processes of their self-organization, creates a coordinate system for the world. The "equilibrium dynamic boundary of a thing" is supported by the "domain of formation of the thing's equilibrium boundary." It is often more convenient to consider, instead of this boundary, its projections onto the three aforementioned areas, which leads to the identification of "boundary-environment," "boundary-structure," and "boundary-rhythm." The approach we are developing is not associated with the desire to identify a universal philosophical category or concept, but rather explores the unity of analogies between processes and phenomena in the interaction of things at various levels of the world's organization through their equilibrium dynamic boundaries. The tendencies of self-organization are examined for four levels of the world: physical-material, organic-living, mental, and historical-spiritual. Everywhere, there is a confrontation between the ordering tendencies that occur in the interaction of things with the environment (gravity, development, individual consciousness, free consciousness) and processes of chaos, which allows us to identify the equilibrium boundary as the foundation of the structural sublevels of the world. These sublevels are: energy, life, the unconscious, and spirituality, which also become chaotic, resulting in the emergence of boundaries of stable rhythms. The chaotization of the latter again leads to boundaries in the interactions of things with the environment.

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Relevance of the problem under consideration and basic concepts

Equilibrium dynamic boundaries of things and their limiting states are present at all levels of the world's organization, across all types of quasi-equilibrium interactions. Therefore, they are most suitable as the basis for a universal approach to studying the self-organization of the world. Anything at all levels of the world's structural organization strives for self-organization. Elementary particles are bound together into atoms, then into planetary systems and galaxies. Living things exist as cells and individual organisms. Products of the spirit strive to find their identity in ideas, concepts, theories, and artistic creations. On the other hand, any defined thing strives to interact with similar things and form a stable system of elements. Everything in the world is connected into systems (molecular, organismic, mental, spiritual, etc.) through interactions.

Equilibrium interactions of a specific thing with limiting dynamic equilibria must be considered in three areas: 1. Within the structural level of the world, that is, the interaction of the thing under study with its surrounding environment. 2. Directly with the very level of the world's structural equilibrium. 3. With the realm of rhythms (signs) that generate these interactions and accompany them, providing the interconnection between various tendencies of self-organization. This is due to the existence of different types of order-chaos inherent in various substances and their interactions, as well as the fact that the parameters and tendencies of self-organization in these areas differ. Especially in physical, chemical, and biological concepts, rhythms are closely linked to self-organization. Humans have traditionally viewed themselves in interactions with the environment, the level of structural equilibrium, and the fundamental rhythms of the world. In Christianity, the Fathers of the Church believed that rhythms ensure the process of the world's emergence.

The set of limiting dynamic equilibria arising in the processes of self-organization of things creates a coordinate system for the world. This coordinate system is accessible to study through the interactions of things with their limiting boundary equilibria, created by these things themselves, and allows us to examine the processes of self-

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organization of a thing from the perspective of these limits (see Kozhevnikov 2020).

The approach we are developing is not associated with the desire to identify a universal philosophical category or concept, but is aimed at exploring the unity of analogies between processes and phenomena at various levels of world organization through the boundaries of dynamic equilibria of things with the environment, structure, and rhythm of these levels.

Research methodology

The fundamental problem of the self-organization of things in the world is the coordination of the world's nonlinearity, caused by the ubiquitous nonequilibrium states and processes, with its extraordinary stability and optimality. Let us consider the main characteristics of this problem.

The equilibrium dynamic boundaries of a thing arise because of its simultaneous interaction with three “areas of interaction.” We will designate them: with the environment (E), the world level and its structures (S), and rhythms (R). The rationale for separately examining the self-organization of a thing in the three aforementioned areas is due to the existence of different types of order-chaos inherent in different substances of things and their interactions within these domains. While it is difficult to visualize a general equilibrium boundary, it is much easier to consider the projections of this boundary onto the three aforementioned areas. Moreover, although the boundary projection is considered, for example, only in the environmental area (level, rhythms), processes from all these areas participate in its creation and functioning, and they all influence each other. Let us denote the thing as T, the equilibrium dynamic boundary as B, and the boundary projections: “boundary-environment” as B_E , “boundary-structure” as B_S , and “boundary-rhythm” as B_R .

Equilibrium boundaries of things and their interaction areas are the most “visible” of all random, rapidly changing boundaries. They are the simplest “docking points” of interactions, since nature, society, and humans rely on the equilibrium boundaries of things and areas in their development.

Equilibrium boundaries have the following characteristics and parameters: 1. An equilibrium boundary links together sets of equilibrium processes in a thing, its environment, level, and rhythms, forming an equilibrium region within which its formation occurs. 2. All

areas with which a thing interacts must be interconnected; otherwise, there would be no stable formations in the world. This can only be achieved through a common equilibrium boundary. 3. An equilibrium boundary acts as an attractor and catalyst, which explains the excessively rapid pace of evolution. 4. The boundary becomes the site (along with the region of its formation) of the structural transformation of chaos into order and vice versa. 5. Spiritual, mental, and life practices, as well as quasi-equilibrium interactions at all levels and sublevels of the world, are based on such a boundary.

The formation of equilibrium boundaries of things and their interaction areas does not occur immediately, but rather because of a lengthy process of additions and refinements. For example, the “Boundary formation area” C includes the processes of identification, communication, and rhythmization and is characterized by the parameters P, H, and R, where P is the identification phenomenon, H is the communication horizon, and R is the reference rhythm. The identification phenomenon of an equilibrium boundary is its element (marker), so the equilibrium boundary consists of a set of them. The limit state of an identification parameter is its complete coincidence with the corresponding boundary. The communication horizon H delineates the area from which resources are supplied or withdrawn to clarify and strengthen the equilibrium boundary. All “areas of interaction of a thing” supply resources for boundary formation and have horizons for these resources. Its limit state is a completely chaotized state of the boundary formation areas. The supporting rhythm R ensures stable interaction between the boundary projections participating in this formation process. The parameters P, H, R are constantly changing and being refined, but remain stable because they continually interact with one another. No matter how the process of chaos is ensured within a thing, self-organizing interaction is guided by boundaries.

The process of forming the equilibrium boundary of a thing and the areas of its interaction is characterized by the following: 1. The area of formation of the equilibrium boundary C is the place of intersection of the areas of its interaction. 2. The boundary exists for a sufficiently long time, so that the processes of forming a certain stage of it have time to be realized. 3. The area of formation of the boundary C is limited by the parameters P - the identification phenomenon, H - the communication horizon, R - the internal support rhythm. 4. The process of self-organization of the parameter P tends to the limit - a

fully identified boundary. 5. The communication horizon H can use this resource to clarify the equilibrium boundary until it is completely exhausted. 6. The support rhythm R corresponds to stable rhythms between the equilibrium boundaries of the beginning and the end of the boundary formation process (see Kozhevnikov 2019). Rhythm is necessary in this process as an external characteristic of time that better corresponds to its comparison with some order "...time is one of the concepts that cannot be defined... The point, however, is not how to define the concept of "time", but how to measure it" (Feiman 1965, 86).

The limit equilibrium dynamic boundaries of a thing (limit equilibria) serve as the basis for all equilibrium dynamic boundaries and are characterized by the following: 1. They are common to all these areas (environment, level, rhythm) due to the completeness of all processes of identification, communication, rhythmization in comparison with other equilibrium boundaries. 2. They are a single basis (attractor) for all other non-limit equilibrium boundaries. 3. The areas of formation of the equilibrium boundaries of a thing and the areas of their interaction, on which these boundaries rely, are chaotized formations. 4. The boundaries of limit dynamic equilibria consist of elements of order (see Kozhevnikov 2022). Similarly, the parameters of limiting equilibria and resources of a thing for the environment, the level of structural equilibrium, and the area of rhythms can be identified.

General trends in the self-organization of the world based on identifying equilibrium boundaries of interacting things

Let us consider self-organization trends for four levels of the world: inanimate, animate, psychic, and spiritual. N. Hartman's classification, which identifies the "physical-material, organic-living, psychic, and historical-spiritual levels" (Hartman 1958, 333), is convenient, illustrative, and profoundly meaningful. Their study involves the following stages, which can be used to identify equilibrium boundaries for individual levels of the world.

For a specific level of the world, three boundaries are identified for each areas: "boundary-environment," "boundary-structure," and "boundary-rhythm." For each of these projections, the mechanisms of its formation are examined: the parameters of identification, communication, and rhythmization. Limit dynamic equilibria that determine the relationships between these areas are identified. The

main parameters characterizing the boundary are compared with parameters associated with limit equilibria or with the resources of the thing. The contribution of each “area of interaction of a thing” to the parameters of equilibrium boundary formation is assessed. The processes for these boundary-projections occur simultaneously, but in accordance with the approach being developed, it is appropriate to consider them sequentially. Various sublevels of a thing interact simultaneously with many sublevels of the environment, the world level, and the area of rhythms. Elementary particles, atoms, molecules, cells, specimen, the biosphere, etc., presuppose various sublevels of the environment. To clarify the basic ideas of the concept being developed, it is sufficient to examine the simplest or most universal of these sublevels.

For clarity, let us begin with the environment, although we could also begin with the world or rhythm level. The interaction of a thing and its environment forms an equilibrium “boundary-environment” between ordering tendencies and opposing chaotic tendencies. This boundary becomes the foundation of the corresponding sublevel of the level of structural organization of the world. The interaction of the resulting sublevel and the opposing chaotic tendencies forms an equilibrium “boundary-structure,” which becomes the foundation of the rhythm sublevel. The interaction of the rhythmic sublevel with its corresponding chaotic tendencies forms an equilibrium “rhythm-boundary,” which becomes the foundation for the surrounding environment. The process of self-organization of things that non-self-organizing else begins with the influence of external rhythms from already self-organizing things.

The approach being developed focuses not on the things themselves or the environment (the world level, the realm of rhythms), but on their boundaries. All possible interactions with other things and fields naturally interact with equilibrium boundaries, since self-organization chooses simpler and less resource-consuming paths. All these boundaries become most “noticeable” during interactions with other things at this level.

Identification, communication, and rhythmization of the boundary-forming area are viewed as elementary processes of self-organization, ensuring the interaction of a thing with the aforementioned spheres. The evolution of these interactions occurs sequentially, gradually. Changes can occur in one, two, or three of these spheres, each of which influences all the others. Consequently, it can be said that the

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evolution of the world at its various levels is subject to the same laws: the emergence of an ordering tendency as a result of an "explosion," evolution striving for the formation of order, and its compensation through the disruption (chaotization) of this order.

Self-organization at specific levels of the world's structural organization

The physical-material level of the world is characterized primarily by space, time, gravity, energy, inertia, heat (thermal energy). Space is of decisive importance here, while at other levels of the world, its significance weakens, and at the mental and spiritual-historical levels it practically disappears. In the simplest case, a thing is understood as a physical body, and an interaction is understood as gravitational, but all other processes are related to them.

The "boundary-environment" deals with the physical body and the tendencies of gravity to order the environment of this level of the world. It is opposed by processes of chaotization. The result is intermediate structural formations—galaxies, stellar-planetary systems, molecular, atomic, and other structures characterized by a certain energy level that ensures their stability. As an example of B_E (boundary-environment), we consider the boundary of the Earth-Sun equilibrium interaction. The full boundary encompasses all possible equilibrium interactions of the Earth: with the planets of the Solar System, their satellites, the Moon, the Kuiper Belt, the Oort Cloud—that is, with all subsystems of the Solar System up to its boundaries—1.2 light years, where the Sun's gravitational pull becomes equal to the galactic background gravitational field. However, not all of these interactions may be in equilibrium. The phenomenon of identification here is the stable, emerging boundary of the Earth-Sun interaction. The communication horizon H outlines the resource necessary to ensure the equilibration of the equilibrium parts of a thing and the environment up to the limit, which is the boundary of the Solar System. The environment here corresponds to the region of active gravitational interaction within this boundary. In the early stages of their existence, interactions between planets and other bodies in the Solar System were nonequilibrium. Numerous collisions of planets occurred until the elements of this system created a universal equilibrium boundary of interactions and began to interact across it.

The "boundary-structure" of the B_s is associated with stable energy sublevels, encompassing all possible types of energy: mechanical,

internal, electromagnetic, chemical, nuclear, subnuclear, “dark matter”, “dark energy”. The “dark energy” sublevel is the most extensive here. Each energy sublevel corresponds to opposing chaotic tendencies of destruction. The energy of the limit energy sublevel can be associated with the temperature of absolute zero. Heat is the most striking characteristic of the tendency of chaotization opposing order. The phenomenon of identification here is the emerging “boundary-structure,” the horizon associated with the “boundary-environment.”

The “*boundary-rhythm*” of the B_R corresponds to the supporting rhythm, ensuring stable oscillations (interactions) between the emerging “boundary-rhythm” and the “boundary-structure,” which is the foundation of these formation processes. The “boundary-environment” corresponds to the boundary of the “essence” of the physical body (thing). The “structure boundary” corresponds to the boundary of “thing in existence”.

The organic-living level of the world

Space, time, birth, death, and levels of life are the main characterizes of this level. The thing here is the cell, the specimen, the biosphere. In the simplest case, this is the specimen. Here, two fundamental tendencies of self-organization exist: 1) development, beginning from the moment of the individual’s birth, or more precisely, from conception; and 2) the degradation of the individual, caused by chaotic processes. These processes are associated with the reproduction and raising of offspring. There are concepts (Morozov 1984, 35) that life arose because of its own biological explosion. That is, the existence of both the individual and the living world as a whole are subject to the same stages: explosion, evolution, striving for the formation of order, and its compensation through the chaotization of this order.

The “*boundary-environment*” balances the tendency of the individual’s birth with the tendency of its death and creates stable sublevels of vital energy (life) capable of existing for a sufficiently long time. The moment of conception is characterized by maximum order and is associated with a fundamental set of signs. The process of birth transitions into the process of development. These processes are quite lengthy, associated with the formation of new structures and corresponding equilibrium boundaries in the womb, childhood, adolescence, and youth. The stability of these equilibrium boundaries ensures the existence of life’s levels.

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For a cell, a specimen, a population, and the biosphere, the sublevels of the environment vary. The interaction of a thing with its environment (with the participation of two other areas of its interaction) forms an equilibrium "boundary-environment," which becomes the foundation for the sublevels of vital energy. The foundation of the process of this boundary's formation is the "boundary-rhythm." The phenomenon of identification is the emerging "boundary-environment." The horizon rests on the "boundary-rhythm."

The fundamental tendency of an individual can be considered creativity, striving to reproduce offspring or realize oneself as the most vivid manifestation of vital force. This creativity can be associated with eros or libido, according to Freud. Processes of chaos oppose them. The transition to other areas (levels, rhythms) occurs through limiting equilibria, since they are common to all areas of a thing's interaction. When all processes in one area are balanced, they continue in another. Birth and death, as limiting boundary equilibria, are unattainable for a thing (specimen) energy, matter, and information with the environment and are characterized by a decrease in their entropy due to an increase in the entropy of the environment, which is consistent with the laws of thermodynamics.

The "boundary-structure" is associated with the sublevels of life (vital energy). Typically, these sublevels are molecular, cellular, body tissue, organ, organismal, population-species, biogeocenotic, and biospheric. Each sublevel of life encounters its own chaotic tendencies, also conditioned by death (of that sublevel). These sublevels possess the most stable elements and structures in the organic-living world. For example, the species that have existed for millions of years. The phenomenon of identification here is the forming "boundary-structure" of the sublevel of life. The horizon is the "boundary-environment," providing the foundation for this formation process. The self-organization of life levels leads to the formation of a "boundary-rhythm."

"Boundary-rhythm" arises from the chaotization of order corresponding to the levels of life and is characterized by its corresponding sign. They are fundamental to the ecosystem, genetic code, homeostasis, and so on. All specimens, including humans, are surrounded by over a hundred circadian rhythms determined by the rhythmic rotation of the Earth, the Sun, the Galaxy, the metagalaxy, and so on. Population waves are crucial for the evolution of life too.

The phenomenon of identification here is the emerging “rhythm boundary.” The horizon is the “structure boundary.” The limiting equilibria of this level are primarily associated with birth and death.

The organic-living level of the world clearly distinguishes the sublevels of life and clearly defines their fundamental characteristics. This level of the world has been repeatedly examined from the perspective of dynamic equilibria (*Dialectics* 1984); it correlates well with the postulates and principles of the adjacent laws of the material-physical and mental levels of the world. The “environment boundary” corresponds to the boundary of the essence of a specimen (thing). The “structure boundary” corresponds to the boundary of the individual’s - “things in existence”.

The mental level of the world

According to N. Hartmann (1997, 510), “the level of the soul is consciousness with its acts and contents”. The defining factors in this world are the individual’s consciousness, mental phenomena and processes, and the unconscious. Heraclitus already pondered the boundaries of the soul: “You will not find the boundaries of the soul, no matter what path [in what direction] you take: so profound is its measure...” (see *Fragments* 1989, 231). Apparently, the concept of the soul extends far beyond humans, encompassing a significant portion of the animal kingdom.

The individual’s consciousness is balanced by the chaos of mental processes, ultimately forming levels of the unconscious where order balances chaos. Thus, individual consciousness is delimited by a “boundary-environment,” which becomes the foundation of the levels of the unconscious. These levels are then chaotized by their corresponding processes, creating a “boundary-structure,” which becomes the basis for the formation of supporting rhythms. After the corresponding chaotization, these create a “rhythm-boundary” as the foundation for the environment.

The “boundary-environment” corresponds to the balanced consciousness of the individual. “Mental life is tied to the individual; it arises and dies with them. Spiritual life is never the work of an individual, no matter how perfect and unique that individual may be as a personality” (Hartmann 2003, 95). Because of the balancing of conscious processes, levels of the unconscious emerge. Individual consciousness is limited a small volume, while the unconscious is much larger, providing a communication resource for the balanced part

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of consciousness. A boundless consciousness would prevent the individual from finding their stable, balanced boundary.

The phenomenon of identification here is the emerging "boundary-environment," the horizon resting on the "boundary-rhythm." Chaotic mental processes and events (actions, emotions, feelings, etc.), behaviour patterns, and states of mind that are subjective and ambivalent, which is explained by the varying significance of certain objects and phenomena for different people balance individual consciousness. The balance of various types of psychological processes is ensured by the personal and collective unconscious, leading to the formation of levels of the unconscious. For a tribe, an ethnic group, or humanity, the balance of various types of "social consciousness" is ensured by the collective unconscious.

The "boundary-structure" is associated with the levels of the unconscious that are inherent in any living being. The self-organization of the levels of the unconscious is the result of their chaotization, which leads to the emergence of levels of rhythms - supporting rhythms. The unconscious also cannot be limitless. This limitation is characterized, among other things, by rhythm (sign). The phenomenon of identification here is the emerging "boundary-structure" of the unconscious level; the horizon rests on the "boundary-environment" necessary to ensure the stability of this process of formation. Mental equilibria should be measured relative to the unconscious. The levels of the unconscious find their expression in culture, society, and language, being institutionalized within them. The extraordinary stability of individual social, cultural, and linguistic structures is conditioned by their reliance on the corresponding unconscious.

"Boundary-rhythm" arises from the chaotization of rhythms and is characterized by an order parameter and its corresponding sign. All individuals, including humans, are surrounded by rhythms that are rooted in stable structures conditioned by mentality, myths, and adats (systems of archaic traditions, customs, values, social practices, and norms passed down from generation to generation). The desire for such equilibria is driven by the social and economic discomfort of individuals, and is sometimes supported by the state. If they are based on extreme equilibria encompassing all aspects of the life of a particular ethnic group, they can be very stable. The structures of many of these are outdated, and their evolution in the wake of the realities of modern life presents a complex problem. If interaction with the unconscious is built through an equilibrium boundary, it becomes an

important creative factor; otherwise, interaction with the unconscious will be destructive. The phenomenon of identification here is formed by the “boundary-rhythm,” and the horizon is based on the “boundary-structure.”

Simpler mechanisms for forming individuals into a crowd based on a single characteristic, without regard for equilibrium boundaries. Examples include religious fanaticism and totalitarian ideologies. People are predisposed to creating various forms of communication formations, readily entering into them, and then unable to part with them. The collective is simpler than the individual; the latter easily dissolves within it completely. This is why collectives arise in which individuals work for decades, despite disadvantages such as low wages, bad locations, and hazardous working conditions. The connections of such a communication system prove simplest than everything else. The “boundary-environment” corresponds to the boundary of the essence of the individual. The “structure boundary” corresponds to the boundary of the individual’s “thing in existence”.

The historical-spiritual level of the world

At this level, the concepts of “personality”, “personal consciousness” or “free consciousness”, “super-consciousness” (religions, ideologies, social institutions, etc.), “spirituality”, and “God” are of particular importance. The thing of the historical-spiritual level is personality. “It is believed that the level of spiritual life is the most ‘highest’; the process of its formation connects generations with each other” (Slinin 2003, 560). By analogy with the Big Bangs at the previous levels, one can consider the “Big Bang of spirituality”. In Christianity, such an explosion is characterized by the “immaculate conception” - the most important (third) dogma, according to which God the Son was conceived through an influence from the level of the spiritual world, but not the living. Here, as well as at other levels of the World, a general pattern takes place: the primordial explosion of substance, which orders its further evolution; counteracting it through chaos, which leads to intermediate quasi-equilibrium states—stable sublevels of spirituality.

The “boundary-environment” is associated primarily with the free consciousness of the individual attempting to bring order to the surrounding world. It interacts with the chaotic processes of the superconsciousness. As a result, a “border-environment” is formed, which becomes the foundation for the creation of highly stable

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sublevels of spirituality. The phenomenon of identification here is the “boundary-environment,” which limits the individual's free consciousness, the “boundary-rhythm” horizon. Ideas related to the study of this process can be found in the concepts of personalism, existentialism, pragmatism, God-manhood, and so on.

“*Boundary-structure*” is associated with levels of spirituality. Here, chaotization of spiritual levels occurs, resulting in the formation of “boundary-structures.” Spirituality—both personal and universal—can approach these boundaries (limits), traditionally called God. The approach being developed does not encroach on the mystery of God, but only on His boundaries and the set of rhythms that characterize them. Direct communication with the boundary of God is possible provided that a person has reached the limits of their spiritual powers and resources, connecting with the ultimate dynamic equilibria. The boundlessness of the spirituality of individuals or of all humanity, as well as the boundlessness of their consciousness, would not make humans powerful; on the contrary, they would lose reliance on their stable intermediate equilibria (levels of spirituality). It is no coincidence that theological and related philosophical concepts speak of humility, while “natural religions” (Buddhism, Taoism, Confucianism, Zen Buddhism) consider not God himself, but paths to him.

In biblical religions (Judaism, Christianity, Islam), the object of study is the transcendental God, which is the focus of two fundamental theological schools: cataphatic and apophatic. The former ascribes positive attributes to God and understands “God through his diverse manifestations and energies” (Gaidenko 2001, 229). For our approach, apophatic theology is more important, consisting of “a consistent ascent from the created world to the Creator” (Gaidenko 2000, 151). Apophatic theology delineates the boundaries of God and cognizes him based on them. A similar approach is found in other religions; for example, in Judaism and Islam, images of God are prohibited. In Hinduism, the concept of Brahman—“the highest spiritual principle of all that exists... Incomprehensible to ordinary consciousness or various rational-speculative constructs, Brahman is cognized only by the highest religious intuition, which lies at the foundation of holistic experience” (Ibidem).

What is important about apophaticism is that “the Fathers of the Eastern Church... were able to maintain their thought on the threshold of mystery and not replace God with His idols... Unknowability does

not mean agnosticism or a rejection of the God of knowledge... The task is not to eliminate antinomy by adapting dogma to our understanding, but to transform our minds so that we can come to contemplate God-revealing reality..." (Lossky 1991, 35-36) Vladimir Lossky considers the Trinity to be the limit of apophatic theology. Spirituality, based on unbalanced structures and striving for infinity, can be a destructive factor in evolutionary processes.

"Boundary-rhythm" characterizes the levels of rhythms and their limits. It is formed as a result of the chaotization of spiritual levels, its foundation is the "boundary-structure." In the most philosophical books of the New Testament, "the Corpus of St. Joann", the word is at the foundation of everything, corresponding to the rhythms that initiate the process of self-organization. "In the beginning was the Word, and the Word was with God, and the Word was God. It was in the beginning with God. All things were made through him, and without him was not anything made that was made. In him was life, and the life was the light of men. And the light shines in the darkness, and the darkness comprehended it not" (*The Bible* 1991, 311).

The interaction of the fundamental aspects of life and death as ultimate equilibria, considered at the two previous levels, is also of fundamental significance at the spiritual level. Plato called philosophy a meditation on death. Death manifests itself much more in life than in the death itself. "Every moment you live you steal from life; you live it at its expense. The continuous occupation of your whole life is to cultivate death. While you are in life, you are in death, for death will not leave you until you have left life. Or, if you prefer, you become dead by living your life, but you live it by dying: death, of course, strikes the dying man far more severely than the dead, much more acutely and deeply" (de Montaigne 1996, 85). Schopenhauer (2018) paid tribute to the organizing influence of death. "Death is the inspiring muse of philosophy: without it, philosophy would hardly exist". The part of a person's life that deals with death may be shorter than the first, but it proves far more important, as it is conducted under the slogan "To have time to do everything that is necessary." Max Scheler (2011) believed that in existence "in the face of death, a person finds meaning in life, since he is freed from the false goals and activities imposed on him by technogenic civilization". Martin Heidegger's (2003) "Being-towards-Death", as a vivid illustration of the limits of dynamic equilibria, also directs a person toward

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“authentic” existence, as opposed to “inauthentic” existence, where, oblivious to death, he drags out an impersonal existence.

Two fundamental ideas of the *Bible*, with their immense depth and antinomy, defy human understanding. First, how could such a victorious, omnipotent God appear in such a pitiful, humiliated form, subjected to execution in the most humiliating manner of that time? Second, the idea of the Trinity, which combines three hypostases in the One God. However, both fit well with the tenets of the concept being developed. The first corresponds to the idea that balance, in terms of a coordinate system, is far more important than activity and action. And God himself, who sets an example of humility, can be seen as an element of such a coordinate system. As for the second, the names of the Trinity correspond well to the boundaries discussed above. Thus, “God the Son” is a “boundary-environment,” a boundary of God’s identification well known to educated people of Christian cultural backgrounds, elaborated in detail in various Christian denominations, art, and literature. “God the Father” is a “boundary structure” inaccessible to human understanding, open to a multitude of interpretations, the limit of the unknown, the name of a great mystery. “God the Holy Spirit” is a “boundary rhythm,” corresponding to a specific religious mood—a connection, a synergy between man and God—characterized by the rhythms of rituals, prayers, and life. It should be noted that many aspects of God the Father, God the Son, and God the Spirit are inaccessible to rational understanding, being objects of faith and comprehended through spiritual practices, as attested by the Fathers of the Church. The same can be said of the mysterious realms in the unconscious spheres of the soul and in the spiritual realm. Here, we can turn to Plato’s concept of “noumenon” and Kant’s notion of the “thing-in-itself.” The unknowable and the mysteries of the world will always exist, since at all its levels, chaotic processes counterbalance the ordering tendencies and create boundaries beyond which no interaction can penetrate. The “environment boundary” corresponds to the boundary of the essence of a person (thing). The “structure boundary” corresponds to the boundary of the “thing in existence” of a person.

Equilibrium boundaries also serve as the basis for the development of ideas about cultural (secular) asceticism, which, unlike religious asceticism, has received little attention. Meanwhile, this asceticism represents a stable framework for culture, capable of ensuring stable and optimal interactions between its various varieties. The world is

complex, but the coordinate system is simple, and it is on this basis that universal asceticism is possible.

Conclusion

The causes of a thing's self-organization are the striving of its equilibrium boundaries, formed by the interaction of order and chaos, toward their ultimate states. The interaction of a thing with one of these boundaries ("environment-structure-rhythm") allows them to be identified as the basis for the self-organization process. The interaction of a thing with its environment is embroiled in a confrontation between the ordering tendency and the processes of chaos, resulting in the "environment-boundary" becoming the foundation of the world's structural sublevels. The chaotization of interactions within the structural level of the world leads to the identification of a "structure-boundary," which corresponds to the foundation of rhythmic sublevels. The chaotization of a thing's ordering interactions in the rhythmic domain ensures the formation of a "rhythm-boundary" as the foundation of the environment's sublevels. Rhythm participates in the formation of the environment and also interacts with a new thing, initiating its self-organization process as a "triple self-organizing spiral of the world." The formation of a boundary can begin in any area of a thing's interaction, since they are all interconnected.

The set of limiting dynamic equilibria arising in the processes of self-organization of things creates a coordinate system of the world. This coordinate system is accessible to study through the interactions of things with their limiting equilibria, created by these things themselves. On the other hand, the coordinate system of the world allows us to consider the processes of self-organization of a thing from the perspective of these limits. The equilibrium boundaries of a thing are homeomorphic and interconnected. The coordinate system of the world tends to interact with a specific thing and with its limiting dynamic equilibria, which is always definable. If the boundaries of dynamic equilibria do not tend toward their limiting equilibria, they will disintegrate. When a thing (physical body, individual, personality) interacts directly with the three above-mentioned areas without relying on an equilibrium boundary, it begins to interact with "false" boundaries, which are the basis for religious fundamentalism, totalitarianism, and so on.

A view of the world from the perspective of this coordinate system represents the recording of the presence of a specific thing in the

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context of the interactions of order and chaos, linking them to its ultimate dynamic equilibria. The bearer of this "view" is not a human being with their consciousness, not an observer, but a "presence" recording the presence of a thing in the world. Any other thing can record such a presence in the context of all its quasi-equilibrium interactions.

The observer and all analogous concepts (Absolute, Spirit, Absolute Idea, etc.) are somehow connected to human consciousness, God, or some transcendental entity or principle. Meanwhile, the vast majority of things and their classes do quite well without consciousness. At the level of electrons, molecules, planetary-stellar systems, and many other levels of the world, human or Spiritual consciousness is not used, yet the processes occurring there are unusually stable and optimal. The broad extrapolation of consciousness to the entire world, adopted in a number of philosophical systems, is not always justified. On the other hand, the level of world organization associated with consciousness emerged relatively recently, and its inherent processes have not yet found stable states, possessing significant imbalances.

On the spiritual and mental levels, the idea that modern human life must be constantly connected to a coordinate system and that the "melody" of this connection, its rhythms, must be heard, is of particular significance. Each individual, ethnic group, and culture can make their own unique contribution to its formation, and the more such contributions, the more stable the coordinate system will be. All processes and phenomena in the world interact with it in one way or another. The concept of a coordinate system of the world based on extreme dynamic equilibria boils down to various forms of asceticism based on natural chaos.

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